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**Exploring public attitudes towards the health  
system of the Kingdom of Saudi Arabia (KSA)**

**Submitted by Afnan Aljaffary**

**For the degree of PhD in Health Services Research and  
Management**

**City, University of London**

**Centre for Health Services Research**

**School of Health Sciences**

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## **Dedication**

To my twin souls;

My youngest brother, Ahmed Aljaffary (May God bless his soul); you are gone but will always be in my heart. Your belief in my ability to succeed has made this journey possible.

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## **Declaration**

I, Afnan Aljaffary, confirm that the work presented in this thesis is my own. Where information has been derived from other sources I confirm this has been indicated in the thesis.

## Abstract

This study explores public attitudes towards healthcare in the Eastern Province of KSA. It employs a sequential mixed-method design. Semi-structured focus group discussions (FGDs) were conducted with fifty-four participants in the Eastern Province. The qualitative arm of the study used a framework thematic analysis. A questionnaire was constructed from evidence-based items from four sources: an international performance assessment framework, literature review, systematic review, and the FGDs. The questionnaire was administered to 813 participants using on-site and online recruitment modes. Two qualitative validity assessments and quantitative construct validity and reliability tests were then carried out for the questionnaire.

The FGDs indicate a public sense of pride in the Saudi health system. However, some concerns emerged from the FGDs—most notably, access barriers to the government health sector including the referral system from primary to secondary care and the necessity of personal connections, or '*wasta*,' to access timely care. Access barriers also emerged in the private health sector, namely the affordability of care and health insurance companies' delays in responding to medical claims. Participants also considered their inability to discuss treatment plans and to be involved in decision-making processes with their doctors as issues in both the public and private sectors. Participants were also concerned about the Ministry of Health (MOH) monitoring and regulating both sectors. This affected participant attitudes towards health service provisions.

The questionnaire demonstrated qualitative validity and good psychometric properties in construct validity and internal reliability. Participants perceived doctor-patient communication as the most positive aspect of the Saudi health system while they perceived MOH monitoring of the private sector and affordability of care as the most negative aspects. Socio-demographic characteristics were considered as strong predictors of participants' attitudes towards the health system, and nationality and insurance status were identified as the most frequent predictors of satisfaction.

Recommendations include implementing policies that monitor pricing in the private sector, fairer access to government healthcare, and patient involvement in decision-making processes. Future research should investigate the relationship between public attitudes towards the Saudi health system and health-related decisions to ensure better use of healthcare services in KSA.

## List of abbreviations

KSA	Kingdom of Saudi Arabia
FGDs	Focus group discussions
MOH	The Ministry of Health
NHS	National Health System
WHO	World Health Organization's
SDM	Shared decision making
PALS	Patient advocacy and liaison services
UOD	University of Dammam
ARAMCO	Arabian American Oil Company
OECD	Organisation for Economic Cooperation and Development
HCQI	Healthcare Quality Indicators
HHS	Department of Health and Human Service
NDPs	National Development Plans
CHI	Cooperative Health Insurance
PHC	Primary healthcare
WHS	World Health Survey
ED	Emergency Department
BSA	British Social Attitude survey
HCS	Health Confidence Survey
PETU	Performance Evaluations, Trust and Utilisation
HCiC	Healthcare in Canada
FSU	Former Soviet Union
N/A	Not Applicable
HSPA	Health systems performance assessment
PROMs	Patient-reported outcome measures
SRHS	Self-rated health status
QOL	Quality of life

PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analysis
CASP	Critical Appraisal Skills Programme
COREQ	Consolidated Criteria for Reporting Qualitative Research
PHS	Private health sector
GHS	Government health sector
CVI	Content validity index
I-CVI	Item content validity index
S-CVI	Scale content validity index
EFA	Exploratory Factor Analysis
PCA	Principle Component Analysis
KMO	Kaiser-Mayer-Olkin measure of sample adequacy
MSA	Measures of sampling adequacy
SE	Standard Error
SD	Standard Deviation
<i>P</i>	P-value
<i>F</i>	Degree of freedom

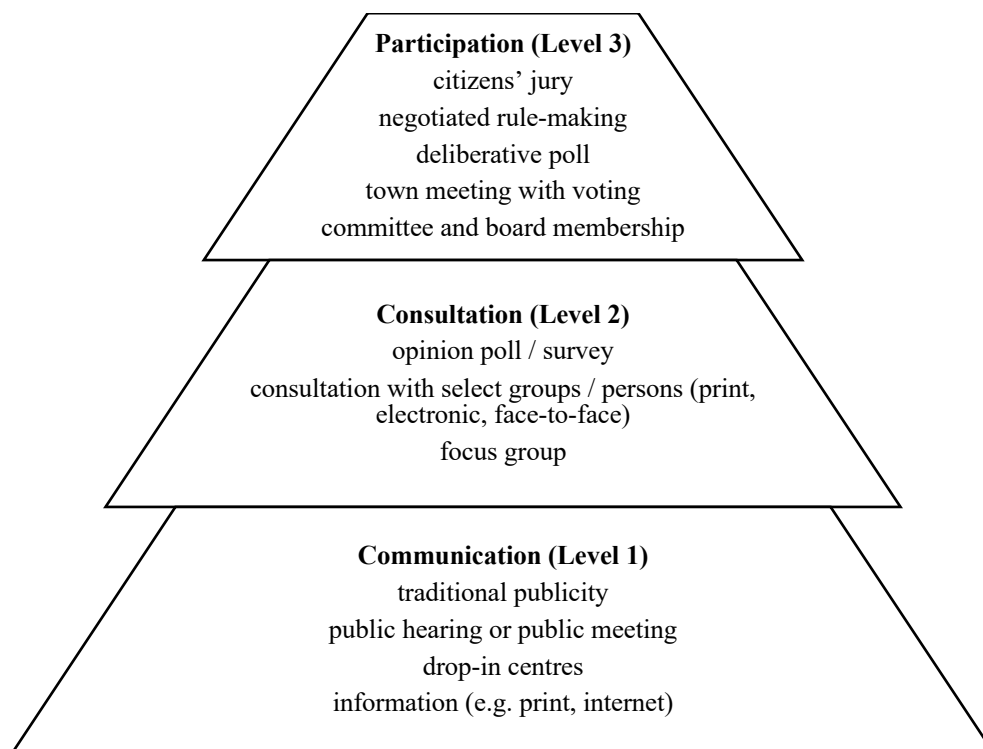
# **Chapter 1 Introduction**

This chapter focuses on the underlying reasons for and the stages undertaken to conduct this research study of public attitudes towards the health service in KSA. First, it outlines theories of public involvement in forming health policy and the arguments for and against public involvement in health policy decisions. It then presents the rationale, the philosophical approach followed in the current study, and research aim/questions. The chapter concludes with a summary and overview of the thesis.

## **1.1 Typology of public involvement and participation in health policy**

The public includes ‘lay individuals’ or citizens who use, are affected by, or are compelled to use healthcare services (Boote et al., 2002); for example, patients, carers, and potential service users. Whereas attitudes have been defined in different ways in social psychology, contemporary thinking in the field of attitude research generally matches the definition of attitudes as cognitive representations of an individual's positive or negative evaluations of distinctive Objects, involving physical objects, people, behaviours, issues or policies (Roberts, 2008; Olson, 2010).

Public involvement pertains to the process of including the public in policy-forming activities (Mitton et al., 2009). A well-known public involvement model called ‘information flow model of public engagement’ (Rowe & Frewer, 2005) classifies approaches to public involvement in health policy hierarchically based on the power allowed to the public as well as the type and direction of communication used to involve them (Mitton et al., 2009). The hierarchy starts with communication (less power, one-way interaction,) and moves to participation (more power, two-way interaction). Figure 1.1 shows these approaches along with relevant examples and methods of involvement for each approach.



**Figure 1.1: Information flow model of public engagement**

**Source:** Adapted from Rowe and Frewer (2005) and Mitton et al. (2009).

As shown in Figure 1.1, public involvement in health policy occurs in a number of contexts. In the communication context (Level 1), there is one-way transfer of information from the decision maker to the public. At this level, public involvement takes the form of public awareness campaigns, which attempt to increase the public knowledge of health and the services the systems provide (Green et al., 2015).

In consultation, classified as Level 2 in the hierarchal model, information is provided by the public to decision makers but without interaction or formal dialogue. Consultation can occur in the form of opinion polls, where focus groups and public opinion surveys are some of the mechanisms that can be used to explore public views on health systems and policy (Conklin et al., 2010).

In participation, which forms Level 3 of the hierarchy, public involvement in health policy occurs as selected members of the public deliberate public policy with policymakers, healthcare experts, government officials, and representatives from private healthcare providers (Baggott, 2005; Forster & Gabe, 2008). In this sense, members of the public are deemed key stakeholders, whose insights exert an influence on the design and delivery of health services (Mitton et al., 2009). Public forums tend to include a small yet influential body of the public that is selected to be representative of the wider population (Cantadriopolous, 2004).

It is important, however, to recognise two points. Firstly, the hierarchy of public involvement ranges from practical partnership to the rhetoric of engagement (Conklin et al., 2010), with deliberative forums with public stakeholders occupying the most inclusive end of the



consultative spectrum (Level 3) and drop-in centres (Level 1) yielding the least passive form of communication (Cantadriopolous, 2004). Evidence exists in the literature that public consultation and communication while forming health policy can have benefits beyond improving the health system. Particularly, it can help the public to learn about and acknowledge health policy decisions and thus to appreciate the complexity of the health policy topic (Forster & Gabe, 2008). In this sense, public knowledge and acceptance of health policy is enhanced and thus public, and patients become more accountable for their own health and health choices, which is a stand-alone benefit (Florin & Dixon, 2004; Conklin et al., 2010). More discussion about this benefit will be explained in section 1.2.

Secondly, public involvement in health decisions falls into several categories: individual participation in clinical care decisions, planning and development of healthcare, and governance (including resources allocation, priority setting, and healthcare quality improvement; Litva et al., 2009; Danis et al., 2010; Gottwald et al., 2014). Therefore, efforts to engage the public in healthcare decisions might vary in each of these categories; for example, in the USA, the focus is more dominant in the category of governance, i.e. priority setting (Danis et al., 2010). Examples of how scholars and policymakers involve the public in each of these categories will be discussed in the following sections.

## **1.2 Theories rationalising user involvement in healthcare and policy decisions**

Whether public opinion should be taken into account when creating or reforming health policy is a topic of much debate (Bowie et al., 1995; Mitton et al., 2009; Kaplan & Baron-Epel, 2015; Peacock, 2015).

Some scholars raised several concerns on the adequacy of public involvement. Firstly, some researchers argued that the sample members of the general population would be biased and inappropriate representatives of the whole population (Rowe & Frewer, 2005). Issues of unrepresentativeness might be due to recruitment bias and/or selective participation (Ham, 1993; Kitzhaber, 1993), which may occur as a result of public reluctance to be involved in health policy-related forums (Rowe & Frewer, 2005; Mitton et al., 2009). Therefore, the public representatives involved in health policy may only cover a particular type of the population. This would be most problematic in Level 3 of public involvement (participation) as it involves the selection of public members in deliberative forums; in Level 2 (consultation), surveys, for instance, can be adequately conducted upon a representative sample of the population.

Secondly, there have been some concerns raised over the adequacy of public knowledge on health and how the health system actually works (Wilson, 1999). Thirdly, another bias that may affect the adequacy of public opinion in health policy is the over-focus on self-interest (e.g. improved financial or health status; Lynch & Gollust, 2010). A study, for example, has shown that the public may exhibit different priorities compared to health professionals when

considering health services, e.g. favouring treatment for younger rather than older people (Bowling, 1996). Similarly, Kaplan and Baron-Epel (2015) argued that laypeople might have difficulty expressing their priorities regarding healthcare, as they may not be able to make as rational decisions as policymakers. In addition, they suggest that laypeople's opinions may be limited to their own experiences or to those of their close family, and so for that reason they may not be able to provide broad perspectives that cover the population's needs thoroughly (Kaplan & Baron-Epel, 2015).

However, a study has argued that lack of knowledge and self-interest are often a 'weak predictor' of policy preferences (Lynch & Gollust, 2010, p. 850). Many researchers have suggested and implemented several strategies to overcome the bias issues discussed above (Nilsen et al., 2006; Crawford et al., 2002; Oliver et al., 2004). For instance, researchers have highlighted/acknowledged the importance of making all possible efforts to select a representative proportion of the public to be involved in health policy-related forums (Bowie et al., 1995). Approaches to recruiting public representatives to be involved in decision-making have been suggested in the literature and include targeted, personal invitations by telephone, mail, or email, wide advertising, and the use of mass media (Oliver et al., 2004). Moreover, providing enough information to the public representatives who will be involved in the policy-making process has been deemed to produce beneficial results: keeping these 'lay stakeholders' informed will enhance their knowledge in health policy issues, broaden their perspectives, and inform their opinions and views (Nilsen et al., 2006; Crawford et al., 2002; Bowie et al., 1995). A group approach, such as FGDs, also eliminates the risk of self-interest bias and makes the conceptual leap to the common concern rather than individual benefits (Bowie et al., 1995; Oliver et al., 2004).

Further supporting the importance of public engagement, Myllykangas et al. (1996) conducted a study that investigated the differences between doctors, nurses, politicians, and public attitudes to healthcare priorities. They concluded that the opinions of these four groups were similar despite the variation in their level of knowledge and culture. This supports the notion that public attitudes and opinions can have influences that improve the effectiveness of health policy and resource priority setting. In addition, public involvement in healthcare potentially leads to more accessible and acceptable health services. This improves the use of resources (Wilson, 1999), which is a core goal of health policymakers.

Many researchers have also recognised the importance of public opinion and consultation (level 2 in the information flow model of public engagement) in forming healthcare and examining attitudes, in, among other countries, the UK (Gershlick et al., 2015), the USA (Helman & Fronstin, 2004; Fronstin, 2012), Canada (Blidook, 2008; Soroka et al., 2013), Australia (Hardie & Critchley, 2008), and China (Duckett et al., 2013). In addition, the Commonwealth Fund, one of the largest and most influential research organisations examining health system performance in developed countries, considers public opinion to be an important part of evaluating a health

system's performance (Commonwealth Fund, 2011; Papanicolas & Smith, 2013a). Boote et al, (2002) summarised reasons that led researchers and policymakers to involve the public in healthcare and policy decisions, including evidence-based, ethical, and political reasons. The following sections will discuss each reason in turn.

### ***1.2.1 Evidence-based reasons***

Scholars argue that public attitudes and opinions in health policy are crucial because they often represent the viewpoint of well-informed users of such services (Sokora, 2013; Peacock, 2015). They believe that the public can think rationally and that complex issues, such as fairness, can help to shape health policy preferences (Stone, 2006; Lynch & Gollust, 2010).

Public opinions towards a health system are informed by individuals' personal experiences, including direct contact with the health system and the clinicians treating them, experience with sick family members receiving treatment, and/or interactions with third parties, i.e. insurance agencies. These interactions allow them to become aware of some of the system's deficiencies, such as care and financial barriers, and build up positive or negative attitudes towards their health systems (Myllykangas et al., 1996; Dien, 2008).

In addition, the expensive and limited health resources were considered a driver for choices based on public opinion. Therefore, many researchers believe that members of the public who will use health services should inform the determination of how healthcare resources are allocated at the organisational level (Bowie et al., 1995; Dicker & Armstrong, 1995). Public involvement can thus help policymakers to understand the degree of popular support for a policy. This may enhance public trust towards the retention or change of a policy by involving the populace in the decision-making process (Peacock, 2015).

For instance, Gershlick et al. (2015), who explored British citizens' attitudes towards the healthcare system in the UK, acknowledged public opinion in prioritising services in the National Health System (NHS) and stated:

There are no obvious, clear-cut solutions to some of the challenges facing the NHS, and some hard choices will need to be made. In this context, it is essential to understand the views of those the service exists to support: the public. So what do the public think about the NHS, and what do they want from it? (Gershlick, 2015, p. 6)

This can be applied to any other welfare-funded health system similar to the NHS, including that of KSA (see Chapter 3).

### ***1.2.2 Ethical reasons***

The World Health Organization's (WHO) Declaration of Alma Ata states that 'people have the right and duty to participate individually and collectively in the planning and implementation of their healthcare' (WHO, 1978, p. 1).

Policies designed to encourage public involvement in healthcare decisions are increasingly prominent in Western countries, especially in the USA, Canada, and the UK, because respect for patients' rights are recognised as an ethical imperative (Elwyn et al., 2010). As said earlier in section 1.1, public involvement can occur in different forms; one of them is an individual's involvement in his or her health decisions (Danis et al., 2010).

Traditionally, the doctor-patient relationship was a paternalistic one (Strong, 1979; Silverman, 1987): the doctor adopted a parental role, directed care, and made decisions about treatment (Ong et al., 1995). However, this approach was replaced by the notion of shared decision-making (SDM; Rodriguez-Osorio & Dominguez, 2008).

The SDM model describes a process that enables patients to express all their reasons for coming to see a medical professional, including their symptoms, thoughts, feelings, and expectations. In addition, effective doctor-patient communication builds up partnerships in care and shared decision-making (Ong et al., 1995).

As a means of thinking about the importance of patients' involvement in their health decisions collectively, public representative groups in the UK have become increasingly determined to challenge the traditional 'paternalistic' approach of healthcare delivery (Boote, 2002; Joseph-Williams et al., 2017). In addition, the UK's Health and Social Care Act (2001) aimed to strengthen public involvement in evaluating the way that the NHS runs (Staniszewska & Hendsen, 2005). In addition, the NHS Plan (Department of Health, 2000) also mandated that patient advocacy and liaison services (PALS) be implemented in every trust in order to ensure that public concerns about healthcare delivery would be tackled (Staniszewska & Hendsen, 2005).

### ***1.2.3 Political reasons***

Many scholars believe that public involvement in health policy decisions is important and a core part of a democratic system (Mitton et al., 2009; Sokora, 2013; Kaplan & Baron-Epel, 2015; Peacock, 2015). Realising the democratic ideals of legitimacy, transparency, and accountability is deemed necessary (Mechanic, 1995; Peacock, 2015).

Welfare-based public health systems that are funded with taxpayer money, such as the UK's, or a country's revenues, such as KSA, are much more open to the influence of public consultation than healthcare systems where for-profit providers shape public healthcare provisions (Milewa, 2004; Kruk & Freedman, 2008). As citizens, and therefore as financial contributors and part

owners of the health system, a strong case can be made that consumers should have a voice about service development that serves to improve its functioning (Hanley et al., 2003).

In the UK, for instance, the move for greater public involvement in the activities of the NHS can also be interpreted politically from within a context of citizenship and stake holding (Boote et al., 2002). This leads to change in the balance of power and decreases the decision-making monopoly of health policy decision makers (Renfrew et al., 2008).

### **1.3 Study rationale: Why is it important to explore public attitudes towards the health system in KSA?**

KSA is the largest country in the Middle East; it consists of 13 regions, and the Eastern Province, in which the current study is set, is the third most populated region after Riyadh and Makkah. KSA is a high-income non-industrialised country, considered one of the leading countries in petroleum production and exportation. The Ministry of Health (MOH) in KSA is the main provider of healthcare services; it provides free-of-charge care for Saudi national citizens, and it is funded via the country's revenues, mainly through Saudi Arabian oil revenues. Currently, there is a fast-moving policy background that has not yet been implemented yet; the focus is on privatisation, meaning that MOH in KSA will no longer be the government provider.

Although some countries take public opinion into account when making health policy decisions is practised in some countries as stated in the previous sections, it is certainly not the norm everywhere. Many countries, including non-industrialised ones (such as KSA), do not show much appreciation for the public's participation in health policy (Cornwall et al., 2000; Brinkerhoff, 2003).

However, the current research study was important for multiple reasons. First, the structure of the Saudi health system has changed drastically in recent decades, altering health-related attitudes (Memish, 2014; see Chapter 3 for in-depth information about the Saudi health system). Changes have resulted both from the growth in national revenues, which has improved the abundance of and consequently access to healthcare services, and improved education and literacy levels (94.4% of 15- to 24-year-olds in 2013; World Bank, 2018). This has opened up KSA to comparison with services provided abroad, in particular the western 'developed' world, and has led to a demand for modernisation from the public. Furthermore, developments in telecommunications technology and Internet coverage throughout KSA have given people more access to information and knowledge and have allowed them to share their ideas, views, and criticisms, especially on social media (e.g. Twitter).

Second, in health systems for which taxpayers pay (in the case of KSA, payment is obtained from nationally owned oil revenues), the people can be said to contribute to healthcare financing (WHO, 2000) and therefore need to observe how effectively the health system achieves its goals and how successfully it responds to demands and expectations (Valentine et al., 2003;

Groenewegen et al., 2005; Bleich et al., 2009).

In 2015, to achieve the political and ethical reasons for involving the public, KSA implemented a new policy called ‘MOH e-participation policy’, which aimed to establish online communication channels via MOH portal in order to give the public of KSA the opportunity to share their views on, criticism of, and suggestions to improve health services in KSA (MOH portal, 2015).

More recently, KSA has begun implementing a new national transformational program, known as Saudi Arabia’s 2030 vision. The aim is to implement major reforms to enhance its economic and developmental achievements and to be more transparent so as to meet public expectations and desires in many areas, including health, education, entertainment, and quality of life (Government of Saudi Arabia, 2016). One of the main themes in this vision is ‘engaging everyone’:

We shall facilitate ways to listen to citizens’ views, and to hear all insights and perspectives.... We want to give everyone the opportunity to have their say so that the government can serve them better and meet their aspirations.

(Government of Saudi Arabia, 2016, para. 1)

Another example of the awareness of the importance of public opinion in the Saudi health system is a recent qualitative study that Mahrous (2013) conducted. This study carried out focus group discussions (FGDs) with interest groups, representatives from health organisations, representatives from local newspapers, and members of the public who actively worked with the Department of Health to identify the key players in the KSA health provision (Mahrous, 2013). The study emphasised that the role of the public in providing feedback to improve the health services in KSA is crucial and that it is important to change the ‘wrong belief’ of Saudi citizens that their participation in health planning decisions is not necessary and that health planners and professionals are the only parties who can manage the provision of healthcare services (Mahrous, 2013). As an indicator of acknowledging the importance of Saudi public opinions in healthcare policy, and as a way to maintain continuous communication between the public and health planners, a representative from the Department of Health presented in each FGD and reported the views of members of the public regarding what is needed to ensure their continuous participation and healthy relationships with health planners to improve health services and policy in KSA, such as volunteering mechanisms and financial support (Mahrous, 2013).

This suggests that the health authorities have begun to appreciate the role of public opinion and the importance of the public’s engagement in healthcare planning in KSA. Therefore, with the changing face of KSA, research is needed first to clarify the public opinion towards the health system in KSA and then to interact with the MOH to tackle health-related issues based on public opinion and suggestions and to implement them in policy and reality.

Third, attitude measurement is crucial in health systems because attitudes may influence health-related behaviours (Sutton, 2004). For example, negative attitudes towards a health system might limit the efficient utilisation of healthcare services, acting as a barrier to patients seeking treatment and thereby negatively affecting their welfare. Based on the ‘evidence-based reasons’ for the importance of involving the public in healthcare, many authors argue that health service users are the eyewitnesses of healthcare delivery; eliciting their views can inform patient-centred, systematic, and efficient care (Gerteis, 1993; Luxford, 2010). In KSA, health service researchers have found that many citizens delay their interactions with the health system until they become critically ill (El Bcheraoui et al., 2015). They argue that this causes financial burdens for the system (because care is then more expensive) and costs lives; therefore, we need to know more about the opinions of the public regarding the health system to understand and tackle this problem. One of the authors of this paper was the KSA minister of health at the time the research was published, which again demonstrates the high level of interest in the importance of opinions and attitudes towards the health system’s performance and its reform.

This highlighted the need for the current research project.

## **1.4 Philosophical approach of the thesis**

Before introducing aims and objectives for this research study, it is important to introduce the philosophical assumptions that inform the current research pathway. A researcher’s approach in his or her research study depends on two main questions.

Firstly, what are the researcher’s assumptions about reality (ontology)? In social science, research studies have been shaped by two overarching ontological positions: realism, which says that reality exists independently of the researcher’s beliefs or understandings, and idealism, which says that there is no external reality existing independently of the researcher’s beliefs or understanding. Secondly, what are the bases of the researcher’s knowledge of reality (epistemology)? There are two epistemological positions: inductive logic, which means exploring knowledge from the bottom up through observation of the world and thereby contributing to developing theories, and deductive, a top-down approach to knowledge where the research study starts with a hypothesis that will be confirmed or rejected based on the findings of the study. The different answers to these two questions led to divergent schools, especially in social science.

Remenyi et al. (1998) state that a number of research philosophies, such as interpretivism, positivism, and pragmatism, can be adopted in academic research. Interpretivism emphasises that knowledge is produced by exploring and understanding the social world of the people being studied by focusing on their meanings and interpretation (Willis, 2007; Ritchie et al., 2013). Ontologically, interpretivism assumes that there is no single reality and that truth is constantly changing (Sale et al., 2002; Ritchie et al., 2013). Epistemologically, interpretivists believe that

knowledge is best acquired when the researcher is enmeshed with the research participants, an interactive link that generates knowledge or findings (Sale et al., 2002).

By contrast, the positivist tradition assumes the world is stable and predictable and that phenomena can be measured empirically (Ritchie et al., 2014). Ontologically, positivists believe that there is only one objective external reality that exists independently of human perceptions. Epistemologically, the researcher is studying a phenomenon without influencing it or being influenced by it (Sale et al., 2002). This means that the research findings of the researcher should be generalisable to a wider society and replicable by someone else applying the same method to the same participants.

According to Creswell (2013; 2014), the pragmatist approach derives from the work of American scholars, and it has many forms; however, this philosophy has been widely understood as actions, situations, and consequences rather than as antecedent conditions (such as post-positivism; p. 10). Pragmatism is about developing the most valid outcome of the research irrespective of the personal opinions of the researcher (Branthwaite & Patterson, 2011). Our approach for this research study broadly falls within the pragmatist school of thought, which is also known as subtle realism (Spencer et al., 2003). This means that, ontologically, we see reality as something that exists independently from those who observe it, but it is only accessible through the perceptions and interpretation of individual participants. We recognise the importance of participants' own interpretations of the issues being investigated or explored and believe that their different points of view generate different understandings. Epistemologically, our position is that external reality is itself diverse and multifaceted, and it is the researcher's responsibility to make all the possible means to capture that reality in all its complexity and depth. Our position within the interpretative frame is that we create a balance between the inductive and deductive approaches across the different phases of this research study and for the ways we analyse and develop interpretations of the data.

Our position on understanding reality and our beliefs on how best to gain knowledge from the research study led us to 'open the door to multiple methods' (Creswell, 2014, p. 11), and we used all the possible approaches to understand the public attitudes and views on the Saudi health system. This study uses the sequential exploratory mixed methods approach (Creswell, 2014) to identify the root cause of public satisfaction or dissatisfaction with the Saudi health system using a systematic review of literature on the existing evidence, qualitative study, and quantitative component. In addition, we were free to choose the methods, techniques, and procedures that best meet the research needs and purpose. For instance, as will be explained in the qualitative methods chapter (Chapter 7), FGDs were chosen over other qualitative methods such as individual interviews because they allow researchers to collect rich data about different participants who are assumed to have different points of view about healthcare provisions in KSA and encourage thorough thinking and discussions to explore the reasons that such diversity exists. Finally, transferability was followed when making inferences from data (Morgan, 2007),



especially in the qualitative data that will be discussed further in the discussion section of Chapter 7.

## **1.5 Research aim, questions, and objectives**

### ***1.5.1 Aim***

The aim of this study was to explore public attitudes towards the health system in the Eastern Province of KSA.

### ***1.5.2 Research questions***

**RQ1** What evidence-based measures (national and international) exist to explore and assess public attitudes towards health systems?

**RQ2** What is the existing evidence of the prevailing attitudes towards the health system of KSA?

**RQ3** What are the prevailing attitudes towards the health system in the Eastern Province, KSA?

**RQ4** Which measures best capture public attitudes towards the health system of KSA?

### ***1.5.3 Objectives***

As the current study used a sequential exploratory mixed-methods design, the objectives were developed as milestones for achieving the study's aim, and these objectives match four phases of the study:

- I. To undertake a literature review to explore the existing available measures of public attitudes towards health systems (Phase 1).
- II. To conduct a systematic review of the literature, to identify the existing qualitative and quantitative literature that has explored public and patient attitudes towards the health system in KSA (Phase 2).
- III. To conduct FGDs exploring the public attitudes towards the Saudi health system's performance in Eastern Province, KSA (Phase 3).
- IV. To use data from Phases 1 to 3 to develop a cross-sectional instrument specifically designed for KSA to measure public attitudes towards the Saudi health system (Phase 4).
- V. To conduct a validation study to assess the reliability and validity of the constructed survey instrument (Phase 4).

## 1.6 Summary and overview of the thesis

The goal of this study was to produce new knowledge of current public attitudes towards the health system of KSA. It used Level 2 (consultation) of the information-flow model of public engagement (Rowe & Frewer, 2005; Mitton et al., 2009).

The thesis consists of 12 chapters. An overview of each of the following chapters, the linkage between different phases, and the research objective(s) for each phase are as follows:

Chapter 2 gives some contextual information about KSA as a country. It starts with providing information related to the geographical and socio-economic contexts of KSA, the history and political structure of KSA, and brief information about the health status of the population in KSA, including the main health challenges in KSA.

Chapter 3 describes the structure of the Saudi health system in particular, including providing an overview of the Saudi health system goals and its recent reforms. The chapter then provides information on the current organisation and regulation of the Saudi health system, including the Saudi health system's finances and health workforce.

Chapter 4 consists of the first phase of the research study (Phase 1). It provides an overview of the literature review that was undertaken to identify the different measures that have been used to explore public attitudes towards health systems, the prevailing factors that influence public attitudes towards and opinions on health systems, and the different methodologies that have been used previously to conduct this type of study. The measures identified in the literature review (see Chapter 4) will inform the design of the Saudi-specific public attitude national survey instrument.

Chapter 5 provides an overview of the different international health system performance frameworks and the rationale for why the chosen framework was deemed appropriate for the purpose of this research study.

Chapter 6 presents a systematic literature review to explore what is already known about public attitudes towards the healthcare services provided in KSA. This formed the second phase of this research study (Phase 2), which helped to map and explore current issues for users of the Saudi health system. The results of this review informed the topic guide used in Phase 3 and the survey instrument used in Phase 4.

Chapter 7 provides an overview of the methods used to collect the data of the qualitative study (FGDs), which formed Phase 3. First, the chapter describes the study design and data collection tool. To ensure that the study had fulfilled its goal of understanding 'an experience from the participant's point of view' (Leedy & Ormrod, 2001, p. 157), in-depth FGDs were conducted to gather public attitudes towards the health system. The chapter concludes with

detailed information about how the participants' answers were analysed using framework thematic analysis (Ritchie & Spencer, 1994). Ethical approval for this stage was sought and obtained by the City, University of London Research Ethics committee (Ref: PhD 14-15/07), Imam Abdulrahman Bin Faisal University (formerly the University of Dammam [UOD]; IBR number: IRB-2014-04-312), and the Research and Planning Committee of the General Directorate of Health Affairs in the Eastern Province, Ministry of Health (Appendix I).

Chapter 8 provides detailed information about the findings of the qualitative arm of the study (Phase 3). This, along with the literature review (Phase 1) and the systematic review (Phase 2), informed the construction of the survey instrument (Phase 4).

Chapter 9 describes the steps that were undertaken to construct the tool used in the quantitative arm of the study (Phase 4). The 'survey indicators development checklist' that De Vaus (2002) proposed was followed to complete the construction of a cross-sectional survey instrument of public attitudes towards the health system in KSA.

Chapter 10 describes the steps undertaken to implement the validity and reliability tests of the constructed questionnaire, including the processes followed to assess the qualitative validity and to administer the questionnaire to a sample of public living in Eastern Province, KSA. The statistical analysis conducted to investigate the quantitative validity and reliability is described. Ethical approval for this stage was sought and obtained by the City, University of London Research Ethics committee (Ref: PhD 14-15/07), Imam Abdulrahman Bin Faisal University (formerly the University of Dammam [UOD]; IBR number: IRB-2014-04-312), and the Research and Planning Committee of the General Directorate of Health Affairs in the Eastern Province, Ministry of Health (Appendix I).

Chapter 11 describes the results of the validity and reliability tests of the questionnaire and then presents a preliminary data analysis and the results of the questionnaire.

Chapter 12 summarises the various aspects of the study, the applicability of the developed questionnaire in future research, and the novel contributions of its findings and then makes recommendations for health policy and practice and potential future research to provide better services for the Saudi population.

## Chapter 2 Country context and background

### 2.0 Introduction

This chapter describes the context of this study, beginning with a brief explanation of the geographic and socio-economic status of KSA and then with a brief description of the main demographic characteristics of this study's setting (Eastern Province) in terms of population diversity, including the number of nationals versus the number of expatriates. This is followed by a discussion of the political, administrative organisation of KSA and its cultural aspects. The final section presents a description of the population's health status, with a brief discussion of major health problems in KSA.

### 2.1 Geographical and socio-economic context

KSA, as shown in Figure 2.1, occupies the majority of the Arabian Peninsula (2,240,000 km<sup>2</sup>; AlRabeeah, 2003). It is divided into 13 regions, of which the Eastern Province is the largest. Islam's holiest cities, Madinah and Makkah, are located in its Western Province, and around 3 million people visit these cities annually to perform the Islamic pilgrimage (the hajj).



**Figure 2.1: Map of KSA**

**Source:** Saudi Embassy (2015)

In 2016, the population of KSA was approximately 31 million (MOH, 2016), and about 33% of KSA's residents are expatriates, with about 98% working in the manufacturing and construction industries (Chalcraft, 2010). The top three expatriate nationalities in KSA are Indian, Egyptian, and Pakistani (De Bel-Air, 2014). Table 2.1 shows the population demographics in KSA.

Indicator	
Total estimated population size	31,742,308
Crude birth rate per 1,000	17.23
Life expectancy at birth	74.8
Annual population growth rate (%)	
Total	2.54
Saudis	1.1
Non-Saudis	2.15
Percentage of population under 5 years (%)	10.6
Percentage of population under 15 years (%)	30.35
Percentage of population 15–64 years (%)	65.46
Percentage of population 65 years and above (%)	4.17
Total fertility rate	2.4

**Table 2.1: Demographic indicators, KSA, 2016**

**Source:** MOH (2016)

The Eastern Province, in which the current study is set, is the third most populated region after Riyadh and Makkah. In 2016, the number of Saudis living in the Eastern Province was 3,090,272; the number of non-Saudis was 1,697,103, constituting 35% of the Eastern Province's total population (Central Department of Statistics, 2016).

In KSA, no clear differentiation exists between the two groups (i.e. Saudis and non-Saudis). For instance, the Ministry of Education provides education opportunities to everyone throughout the Kingdom, including non-Saudis, and allows them to complete their studies at government schools (MOE, 2018). The core difference might appear more clearly in healthcare. Coverage and eligibility for national (free) health care services is seen as a right for all Saudis, but not necessarily for non-Saudis. The next chapter will discuss in more detail this law related to health coverage. The differences in eligibility and health coverage in the Saudi health system might create inequities in access to healthcare in terms of both the level and the quality of healthcare for Saudi and non-Saudi populations. The results sections of the thesis (Chapter 8 and Chapter 11) will discuss the impact that this difference might have on public attitudes towards the different aspects of the Saudi health system.

With regards to the economic status of KSA, before 1953 the country's limited revenue was derived from service fees paid by Muslim pilgrims to Makkah and Madinah and from a small subsidy provided by the British government (AlMana, 1980). However, when the Arabian American Oil Company (ARAMCO) discovered oil in KSA before the Second World War, this new source of revenues was fully owned by the Saudi government, prompting governmental revenues to rise, particularly once exports increased after 1947 (Woodward, 1988).

Currently, KSA is amongst the world's richest countries, categorised by the World Bank as a high-income country, and it is the largest petroleum producer and exporter (Kronfol, 2014). Oil

has not only increased KSA's influence on the international stage; it has funded the development of the country's public services, such as education, agriculture, and, as said earlier, healthcare (Woodward, 1988; Alkhamis, 2017). KSA is reported as one of the top 10 countries in terms of development gains since 1970 (Batniji et al., 2014). In 2016, the gross domestic product per capita was \$20,028 (Central Department of Statistics and Information, 2016). The economic status of KSA enables it to support other Islamic and Arab nations in need, such as countries affected by wars, famine, or natural disasters.

However, KSA is currently experiencing real challenges with regards to its economic power (Bahgat, 2016). In 2016, the government announced a deficit of SR 326.2 billion (\$87 billion) on expenditures of SR 840 billion (\$224 billion) and revenues of SR 513 billion (\$137 billion). The sharp decrease of oil prices in 2015, which negatively affected the global market in general, highly contributed to the weakening of the Saudi Arabian economy (Al-Nakib, 2016; Bahgat, 2016; Dutta et al., 2017). In addition, the role of KSA in the Yemen war contributed towards forcing the kingdom to increase its drawdowns of its foreign reserves and finance the deficit in the budget by Saudi sovereign debt issuance (Al-Nakib, 2016; Young, 2017). This financial transformation in KSA necessitates the Saudi authorities to make immediate spending cuts and subsidy reforms. As explained earlier in Chapter 1, a new vision was initiated and is called 'Kingdom of Saudi Arabia 2030 vision'. Alongside the aim of hearing the public voice to improve public services, this vision has the aim of making KSA a global investment powerhouse by changing its economic strategy, which currently mostly relies on oil wealth, into new, diverse, and high value-added activities, such as the launch of solar industry (Government of Saudi Arabia, 2016; Larson & Pence, 2016; Yamada, 2016).

Despite the financial challenges faced by KSA, the government has continued to prioritise public services such as education and health as well as defence and security in its spending plans. Education and health/ social development received 35% of budgetary allocations in 2017 (Ministry of Finance, 2017). A focus on financing healthcare in KSA and the influence of the current economic status on budgetary allocation of healthcare services is given in Chapter 3, Section 3.3.4.

### ***2.1.1 History, political, and cultural contexts***

In the past, the governance and organisation of the different regions and areas of the Arabian Peninsula was based on a Bedouin tribal system. Each tribal family had a tribal chief who had significant power over people and land that belonged to them. However, since 1932, King Abdulaziz Al-sa'ud unified the Central, Northern, Southern, Eastern, and Western Provinces, and KSA was established.

King Abdulaziz Al-sa'ud arranged a series of short-term marriages to the daughters of leading tribal chiefs, and this was the main contributor to establishing his personal connection and bonds with those chiefs and to establishing and maintaining the unity of the kingdom

(AlRasheed, 2010). Although the flow of oil wealth has reduced the importance of tribal leaders, the blood and tribal solidarity, known as ‘asabiyya qabaliyya’, still exists, and individuals have always been loyal only to their own clan and tribe, such as Tamim, Utayba, Qahtan, Anaza, Shammar, or any of several dozen other tribes in KSA (AlRasheed, 2010). This is considered the main contributor for the introduction of personal connections, known as *wasta*, where people with similar tribes are keen to support one other to get things done more smoothly (Abalkhail & Allan, 2016).

The system of government in KSA is monarchic, and absolutist monarchs from the royal family (AlRasheed, 2006; Batniji et al., 2014) govern the entire kingdom with the guidance of religious leaders. Unlike the UK or any other Western country, democracy is not recognised in KSA; rather, the politics of the kingdom are derived from the absolute power of the king, sharia law, and the holy Koran, which provides its constitution. Thus, the history, culture, policies, and economy of KSA are linked to Islamic law (Islamic sharia). Islamic sharia is promoted throughout KSA and influences every aspect of Saudi Arabians’ lives, a feature that will be discussed subsequently in relation to attitudes towards healthcare in KSA.

Regardless of the significant economic and modernisation advances in KSA since oil was discovered, many Saudi Arabian traditions, cultures, and religious beliefs have not been changed and remain deeply embedded in daily life. For instance, and as explained earlier, tribes’ loyalty (‘asabiyya qabaliyya’) is still very influential. In addition, Muslim modesty laws are strictly adhered to in the country (AlShahri, 2009). In healthcare, practices in hospitals are determined by gender rules, and people usually demand same-gender healthcare providers (AlYaemni et al., 2013). Hospitals’ inpatient wards and outpatient waiting rooms are designed to completely separate women from men in order to eliminate gender mix, as required by sharia law.

There are three authorities that contribute in politics in KSA; each of these authorities exercises its duties independently and in cooperation with the others (AlTuraiqi, 2008). These authorities are the legislative, which has the power to make new laws; the executive, which executes orders and ensures that they have been implemented as proposed; and the judicial, which is responsible for interpreting and implementing laws in KSA (AlTuraiqi, 2008). However, all legislation should be reviewed and approved by the king.

As the political system in KSA is derived from the Islamic legislation, it necessitates the existence of a consultative (*Shoura*) council that could help the king make political decisions: ‘And those who answer the call of their Lord and establish worship, and whose affairs are a matter of counsel, and who spend of what We have bestowed on’ (Koran, Ash-Shûra:38).

The role of *Shoura* is to examine, evaluate, and revise any public or policy issues referred to it by the king. The majority of *Shoura* members are selected and appointed by the king, and they

play a vital role in political decision making in KSA. The public voice is also taken into consideration, and the *Shoura* council is responsible for making all the possible means to gather the required information in order to represent public opinion and ensure that its decisions are aligned with the public's interests and needs (AlTuraiqi, 2008). The mechanism for representing public opinion is through the debating members of the *Shoura* council (Montagu, 2015). Lay members were not allowed to attend *Shoura* meetings or participate in the debate; therefore, there are some doubts as to the democratic representation of public opinion in KSA (Montagu, 2015).

Nevertheless, KSA is experiencing many reforms, and recent legislation has been implemented to improve public rights. For instance, in 2003, the *Shoura* council implemented a direct channel with the public via the *Shoura* council website to receive opinions and concerns about different social and political issues (*Shoura* council, 2003). A committee in the *Shoura* council called Human Rights and Control Commissions was created specifically to collect and organise the issues raised into topics to be discussed in *Shoura* council meetings (*Shoura* council, 2003; Aliqtisadia, 2010). Furthermore, in 2008, lay members became allowed to attend *Shoura* meetings (Aliqtisadia, 2010). In 2011, in response to public voice on the importance of applying women's rights in KSA, women were given the chance to be members in *Shoura* council; in 2015, women in KSA were given the right to vote in the elections; and more recently, in late 2017, and as an initiative of applying Saudi Vision 2030 to hearing the public voice in KSA, women started receiving the right to driving licenses and to drive cars. These can be considered big steps in terms of the state's responsiveness to public opinion in policy-related issues.

### ***2.1.2 Health status of the Saudi population***

Public health and disease rates in Arab countries are due to their unique historical, social, cultural, and economic characteristics (Mokdad et al., 2014). Since 1970, the rapid change in living standards in KSA has led to considerable advances in overall health indicators; for example, there was an average drop in the infant mortality rate from 21.4 deaths per 1,000 in 1999 to 4.82 deaths per 1,000 live births in 2016 (WHO, 2015; MOH, 2016). According to the Department of Economics and Social Affairs at the United Nations, the average life expectancy rose from 39.1 in 1950 to 71.4 in 2004; it is estimated to reach 78.3 by 2050 (UN DESA, 2004). Table 2.2 summarises the mortality indicators in KSA for 2015.



Indicator	Rate
Mortality rate due to road traffic injuries per 100,000	25.5
Mortality rates by communicable diseases per 100,000	71
Mortality rates by non-communicable diseases per 100,000	549
Mortality (between ages 30 and 70, per 100,000) from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases	17

**Table 2.2: Mortality indicators in 2015**

**Source:** WHO (2015)

As stated earlier, some health concerns in KSA have arisen because of its social and cultural characteristics (De Nicola et al., 2015). The discovery of oil and the dispersal of wealth have led to a shift in the burden of disease (Memish et al., 2014). For instance, most people now own a car and so are less physically active than previously, leading to higher incidences of non-communicable diseases, as shown in Table 2.2, such as obesity, diabetes mellitus, and cardiovascular disease. Ischemic heart disease is now the main cause of death (16.4% of total deaths) in KSA (Mokdad et al., 2014; MOH, 2016).

Moreover, the location of KSA causes other critical health and safety issues. Specifically, the existence of the holy cities in KSA and the pilgrimage (hajj), which usually takes place in the 12th month of the Islamic year, contribute to the spread of disease, particularly diseases that native Saudi Arabians are not normally subjected to, such as malaria and meningitis. Although there are restrictions on participation in the pilgrimage, including health considerations, during hajj, massive numbers of people come together from all over the world and travel and stay together in close quarters, facilitating the spread of transmittable diseases. The most common transmittable diseases in KSA are malaria, schistosomiasis, and tuberculosis (AlYousuf et al., 2002). Incidences of these diseases rise during hajj season, but rates have been significantly reduced because of the recent mandatory protective services (vaccination programs) provided by the MOH to all pilgrims free of charge.

## 2.2 Summary

Since this research was conducted on KSA, this chapter has outlined the characteristics of KSA, including the demographic, economic, history, policy, and cultural contexts, that may have important consequences for the health status of the population. The following chapter will specifically focus on the health system implemented in KSA, including its goals, current structure, and functions.

## Chapter 3 Saudi health system in context

### 3.0 Introduction

This chapter identifies the concept of a national health system in general and the Saudi health system in particular. It discusses the various definitions of health systems, establishes the various associated goals of health systems and then sheds light on the health system of KSA by providing information about the Saudi health system's structure. After that, it discusses the Saudi health system's functions, including the health workforce and the health system finance. Finally, it concludes with the current challenges to the Saudi Arabian health system and its future direction in implementing a new health reform, 'New Model of Care'.

### 3.1 What is a health system?

Before examining the Saudi Arabian health system, it is important to define and explain the concept of health system. Arah et al. (2006), who proposed the conceptual framework for the Organisation for Economic Cooperation and Development (OECD) Healthcare Quality Indicators (HCQI), chose to distinguish between a *health* system and a *healthcare* system. They stated that the latter refers to personal healthcare services implemented under the direct control of recognisable agents (e.g. the MOH), whereas the former should be understood as broader in scope, encompassing all activities and structures associated with public health and pertaining to ensuring the health of the individual within a society (Berman & Bitran, 2011). According to the Institute of Medicine, public health activities include monitoring population health status, identifying the population's main health problems, and developing policies and laws to protect and promote health (IOM, 2003).

The WHO classifies a health system as 'all activities whose primary purpose is to promote, restore, and maintain health' (WHO, 2000, p.5). It must meet people's legitimate expectations, protecting them from the catastrophic costs of ill health and pursuing the primary aim of improving the population's health overall (WHO, 2000). Similarly, the Commonwealth Fund defines a health system as 'the ways in which healthcare services are financed, organised, and delivered to meet societal goals for health' (Papanicolas & Smith, 2013b, p.34).

Hsiao (2003) highlight the health system as a 'set of relationships where the structural components (means) and their interactions are associated and connected to the goals the system desires to achieve (ends)' (p. 4; Roberts et al., 2003). In addition, Atun and Menabde (2008) define it as a complex interaction between fundamental healthcare elements (healthcare organisations, pharmaceuticals) and national context (history, country structure, and governing institutions), thereby highlighting the importance of a country's context.

In summary, the definition of a health system is contested. There are many definitions, but they have similar features in common, such as maintaining health status, and some definitions have specific features not found in others. For this study, and as will be explained later in this chapter, KSA implemented and is still implementing many health reforms in order to improve the population health. According to Roberts et al. (2003), increasing public expectations are considered as a ‘major driving force behind health reform’ and have been classified as a core outcome of a good health system (p. 13). Thus, to meet the aim of this study, Hsiao (2003) definition has been selected as a foundation from which to address the complex issues affecting the Saudi health system and how the Saudi health system performs in terms of achieving the desired goal of meeting public expectations. More explanation about Hsiao (2003) and Roberts et al.’s (2003) definition of a health system and their proposed health system performance framework will be given in Chapter 5.

## **3.2 Health system goals**

Governments worldwide have recognised that health systems are integral to the smooth functioning of society. Healthy individuals produce a healthy society, which ultimately participates in enhancing the economic growth of the state. Consequently, many societies allocate very large budgets to support their stated goals. These goals vary between systems; for example, the NHS in the UK has three core principles, dating to its establishment in 1948: to meet the needs of everyone, to be free at the point of delivery, and to deliver care based on clinical need, not ability to pay (NHS Choices, 2015). On the other hand, in a health system where the services are not provided free of charge, such as the USA, the health system goals are different and more focused on ensuring affordable care to the public. For instance, the US Department of Health and Human Service (HHS) has several core goals, called HHS mission, including helping more Americans achieve the security of quality, affordable healthcare for themselves and for their families; keeping food and medical products safe; protecting against chronic and infectious diseases; and helping parents access affordable child care (HHS, 2015).

Health system goals can be intrinsic, instrumental, or cross-system, as detailed in the following sections, which focus particularly on the Saudi health system goals.

### ***3.2.1 Intrinsic goals***

Intrinsic goals can also be termed strategic goals. According to WHO (2000), a health system should have three intrinsic goals. The first is health status; it concerns the population’s average level of health and inequalities in the distribution of good health amongst the population. The second intrinsic goal is responsiveness, which denotes the ability of a health system to conform to a population’s legitimate expectations according to the state’s law and therefore is highly context-related. For example, ‘abortion on demand’ is only a legitimate expectation in some societies according to the law in these societies. In others, such as KSA, this procedure is considered wholly unacceptable (Hessini, 2007). Responsiveness in health systems also

proceeds from intention to ensure citizen satisfaction (Murray & Frenk, 2000). Finally, the third goal is to establish *fairness* in terms of *financial contribution* (Murray & Evans, 2006).

However, while fairness in a market mechanism is based on ‘you pay for what you get’, in social systems such as healthcare, education, and defence, fairness is measured on need and not ability to pay (Murray & Frenk, 2000, p. 719).

The MOH in KSA has three stated intrinsic goals, called the MOH mission, which are as follows:

1. To provide all levels of healthcare, enhance public health to all, and prevent diseases
2. To regulate the private and public health sectors while conducting research
3. To deliver academic training and promote health investment (MOH, 2015)

The first goal is consistent with the WHO (2000) intrinsic goals, while the second goal is set based on the ‘two-tiered’ characteristic of the Saudi health system. More details on the structure of Saudi health system are given in section 3.3.2. In response to the challenges related to the health workforce in KSA and after mandating the Saudi national health workforce ‘Saudisation’ (as described in section 3.3.3), the third goal focuses on providing training opportunities to the health workforce in order to enhance its medical and practical capabilities.

### **3.2.2 Instrumental goals**

Instrumental goals concern access to healthcare, public involvement, innovation in healthcare, and health system sustainability (Murray & Evans, 2006). Instrumental goals underpin intrinsic goals; for instance, the MOH in KSA has five instrumental goals – called the MOH Vision – designed to help it achieve its intrinsic goals:

1. Managing the health conditions or health status of Saudi inhabitants to the best and highest possible level in terms of justice and equality in providing healthcare and in terms of effectiveness and the possibility of incurring the financial burden of treatment and healthcare. The target is to meet citizens’ aspirations by providing them with high-quality general and specialised health services, offering these services to the entire population.
2. Creating a sole and exclusive entity to formulate health policies, including health insurance services (e.g. the Health Services Council).
3. Adopting a public and national health strategy focusing on the main morbidity burdens, including non-communicable diseases, nutrition, reproductive health, smoking (tobacco use), AIDS, traffic accidents, and injuries.
4. Employing an effective and fair method for estimating risks and benefits.

5. Diversifying sources of revenue to finance the system effectively. These sources must include public revenues and insurance premiums in addition to equally allocated costs (MOH, 2015).

The first point in the MOH vision is highly consistent with the WHO intrinsic goal, while the remaining four points come in response to a series of major challenges facing the healthcare sector worldwide, such as the issues related to the control of morbidity burdens (Tinetti & Fried, 2004), financing the accelerated expenses of healthcare delivery in, for example, OECD countries (Huber & Orosz, 2003), and the importance of applying optimal use of resources in healthcare sectors (Tinetti & Fried, 2004).

### ***3.2.3 Cross-systems goals***

Cross-system goals aim to achieve socially desirable outcome-focused goals related to educational attainment and improved productivity (Murray & Frenk, 2000). There are multiple social goals that several systems contribute to achieve, such as security, education, and health (Murray & Frenk, 2000). Therefore, as said earlier in Chapter 2, KSA put a great focus on achieving social goals related to security and defence, education, and health and used huge budgets (35% of the total government budget) from the state's revenues to fund these public services (Ministry of Finance, 2017). An important cross-system goal for the health system is how it helps or hinders education and economic production since evidence suggests that improvements in healthcare could enhance the state's economic growth (Sacks & Gallup, 1999).

However, this type of goal has frequently been excluded from health system performance assessments due to its complexity and concerns about cross-system interactions (Murray & Frenk, 2000). The cross-system interactions are beyond the scope of this study, as we first have to establish the individual systems, characteristics, and features before investigating the cross-system one. This study is one of the first to do this for health. As other systems (e.g. education) get examined, we will be in a better position to examine cross-system goals and interactions, which are an interesting area for multidisciplinary further research.

## **3.3 The health system of Saudi Arabia**

### ***3.3.1 History of the Saudi Arabian health system***

Over the past century, the health system in KSA has been subject to several reforms. The first step in providing formal healthcare services occurred in 1925 in KSA, when King Abdulaziz signed a royal declaration establishing the first public health department in the holy city of Makkah (Mufti, 2000; AlMalki et al., 2011), with the aim of sponsoring and monitoring free-of-charge healthcare services to the general population of KSA, visitors to Makkah, and hajj pilgrims. This department established several hospitals and healthcare centres; however,

because money was lacking within the system, the development of healthcare services was very slow (Mufti, 2000).

Twenty-five years later, a major health reform occurred after another royal decree established the Saudi Arabian MOH. Since 1938, and after the discovery of oil, KSA has provided Saudi and non-Saudi national populations with the right to seek healthcare services free of charge (Kronfol, 2012; Mufti, 2000). From 1970 onwards, the government, through the Ministry of Economy and Planning, started to introduce five-times-yearly Strategic National Development Plans (NDPs). The NDPs aim to improve entire government sectors (e.g. education, housing, trade, and the health system) and need to be approved by the *Shoura* council. For instance, many administrative reforms have been implemented, including restructuring the MOH organisation and regulations. In addition, efforts have been implemented to strengthen quality assurance in healthcare facilities located in KSA through quality accreditation projects (WHO, 2006).

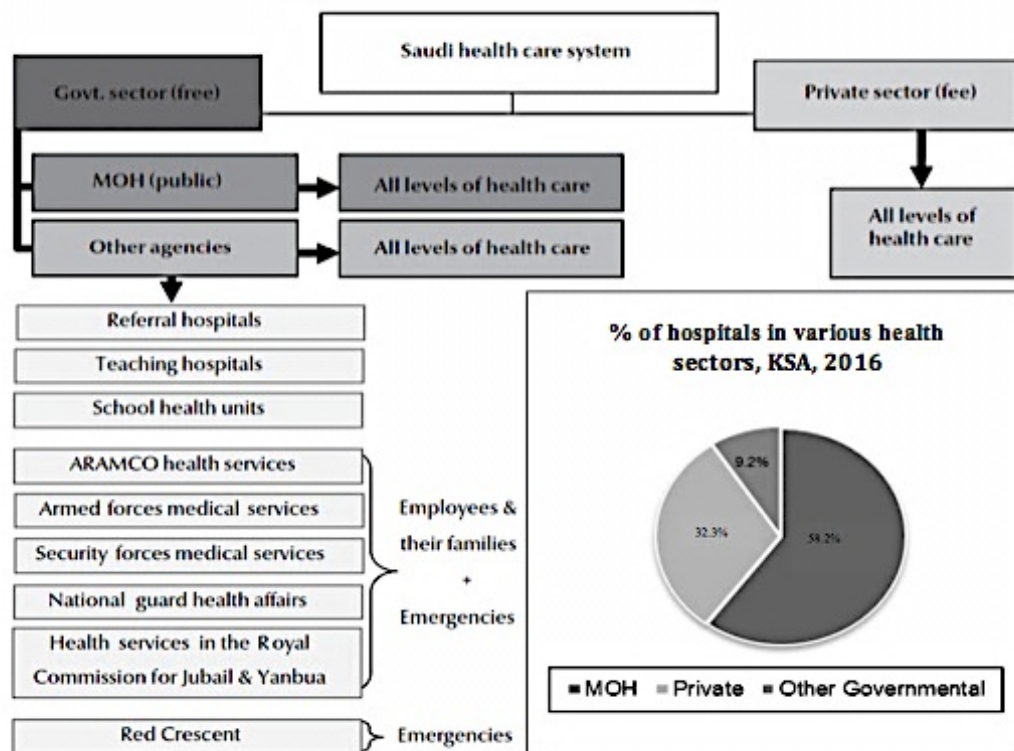
In 1999, as a response to issues over healthcare availability and equality of access, a new financial scheme was issued by royal decree, called the Cooperative Health Insurance (CHI) Act. This was intended to implement and monitor health insurance practices in KSA (AlMasabi, 2013). The CHI scheme significantly increased private sector involvement in healthcare provisions in KSA, with the aim of increasing access to care and reducing the pressure in public sectors. The public sector was responsible for providing healthcare services in situations where private service delivery was inappropriate, unavailable, or inaccessible, and the reverse also applied (AlSharqi & Abdullah, 2013). Implementation of the health insurance program began in late 2006, and 5 years later there were 8.3 million insured individuals (which represented around 28% of the total population), 2,147 accredited healthcare providers, and 26 certified health insurance companies (Barakah & Alsaleh, 2011).

The Saudi government planned to implement CHI in three stages. The first stage was to cover Saudi and non-Saudi citizens working in the private sector; this stage was completed in late 2006 (AlSharqi & Abdullah, 2012; AlKhamis, 2013). The second and third stages, which include covering government workers and pilgrims, are still pending (AlSharqi & Abdullah, 2013), and both government workers and pilgrims are currently receiving care free of charge through MOH. The reason for abandoning the second and third stages of CHI is the plan for implementing an alternative reform, which will be explained in further details in section 3.4.

### ***3.3.2 The current structure of the Saudi health system***

The current Saudi Arabian health system is comprised of two sectors: the government sector and the private sector. Figure 3.1 shows the current structure of the healthcare sectors in KSA, and an explanation of each sector is given in the following sections.

The health system is centrally controlled and managed by the minister of health; thus, the administration of the healthcare sector is subject to change based on the incumbent minister's management style and political persuasion. It is expected that this situation will not endure in the subsequent health reform. In the new health reform, there are several strategic plans that aim to decentralise Saudi health system, which would be achieved by privatising healthcare sector; this will be explained later in this chapter. The following sections provide the most recent relevant statistics from MOH sources.



**Figure 3.1: The current structure of the healthcare sectors in KSA**

**Source:** Adapted from AlMalki, 2011; MOH, 2016

### 3.3.2.1 *Government sector*

The MOH and other government agencies manage and finance the government health sector. As will be explained later in section 3.3.4, MOH receives its annual budget from the Saudi government. The MOH is the main healthcare service provider and financier; it is responsible for around 60% of total healthcare services in KSA (Yusuf, 2014). Currently, there are 20 health affairs directorates dispersed throughout KSA (MOH, 2016) responsible for maintaining and managing healthcare services in the region and for providing annual statistical data to the MOH.

The MOH provides three levels of care: primary care provided in healthcare centres, secondary healthcare provided in general hospitals, and tertiary healthcare delivered at specialist hospitals (AlYousuf et al., 2002). The highest number of primary healthcare (PHC) centres is in Riyadh (424) and Aseer (249), and in total, the MOH operates 2,325 PHC centres (MOH, 2016).

Between 2012 and 2016, MOH hospitals and beds increased by 6% (274 hospitals) and 15.3% (41,297 beds), respectively (MOH, 2016).

Other government agencies, sometimes called quasi-governmental agencies, such as teaching hospitals and National Guard hospitals, provide healthcare services at all levels for specific groups within the population (mainly government agency employees and their dependants). In 2016, there were 11,449 hospital beds provided by government agencies other than the MOH, representing 18% of total bed provisions in KSA (MOH, 2016). This provision was for 44 hospitals (MOH, 2016). Crucially, in cases of crisis or emergency, all other government hospitals are obligated to provide healthcare to all Saudi Arabian citizens (Mufti, 2000; AlMalki et al., 2011).

### 3.3.2.2 *Private health sector*

The Saudi private health sector is a significant provider of healthcare services, especially for secondary care services. Table 3.1 shows the number of hospitals and beds in the MOH, other governmental hospitals, and the private sector in KSA in general and the Eastern Province in particular. Between 2012 and 2016, the number of private secondary hospitals rose from 137 to 152 hospitals (MOH, 2016). There are also 2,249 private primary care clinics in KSA, the majority located in Riyadh and Jeddah, comprising 34.5% and 16.9% of the total number, respectively (MOH, 2016). In the Eastern Province, there are 251 private PHC centres, comprising 9.24% of the total number in KSA (MOH, 2016).

<b>Sectors</b>	<b>Number of PHC centres in KSA / Eastern Province</b>	<b>Number of hospitals in KSA / Eastern Province</b>	<b>Hospital beds in KSA / Eastern Province</b>
<b>MOH</b>	2,325/ 251	274/ 18	41835/ 3256
<b>Other government hospitals</b>	44/ 6	44/ 6	11581/ <sup>-1</sup>
<b>Private sector</b>	65/6	152/ 20	17428/3816
<b>Total</b>	2434/263	470/ 44	70844/7072

**Table 3.1: Number of hospitals and beds operated by different sectors in KSA and the Eastern Province, 2016**

**Source:** Adapted from MOH, 2016

<sup>1</sup> Number of hospital beds at other government hospitals in Eastern province is not available in the MOH statistical yearbook, 2016.



### 3.3.3 Health workforce

It stated that there are currently 89,675 doctors in KSA; 48% are employed by the MOH, 19% in other governmental hospitals, and 33% in the private sector (MOH, 2016). Therefore, as of 2016, there were 2.83 doctors per 1,000 people in KSA (MOH, 2013) compared to 2.8 doctors per 1,000 people in the UK and 1.295 per 1,000 people in other Middle East and North African countries (World Bank, 2016). The total number of nurses in 2016 was 180,821, of which 56% were employed by MOH, 21% were in the other-governmental hospitals, and 23% were in the private sector. In 2013, there were 2.2 nurses for every physician employed at MOH facilities in KSA compared to 1.3 nurses for every physician in the Eastern Mediterranean Region and 1.8 nurses for every physician globally (MOH, 2013).

The health workforce is a critical concern within the Saudi Arabian health system. Staff turnover has been very high because most employees are expatriates who work in KSA for a set number of years and then return to their home country (AlMalki et al., 2011). In 2009, the total number of physicians working in MOH hospitals was 18,086, and only 21.6% were Saudis. Of the total number of nurses working in MOH hospitals in 2009 (44,719), 46.9% were Saudi (MOH, 2013). The situation in the private sector is extreme, with only 173 Saudi physicians out of 10,040 working in it (MOH, 2013), making the proportion of the Saudi workforce in the private sector minimal.

To address this, the MOH has implemented a new policy to increase Saudis in the workforce, known as ‘Saudisation’ (AlYami & Watson, 2014). This policy aims to provide a more stable workforce by mandating the hospitals to hire more Saudi-national healthcare providers, including doctors, nurses, and allied health professionals, and to eliminate the dependence on non-Saudi national health workforce. The actual numbers of healthcare providers with the percentage of Saudis, including doctors, nurses, pharmacists, and allied health professionals working in MOH, other-governmental, and private hospitals are given in Table 3.2.

During the 5-year period from 2012 to 2016, the proportion of Saudi Arabian doctors employed by the MOH increased from 25.4% to 33.4% of the total doctors. There was also an increase in the proportion of Saudi Arabians nurses between 2012 and 2016, rising from 55.3% in 2010 to 57.6% in 2013 (MOH, 2016). However, the private sector is still unattractive to Saudi national health professionals, and based on the latest statistics, only 3.3% of the private doctors are Saudis (MOH, 2016), making the proportion of the Saudi workforce in the private sector minimal.

Health workforce	MOH	Other governmental hospitals	Private	TOTAL
Physicians	42,768	17,206	29,701	89,675
(Saudis %)	(33.4%)	(50.5%)	(3.3%)	(26.7%)

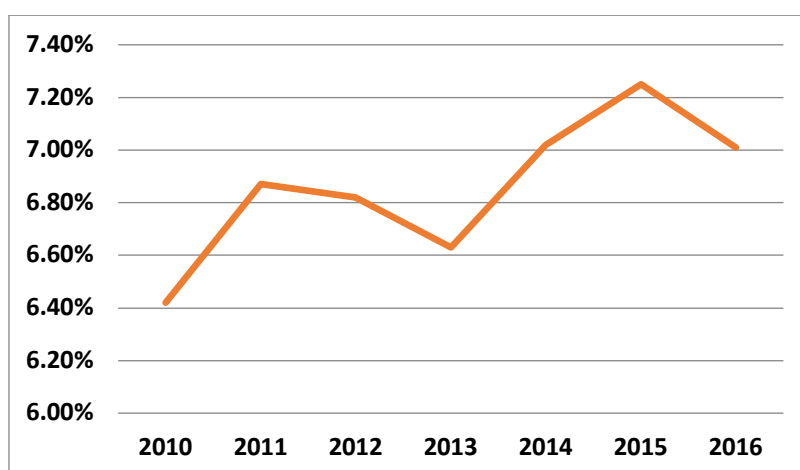
Health workforce	MOH	Other governmental hospitals	Private	TOTAL
Nurses (Saudis %)	101,256 (57.6%)	36,927 (14.9%)	42,638 (5.3%)	180,821 (36.5%)
Pharmacists (Saudis %)	3,525 (91.5%)	2,285 (65.1%)	19,309 (4.2%)	25,119 (22.0%)
Allied health professionals (Saudis %)	57,474 (93.2%)	29,871 (70.0%)	19,978 (29.9%)	107,323 (74.4%)

**Table 3.2: Health workforce distribution by nationality and health sector, KSA, 2016**

**Source:** Adapted from MOH, 2016.

### **3.3.4 Health system financing**

Most Western countries that offer free-of-charge national health services, such as the UK, Italy, and Spain, fund healthcare through taxation (Polikowski & Santos-Eggimann, 2002). However, such a taxation scheme has not been implemented yet in KSA. Therefore, the MOH receives its annual budget from KSA's general revenues, mainly generated from revenues from oil exports (Bahgat, 2016; Alkhamis, 2017); this is considered a 'cornerstone of health resources' (MOH, 2013, p. 42). Every financial year, the Saudi government announces specific budgets for public services, including the health sector. The process of allocating budgets usually takes place after the government announcement of the budget generated from oil exports. Every ministry is required to prepare a financial document explaining the required estimated budget to cover the expenses of services it offers, including staff wages and future developmental investment costs. Then the king, with the support of the council of ministers as well as the *Shoura* council, makes the decision as to the percentage to be allocated to each public sector (MOF, 2011). In 2013, around 6% of the government budget was devoted to MOH. MOH services, which accounted for 82.9% of total health expenditure in 2010, was expected to rise by an average 10% annually between 2012 and 2016 (Walston et al., 2008). However, in 2016, the budget of MOH reached SR 58.9 billions amounting to 7.01% of total governmental budget, equivalent to a decrease of SR 3.4 billion (0.24%) from the allocated financial resources of 2015 (MOH, 2016). As shown in Figure 3.2, there was a continuous increase in the allocated financial resources for healthcare in KSA, except in 2016 where the state started cutting costs in order to respond to the significant financial shortage in KSA.



**Figure 3.2: Percentage of budget Appropriations for the MOH in relation to Saudi government budget (2010–2016)**

**Source:** Adapted from MOH, 2016

With regards to the finance of the private healthcare sector, prior to the implementation of the CHI scheme, it relied mainly on big companies offering health insurance voluntarily to their employees as recruitment allowances and individuals capable of paying up front or what is called out-of-pocket expenses, where the latter was the major source of private-sector expenditure (Mufti, 2000; AlKhamis, 2013). After the initiation of CHI, money received by insurance companies contributed much to financing the private health sector in KSA (AlKhamis, 2013). However, according to the World Health Organisation’s (WHO) Global Health Expenditure Database, in 2015 out-of-pocket payments in KSA constituted a significant percentage (14.3%) of total expenditure on health. This number is quite high relative to similar countries that provide free-of-charge health services, e.g. the UK, where the out-of-pocket expenditure rate is 9.3% (WHO, 2015). This indicates patients in KSA are still facing high out-of-pocket expenses despite extensive government facilities and the implementation of health insurance. Table 3.3 shows the healthcare expenditure in KSA in 2015.

<b>Indicator</b>	
Total expenditure on health as % of GDP	8.2
Per capita total expenditure on health at average exchange rate (US\$)	1147
General government expenditure on health as % of government expenditure	8.2
Out-of-pocket expenditure as % of total health expenditure	14.3

**Table 3.3: Health expenditure, KSA, 2015**

**Source:** WHO Regional Health Observatory 2015, <https://rho.emro.who.int/rhodata/node.main.A20?lang=en>

### **3.4 The new Saudi health reform**

Following the implementation of CHI for all workers in the private sector in Saudi Arabia, private healthcare providers were unable to cope with the huge increase in demand for healthcare services (MOH, 2010). In addition, as said earlier in Chapter 2, KSA is experiencing a real financial challenge, especially after the fall in the price of oil, which is the main source for financing public services (Alkhamis, 2017). Therefore, in order to enhance accessibility to healthcare in KSA and to reduce the financial burden on the MOH, a new health reform called 'New Model of Care' was proposed. The new reform is under the umbrella of Saudi Vision 2030, which aims to cut the cost of the governmental sector, enhance public services for the Saudi national population, and provide adequate healthcare coverage equivalent to current and future healthcare demand (MOH portal, 2017). The new model basically increases the role of the private sector in delivering healthcare in KSA, with the MOH intending to move the ownership of public health facilities to other companies through privatisation.

In addition, the New Model of Care aims to produce a series of initiatives that will develop preventive health interventions in Saudi society to maintain health rather than merely treat disease. The aim of these interventions is to ensure that the roles of the individual and society and its institutions are integrated with the service provided to achieve better health outcomes for Saudi society (MOH portal, 2017). The health interventions announced include raising taxes on sugar-sweetened beverages and tobacco products and mandating healthy meals at schools. The implementation of these interventions started in late 2017.

After the implementation of the new health reform, the MOH will no longer be responsible for the operation of government healthcare facilities. The MOH partnered with the Council of Economic and Development Affairs and 18 government entities and introduced 755 initiatives in various economic, development, and social fields (MOH portal, 2017). The companies will use the MOH's existing human and non-human resources and will be responsible for the ownership, operation, and organisation of the public healthcare facilities (MOH portal, 2017).

These government health services will continue to be monitored and financed via the MOH even after the implementation of the new health reforms in order to ensure the best health outcomes (MOH portal, 2017). However, the mechanism of the financing system and the move towards privatisation is still unclear (Alkhamis, 2017). MOH is in the process of developing budgetary policies and the selection criteria for the companies that will be responsible for the ownership of government health services.

The MOH's vision of providing free-of-charge health services to its national citizens and pilgrims at the point of access is still continuing. The patient flow in receiving healthcare services should not be affected by the new health reform (Alkhamis, 2017).

### ***3.4.1 The Saudi health system: Challenges and future reforms***

In the WHO 2000 World Health Report, the Saudi health system ranked 26th amongst the 190 recognised health systems worldwide (AlMalki et al., 2011). Despite the fact that ranking indicates many improvements in the system, numerous obstacles remain, including financing and expenditure, the composition of the health workforce, and changing patterns of disease occurrence, from communicable to non-communicable diseases (AlMalki et al., 2011; AlMasabi, 2013).

More specifically, offering services free of charge places significant demands on government healthcare services; free service creates long hospital waiting lists, which negatively affect patients' healthcare outcomes and result in dissatisfaction among patients and hospital staff, poor quality patient care, and inefficient use of healthcare resources (AlOmar, 2000). An additional financial pressure in KSA is the provision of free-of-charge health services for people visiting its holy cities for hajj. Around 5 million pilgrims visit Makkah and Medina annually to perform hajj, and the Saudi Arabian government must plan extensively to provide them sufficient healthcare (AlMasabi, 2013).

The MOH imposes strict health requirements on pilgrims to ensure they are in adequate health, and the MOH operates centres for disease control at entry points. These centres are equipped with highly qualified health workers who provide pilgrims with therapeutic and preventative services, including vaccines and preventative drugs. Moreover, public safety at the hajj also causes significant financial and logistical difficulties, as exhibited in September 2015, when around 800 people were crushed to death and more than 800 injured in KSA (Harrison & Dehgan, 2015). In 2016, the MOH provided eight seasonal hospitals and 112 seasonal PHC centres and recruited 24,900 healthcare workers to provide services exclusively during the hajj season (MOH, 2016).

The KSA health system is also impeded by the current structure of the healthcare workforce. As mentioned above, staff turnover is high (AlMalki, 2011), and language barriers result in poor professional-patient communication between expat staff and Saudi patients, which also negatively affects healthcare quality (Yusuf, 2014). This issue will be discussed in further detail in Chapters 6 and 8.

As explained in Chapter 2, there has been an alarming rise in the prevalence of non-communicable diseases in KSA, including diabetes, hypertension, and heart disease (Kronfol, 2012), placing an uncontrollable burden on healthcare expenditure, especially when considering that treatments for some chronic diseases are largely ineffective (Al-Qurashi, 2008). For example, in 2011, the annual cost for the treatment of diabetes mellitus in KSA was \$1.87 billion (AlMalki et al., 2011). The control of these chronic diseases would increase the population's quality of life and lifespans in KSA, but these may not be the government's most

important goals: people with long-term conditions, even well-controlled ones, become a drain on the finances.

The Saudi Health Care model was designed to address these financial and disease-related challenges. The main proposed policy is, as said earlier, boosting the private healthcare sector's participation in healthcare delivery. Moreover, new policies are being implemented to shift the MOH from a centralised to a decentralised system, placing the population under the responsibility of certified companies in all cities and regions of KSA. This strategy is intended to reduce the burden on MOH to manage the huge number of healthcare facilities, which are distributed all over the country in order to ensure better organised and more efficient healthcare delivery. As said earlier, the Saudi New Model of Care's goal is to reduce the prevalence of non-communicable diseases in KSA.

However, the mechanism of the new reforms is still unclear. Although there are promises that patient flow will not be affected and that healthcare will continue to be offered free of charge, some Saudi experts have raised concerns about the reforms' influence on access, especially for the most vulnerable groups (Alkhamis, 2017). Thus, it has been recommended that the reforms be partially implemented first to assess their successfulness before approaching hospitals to undergo privatisation (Alkhamis, 2017).

### **3.5 Summary**

This chapter shed light on the concept of a health system and focused on the health system of KSA, describing its structure, workforce, financing, and the current challenges facing it. A brief overview of its future direction was also provided. This will help the reader to understand the detail related to the public attitudes towards the Saudi health system in Chapters 6, 8, and 11.

## **Chapter 4 Public attitudes towards health Systems: Measures and implementation**

### **4.0 Introduction**

This chapter provides a critical and in-depth analysis of the different measures of public attitudes and opinions that have been utilised in previous literature and the various methods used to implement these measures. It concludes with an exploration of intervening cognitive factors, such as expectations, that influence public attitudes towards the health system.

### **4.1 Measures of public attitudes towards health systems**

This section provides a comprehensive overview of the ways in which public attitudes are measured by researchers around the world.

As this study seeks to examine the general population rather than specific subgroups, this chapter includes only surveys that have assessed broad public attitudes towards health systems. This means that surveys specific to particular diseases, such as diabetes (e.g. National Survey of Patients with Diabetes (Harris et al., 2007) or heart disease (e.g. Coronary Heart Disease Survey conducted by Healthcare Commission, 2004), are excluded because they do not apply to the wider population. Similarly, surveys that are designed to assess the health status of individuals and their health behaviours are excluded, such as Health Survey for England (Craig et al., 2015). This is because these surveys do not directly address whether individuals are satisfied with the health system and health policy. Finally, this thesis does not target people with specific demographic characteristics; excluded are surveys that include only particular segments of the population based on demographic factors, such as age (e.g. the Commonwealth Fund International Health Policy Survey for older adults; Commonwealth Fund, 2014). Overall, this means that this review has three exclusion criteria, omitting studies that are disease-specific, health attitude– and behaviour-related, and demographic-specific.

A number of inclusion criteria for surveys reviewed in this section were also set. Only publicly available surveys administered in English are included, but these surveys could be either national or international in order to avoid reliance on country-specific measures of public attitudes towards health systems and to provide a comprehensive overview of the measures that have been utilised in the literature to assess this complex topic. Table 4.1 explains the selected international, national, and researcher surveys in terms of the methods used and the key papers that reported the selected surveys in this review.

Name/Author	Year(s)	Survey type	Methods						Key publications
			Setting	Data collection	Target population	Sample size	Sampling technique	Survey validity	
<b>The Commonwealth Fund International Health Policy Survey</b>	1998–	International survey	Canada, Australia, USA, New Zealand, UK, Germany, Netherlands, France, Norway, Sweden	Telephone interview	Adults aged 18 and over	In 2013: 15,543 In 2016: average country sample ranged from 1,000 to 7,124	Random probability sampling	Yes	Osborn et al., 2016 Schoen et al., 2013; Thomson et al., 2011 Schoen & Doty, 2004 Schoen et al., 2009 Blendon et al., 2003 Blendon et al., 2002
<b>World Health Survey (WHS)</b>	2000–2004	International survey	70 countries, including Africa (19 countries), the Americas (7 countries), Europe (30 countries), Eastern Mediterranean (4 countries), and South-East Asia (5 countries).	Face-to-face interviews	Adults aged 18 and over	300,000	Random probability sampling	Yes	Wagner et al., 2011 Ustün et al., 2003 Gouveia et al., 2005
<b>British Social Attitudes (BSA) survey</b>	1983–	National survey	England, Scotland, and Wales	Face-to-face interviews (60 mins)	Adults aged 18 and over	In 2015, the survey consisted of 4,328 interviews	Random probability sampling	Yes	Gershlick et al., 2015; Appleby & Robertson, 2016 Blendon & Donelan, 1989; Smyth et al., 2014; Appleby et al., 2015; Appleby, 2012
<b>Health Confidence</b>	1995–	National survey	USA	Telephone interviews	Individuals age 21 and over	1,000	Random digit dialing with a cell phone	Yes	Helman, 2004; Forstin 2004; Helmen &



Name/Author	Year(s)	Survey type	Methods						Key publications
			Setting	Data collection	Target population	Sample size	Sampling technique	Survey validity	
Survey (HCS)					older		supplement was used to obtain a representative cross section of the US population	Fronstin, 2006 Forstin, 2012, Blendon et al., 2006; Blendon et al., 2006	
Performance Evaluations, Trust and Utilisation (PETU) Healthcare in China Survey	2013	National survey	China	face-to-face interviews	Age 18 to 70 residing for more than 30 days in family dwellings in all 31 provinces.	3,684	GPS – assisted area sampling method to project a grid onto 2855 counties, county-level cities or urban districts of the same status	Duckett et al., (2013), Munro & Duckett, 2015  Yes	
HCiC survey	1998–	National survey	Canada	Online survey questionnaire	Age 18 and older	1,000		Sokora 2007; Soroka, et al., 2011; Sokora, 2013; Nemis-White et al., 2014  Not stated	
Alberta health survey	1995–2004	National survey	Alberta/Canada	Telephone survey.	Age 18 and older	4,000	The PRL's computer assisted telephone interviewing system	Northcott and Northcott, 2004; Northcott and Harvey, 2012; Nurullah et al., 2014  Yes	

Name/Author	Year(s)	Survey type	Methods						Key publications
			Setting	Data collection	Target population	Sample size	Sampling technique	Survey validity	
<b>Jado et al., (2014)</b>	2014	Researcher survey	Turkey	Self-administered household survey	At least 18 years old or older when health reform process began since 2003	482	Multistage sampling technique	Not stated	N/A
<b>Balabanova (2012)</b>	2010	Researcher survey	Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Moldova, Russia, and Ukraine	Cross-sectional household survey	Age 18 and older	A range of 2000 respondent in each country. The total sample size was 16,200	Multistage stratified random sampling	Yes	Footman et al., 2013
<b>Hardie &amp; Critchley 2008</b>	2008	Researcher survey	Australia	Cross-sectional national telephone survey	Age 18 and older	800	Computer-assisted telephone interview	Not stated	N/A
<b>Mastilica &amp; Chen (1998)</b>	1998	Researcher survey	Croatia	Not stated	Age 18 and older	562	Not stated	Not stated	N/A

**Table 4.1: An overview of the design and methods of included public opinion surveys**

Source: The author; Garrat et al., 2008

This section sets out the range of measures used to capture public attitudes towards health systems and health policy. It seeks to compare similarities and differences between the surveys, which contributed to the construction of the survey instrument for this thesis. After selecting the included measures, we referred back to the included surveys in this review and used the same question wording to develop the constructed survey of this thesis when applicable (see Chapter 9). A full analysis of international surveys is provided in the next section (4.2), along with a condensed analysis of the national and research-based surveys. For a complete analysis of the national surveys, see Appendix II, and for a full examination of independent research, see Appendix III.

## **4.2 International surveys**

Based on the inclusion criteria given in the previous section, two international surveys were found: the Commonwealth Fund International Health Policy Survey and the World Health Survey (WHS; WHO, 2003). Each will be examined in the following paragraphs.

### ***4.2.1 The Commonwealth Fund International Health Policy Survey***

This biennial survey is funded by the Commonwealth Fund, a private foundation that provides funding for research on healthcare issues and is designed to improve healthcare policy and practice in the following industrialised countries: Canada, Australia, the USA, New Zealand, the UK, Germany, Netherlands, France, Norway, and Sweden. The Commonwealth Fund runs this survey across many developed countries and makes cross-country comparisons.

The survey themes are usually updated to capture recent trends in healthcare, health issues, and health reforms, such as the cost of healthcare, but some areas are kept largely the same; these core concepts include overall views of the health system, access to care, primary care, and coordination. For instance, in 2011, sections related to the health system were overall views of the health system, access to care, coordination, doctor-patient relationship, prevention and health promotion, information technology practice, patient safety, and primary care (Commonwealth Fund, 2011). In the 2013 survey, these sections were slightly changed and included overall views of the healthcare system, access and primary care, use of specialists, experiences with care in the hospital and Emergency Department (ED), healthcare coverage, out-of-pocket costs and medical bills, prescription and drug use, dental care, medical errors, and preventive care (Commonwealth Fund, 2013). In the 2016 survey, two additional sections related to population health were added to the previous surveys: health status and chronic illness care and social context and behavioural factors affecting health (The Commonwealth Fund, 2016).

As mentioned in Chapter 1, the Commonwealth Fund International Health Policy Survey is one of the largest international surveys designed to improve healthcare policy and practice in industrialised countries; it includes around 100 items. The questionnaire is challenging to follow

because some sections are not written in English, some questions are country-specific, and some of the items are specific to gender, age, or disease. Figure 4.1 shows a screenshot of the questionnaire. However, it has many questions that can be adequately utilised widely and in any country, including access and experiences of care, doctor-patient relationship, and coordination.

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(IHP 2010 Q1355)  
 (Netherlands translation -- Per MF the following was added as part of qn text "Hiermee bedoelen we alleen de EHBO of spoedeisende hulp en niet de huisartsenpost.")  
 (Translation for FRANCE --interviewer note text slightly modified per 2013's IPSOS review)  
**BASE: HAS USED ER IN PAST 2 YEARS (Q1350=1-97)**  
 Q1355. [IF AUS, CAN, NZ, GER, NETH, FR, NOR, SWITZ (Q600=1,2,3,6,7,8, 9,11) DISPLAY:  
 "The last time you went to the hospital emergency department, how long did you wait before being treated?"  
  
 IF UK (Q600=4), DISPLAY: "The last time you went to the hospital Accident and Emergency Department, how long did you wait before being treated?"  
  
 IF US, SWE (Q600=5,10), DISPLAY: "The last time you went to the hospital emergency room, how long did you wait before being treated?"]  
  
 (INTERVIEWER: DO NOT READ LIST)  
 (INTERVIEWER: PROBE FOR BEST ESTIMATE IF UNSURE.)  
 23/15\_10(1775\_10)  
 23/15 1 Less than 30 minutes  
 (1775) 2 30 minutes to less than 1 hour  
 3 1 to less than 2 hours  
 4 2 to less than 3 hours  
 5 3 to less than 4 hours  
 6 4 to less than 5 hours  
 7 5 to less than 8 hours  
 8 8 hours or more  
 9 (DO NOT READ) Never treated/Left without being treated  
 23/24 8 (DO NOT READ) Not sure  
 (1784) 9 (DO NOT READ) Decline to answer  
  
 (IHP 2010 Q1385)  
**BASE: ALL QUALIFIED CANADA RESPONDENTS (Q99=1 AND Q600=2) AND HAS REG PLACE/DOCTOR AND HAS USED ER IN PAST 2 YEARS AND WAS TREATED (Q1135=1,2 AND Q1350=1-97 AND Q1355=1-8, DD, RR)**  
 Q1385. After your visit in the hospital emergency department did the doctors or staff at the place where you usually get medical care seem informed and up-to-date about the care you had received in the hospital emergency department?  
  
 23/25 1 Yes  
 (1785) 2 No  
 3 (DO NOT READ) Did not see regular doctor after ER  
 8 (DO NOT READ) Not Sure  
 9 (DO NOT READ) Decline to Answer

**Figure 4.1: A screenshot of the Commonwealth Fund International Health Policy survey, 2013**

**Source:** Commonwealth Fund, 2013

#### ***4.2.2 World Health Survey (WHS)***

The World Health Survey was designed and implemented by WHO between the years 2000 and 2004 to generate information on the health of adult populations and to elicit their assessment of their health system's performance and responsiveness. Seventy countries participated in this international survey, including Africa (19 countries), the Americas (seven countries), Europe (30 countries), Eastern Mediterranean (four countries), and South-East Asia (five countries). As given in Table 4.1, the total sample included over 300,000 individuals.

The survey has two versions, the household and the individual-level versions, and it includes several sections to evaluate people's health status. The individual-level version includes a separate section called 'health system responsiveness'. The section includes several themes, such as the need for healthcare and general evaluation of the health system; reasons for seeking healthcare services; difficulties in dealing with private care organisations; satisfaction with outpatient home care and inpatient care; the importance of being treated with respect; the importance of keeping personal information confidential; the importance of being involved in the decision-making process; clarity of communication; and the quality of surroundings. In addition, this section includes some questions to assess equity in healthcare provision based on gender, age, socio-economic class, and ethnicity.

WHS is comprehensive, and it has been conducted worldwide but not in KSA. The participants included in this survey were from both low-income and high-income countries, and it includes people from different socio-economic classes. The survey includes useful questions to assess public opinion of the health system's performance in general and its responsiveness to the public's needs in particular; it is considered one of the best available global health surveys (Witvliet, 2014). The survey includes items similar to the Commonwealth Fund, such as public satisfaction with the health system. It also includes unique items related to the importance of different aspects of the system from the public's point of view. For example, it asked the participants about the importance of the quality of their surroundings, their involvement in decision-making processes, and short waiting times to see the doctor. It provided clear instructions for the interviewers, with some examples for each aspect in this section to ensure participants' understanding of each area. On the other hand, as with the Commonwealth Fund survey, the WHS is long, including around 120 items, and it includes several sections assessing participants' health status. The focus here was only on the sections related to the participants' opinion of the health system.

### 4.2.3 Overview and critical evaluation of international surveys

International surveys are typically constructed by well-known organisations with large groups of experts and researchers and have a high standard and a solid evidence base, making them an ideal foundation for constructing a new instrument. International surveys are also designed to be implemented in various countries, which means that they could also be adapted for use in previously un-surveyed countries, such as KSA.

Depending on the different healthcare trends and policies implemented in each country, the main themes that emerge have changed over time and between countries. The primary themes that emerge from the international surveys are (i) access to care; (ii) satisfaction with the health system performance; (iii) satisfaction with different types of healthcare services, including inpatient, outpatient, and emergency services; (iv) healthcare coverage and out-of-pocket expenses; and (v) quality of care (see Table 4.2).

Theme	The Commonwealth Fund International Health Policy Survey, 2013	WHS (WHO, 2003)
Access to care	<ul style="list-style-type: none"> <li>• Getting an appointment with a doctor the same or next day when sick</li> <li>• Getting access without going to the emergency room</li> <li>• Easy access to care during evening, weekend, or holidays</li> </ul>	<ul style="list-style-type: none"> <li>• Importance of short travel times and convenient access to healthcare facilities</li> <li>• Reasons for inability to access healthcare when needed</li> </ul>
Satisfaction with the health system performance	<ul style="list-style-type: none"> <li>• Satisfaction with the way healthcare runs in the country</li> </ul>	<ul style="list-style-type: none"> <li>• Satisfaction with the way healthcare runs in the country</li> <li>• Deciding what services it provides and where it provides them</li> <li>• Difficulties in dealings with private healthcare organizations or the government</li> </ul>
Satisfaction with different types of healthcare services, including inpatients, outpatients, and ER services	<ul style="list-style-type: none"> <li>• Waiting time for elective surgery</li> <li>• Follow-up care after hospital discharge</li> <li>• Waiting time to see the doctor at ER</li> </ul>	<ul style="list-style-type: none"> <li>• Adequacy of healthcare provider's skills for the participant treatment</li> <li>• Adequacy of healthcare provider's equipment for the participant treatment</li> <li>• Adequacy of healthcare provider's drug supplies for treatment</li> <li>• Waiting times to see the doctor</li> </ul>
Healthcare coverage and out-of-pocket expenses	<ul style="list-style-type: none"> <li>• The amount of out-of-pocket expenses for medical care</li> <li>• Difficulty in paying medical expenses</li> </ul>	<ul style="list-style-type: none"> <li>• The amount of out of pocket expenses for medical care in the last 4 weeks excluding the insurance reimbursements</li> <li>• The amount of out-of-pocket</li> </ul>

Theme	The Commonwealth Fund International Health Policy Survey, 2013	WHS (WHO, 2003)
	<ul style="list-style-type: none"> <li>• Frequency of insurance refusal to cover medical expenses</li> </ul>	expenses for inpatient care, medications, traditional healers, formal healthcare providers in the last four weeks <ul style="list-style-type: none"> <li>• Financial sources utilised for paying medical expenses</li> </ul>
Quality of care	<ul style="list-style-type: none"> <li>• Information given for self-care after inpatient discharge</li> <li>• Information given for self-care after ER discharge</li> </ul>	<ul style="list-style-type: none"> <li>• Rating the experience of being greeted and talked to respectfully</li> <li>• Rating the experience of respecting privacy during physical examination</li> <li>• Rating the experience of being involved in decision-making</li> </ul>

**Table 4.2: Measures used by international surveys to assess the common themes**

**Source:** adapted by the author from The Commonwealth Fund (2013); WHO (2003).

Given that these international surveys take into account country-specific opinions and policies, it seems important to also create a country-specific survey for KSA. This is because it is impossible to fully understand the public opinions of public health policy in a country without taking into account its culture and policy.

While a general application of such surveys to KSA is possible, presently these international surveys have a number of country-specific follow-up questions, none of which are specific to KSA. For example, in the Commonwealth Fund International Health Policy survey, there was a specific question related to the Canadian health system: ‘After your visit in the hospital emergency department did the doctors or staff at the place where you usually get medical care seem informed and up-to-date about the care you had received in the hospital emergency department?’ This question is not applicable to all other health systems, including KSA. This is because an integrated health information system has not been applied in KSA as of yet.

Additionally, many resources are typically required to implement a large-scale international survey. Time, sample size, and funding are just some of the issues that restrict the implementation of this size of survey in other kinds of research settings, including in the present line of research. For example, many existing international surveys are designed to be conducted as face-to-face interviews (Table 4.1), by a group of researchers located in each country – a tremendously costly undertaking.

In order to address some of these limitations, a shorter, KSA-specific survey is required, one that meets the direct aims of this thesis. To meet these needs, it is important to explore all possible avenues for useful questions that might be included. One of these avenues is existing national, rather than international, surveys.

### **4.3 National surveys**

National surveys were also examined in order to gain a comprehensive picture of the public opinion literature. These surveys have a number of notable advantages when compared to international surveys. The first strength of national surveys is that, by being country-specific, they are more likely to take into account the strategic goals of the particular health system, type of health system under consideration, and the culture of the selected country. This allows national surveys to explore public satisfaction with the specific health system's goals and whether the public believes that these goals are being met. Different countries have different goals; only through tailoring surveys at the national level can we measure public opinion on the outcome of these goals.

Unlike international surveys, many national surveys also have the benefit of distinguishing between private and governmental health services when necessary. This is useful for understanding the gap between the public and the private sector, which is important when discussing the two-tiered health system of KSA. This distinction is valid within the context of KSA because both the private and governmental sectors are managed and organised by different parties. The distinction is important because public opinion of health services may differ between these two sectors.

A detailed analysis of six national surveys was conducted. This analysis is presented in-depth in Appendix II, and Table 4.3 provides a summary of similarities and differences between the items in the national health surveys. It is apparent from the analysis given in Appendix II and Table 4.3 that the main themes in national surveys are (i) the participants' overall public satisfaction towards their health system; (ii) their opinion as to whether the system needs reforming; (iii) involvement in shared decision-making; and (iv) the performance of public hospitals versus governmental hospitals (except the UK surveys, where the focus is mainly on the NHS and its performance, and the US surveys, where the focus is mainly on the health coverage and cost of care).



Themes	British Social Attitude survey (BSA) / UK <sup>2</sup>	Health Confidence Survey (HCS) / USA <sup>3</sup>	Performance Evaluations, Trust and Utilisation (PETU) questionnaire/ China <sup>4</sup>	Healthcare in Canada (HCiC) survey / Canada <sup>5</sup>	Alberta health survey/ Canada <sup>6</sup>
Citizen satisfaction	<ul style="list-style-type: none"> <li>Overall satisfaction</li> <li>Views on the importance of health reform</li> <li>Reasons for satisfaction</li> <li>Reasons for dissatisfaction</li> </ul>	<ul style="list-style-type: none"> <li>Overall satisfaction with current system.</li> <li>Views on the importance of health reform</li> </ul>	<ul style="list-style-type: none"> <li>Overall satisfaction with the health system</li> <li>Perceptions of the necessity of healthcare reform</li> </ul>	N/A	<ul style="list-style-type: none"> <li>Overall satisfaction with the health system</li> <li>Reasons for dissatisfaction</li> </ul>
Accessibility to healthcare	<ul style="list-style-type: none"> <li>Waiting times</li> <li>Ease of access to doctors and hospitals</li> </ul>	N/A	<ul style="list-style-type: none"> <li>Equality in access to healthcare</li> </ul>	<ul style="list-style-type: none"> <li>Timely access to care at different types of healthcare facilities</li> <li>Perceptions of access improvement proposals</li> <li>Future expectations of access to care</li> </ul>	<ul style="list-style-type: none"> <li>Perceptions of access to care and waiting times</li> <li>Services respondents have difficulty obtaining, reasons for this difficulty</li> <li>Services the respondents couldn't be able to obtain in the last year, and the reasons for that</li> </ul>
Healthcare financing and affordability of healthcare services	<ul style="list-style-type: none"> <li>Views on the way the NHS uses money</li> </ul>	N/A	<ul style="list-style-type: none"> <li>Healthcare costs contributions</li> </ul>	<ul style="list-style-type: none"> <li>Perceptions of the affordability of care</li> </ul>	N/A
Perceptions of health and lifestyle behaviours	N/A	N/A	N/A	<ul style="list-style-type: none"> <li>Health habits and service's needs</li> </ul>	N/A
Service quality or patient-centred care	<ul style="list-style-type: none"> <li>Views on the standard of care</li> </ul>	<ul style="list-style-type: none"> <li>Doctors explain to patients why a test is needed</li> <li>Whether patients ask about the success rate of a procedure.</li> </ul>	N/A	<ul style="list-style-type: none"> <li>Care that is readily and timely accessed</li> <li>Care that is provided in a caring and respectful context</li> <li>Care decisions that are made in partnership</li> </ul>	<ul style="list-style-type: none"> <li>Reasons for poor or fair quality of care</li> </ul>

<sup>2</sup> Gershlick et al., 2015; Appleby and Roberison, 2016

<sup>3</sup> Fronstin, 2012

<sup>4</sup> Munro & Duckett, 2015

<sup>5</sup> McGill, 2014

<sup>6</sup> Northcott & Northcott, 2004

Themes	British Social Attitude survey (BSA) / UK <sup>2</sup>	Health Confidence Survey (HCS) / USA <sup>3</sup>	Performance Evaluations, Trust and Utilisation (PETU) questionnaire/ China <sup>4</sup>	Healthcare in Canada (HCiC) survey / Canada <sup>5</sup>	Alberta health survey/ Canada <sup>6</sup>
Healthcare choice and utilisation	N/A	<ul style="list-style-type: none"> <li>The influence of health costs in healthcare utilisation</li> </ul>	<ul style="list-style-type: none"> <li>Health seeking behaviour for minor and major illness</li> <li>Reasons for choosing public/private providers</li> <li>Patterns of health utilisation and experience in different levels of care and reasons for that</li> </ul>	<p>between informed patients and their providers</p> <ul style="list-style-type: none"> <li>Health policy is shaped by interaction with service users</li> </ul>	N/A
Confidence and trust	N/A	<ul style="list-style-type: none"> <li>Ability to get needed care</li> <li>Ability to get affordable care without financial hardship</li> <li>The health system ability to give patients the freedom to choose their preferred healthcare provider</li> </ul>	<ul style="list-style-type: none"> <li>Reliability of different insurance schemes.</li> <li>Quality and safe medical care.</li> </ul>	N/A	N/A
Others	N/A	N/A	N/A	<ul style="list-style-type: none"> <li>The ability to make complaints when things go wrong</li> </ul>	N/A

**Table 4.3: Measures used by national surveys to assess the common themes**

Referring to Table 4.2 and Table 4.3, the themes that emerged from the national surveys are quite similar to the themes that emerged in the international surveys. However, the international surveys are broader, having bigger and more varied samples than national surveys due to their cross-border participant pools. Because of international differences in the structure of healthcare systems, international surveys also generally examine the public experience of the health service without differentiating between the private and governmental sectors.

Based on the present review, it seems that international surveys do not include questions designed to assess public trust in health systems, while national surveys do include this factor and examine how it influences the overall satisfaction with a particular health system. The present thesis includes this as a topic of interest because the scientific literature suggests that trust can impact the overall attitudes towards the health system (Hall et al., 2001; Hardie & Critchley, 2008). The role of trust is important to examine in order to get a comprehensive understanding of Saudi Arabian public opinions of the health system; national surveys include relevant questions that can be adapted for this purpose.

The variation in the content across national surveys makes it difficult to compare and critique them as a whole. Many national surveys, like international surveys, are resource-intensive, often involving large numbers of participants, face-to-face interviews, and large research teams. Unlike international surveys, some of the national surveys are very short. For example, the BSA includes few questions related to healthcare, which is insufficient to provide a clear picture of this complex topic. Sometimes national surveys also ask questions that are too broad and relate to multiple governmental organisations rather than focusing on healthcare policy. For example, the PETU begins by asking participants about their trust in different institutions such as the courts and the police. It can be argued that public financing and provision of healthcare can be influenced by such institutional attitudes (Font, 2001), but this makes the analysis of the results more complicated than they already are by introducing extra variables in the statistical analysis. The inclusion of questions pertaining to these kinds of broader attitudes is not common within health surveys, presumably because this over-extends the survey and adds unnecessary questions and can therefore be detrimental to participant recruitment. For example, in some countries, including those in the Middle East, the public often avoids political topics and adding political questions to health surveys might confuse the study participants about the purpose of the study and/or discourage them from participating and might fail to ensure the acceptability of the survey, which is seen as a core aspect of such a tool (Smith et al., 2009). The acceptability of surveys as a criterion for developing a survey tool is discussed in Chapter 9. For these reasons, it was decided to separate questions regarding health attitudes from those addressing political attitudes as much as possible.

Reviewing national surveys has provided a valuable set of additional possible materials of questioning for the present thesis, including country-specific health goals, questions about private versus public health sectors, and the role of trust in influencing public attitudes. However, like the international surveys, the national surveys are often conducted in developed

counties, and only one survey is conducted in a developing country (PETU in China). This drives us to examine further research conducted by independent researchers that has been conducted in non-industrialised countries that are more similar to KSA than the over-represented industrialised countries.

#### **4.4 Independent research (surveys by researchers)**

A major benefit of the independent research reviewed was the dramatically reduced need for resources; unlike international and national surveys, some of the independent research surveys, such as Jadoo et al. (2014; Table 4.1), were designed to be self-administrated and are formulated in a clear manner. This made the surveys far less resource-intensive, minimising researcher time commitment and the difficulty in scheduling face-to-face meetings (Bowling, 2005). It also meant that a far smaller team was needed to complete the research successfully. Furthermore, the fact that the independent research surveys are short and clear may help to avoid survey fatigue, keeping the participants engaged and increasing the probability of their participation. This is very useful for the present thesis because only limited resources are available. However, it is worth noting that self-administered surveys have some drawbacks, which are addressed in detail in Chapter 10, Section 10.2.1.

Three main themes emerge from an examination of the literature on independent research: (i) accessibility to healthcare services, (ii) healthcare financing and affordability of healthcare services, and (iii) healthcare service quality. An in-depth examination of the four independent research surveys (Mastilica & Chen, 1998; Hardie & Critchley, 2008; Balabanova et al., 2012; Jadoo et al., 2014) is given in Appendix III.

A summary of the main measures used by researchers to explore these common themes is given in Table 4.4.

Themes	Jadoo et al. (2014)	Balabanova et al. (2012)	Hardie & Critchley (2008)	Mastilica & Chen (1998)
<b>Citizen satisfaction with the health system</b>	N/A	N/A	N/A	<ul style="list-style-type: none"> <li>• Satisfaction with healthcare services in general</li> </ul>
<b>Accessibility to healthcare</b>	<ul style="list-style-type: none"> <li>• Easy access</li> <li>• Availability of drugs and treatment</li> <li>• Accessibility to medical treatment</li> <li>• Waiting time</li> </ul>	N/A	N/A	<ul style="list-style-type: none"> <li>• Access to needed medication</li> <li>• Access to healthcare services</li> <li>• Social equality in accessing healthcare</li> </ul>
<b>Service quality</b>	<ul style="list-style-type: none"> <li>• Quality of care provided</li> <li>• Friendliness of doctors</li> <li>• Information given by doctors</li> <li>• Availability of equipment at doctors' office</li> </ul>	N/A	N/A	<ul style="list-style-type: none"> <li>• Behaviour of healthcare personnel and respect.</li> <li>• Quality and professional level of care</li> <li>• Quality of healthcare facilities and equipment</li> </ul>
<b>Health and lifestyle behaviours</b>	N/A	<ul style="list-style-type: none"> <li>• Living conditions</li> <li>• Exercise</li> <li>• Alcohol and tobacco consumptions</li> </ul>		
<b>Perceptions of health and illness</b>	<ul style="list-style-type: none"> <li>• Peoples' responsibility for their own health</li> <li>• The population is less informed about health risk</li> <li>• Healthcare gets more attention from politicians</li> </ul>	N/A	N/A	N/A
<b>Financial risk protection or healthcare financing and affordability of healthcare services</b>	<ul style="list-style-type: none"> <li>• Perceptions of new health insurance coverage</li> <li>• Cost of care</li> </ul>	N/A	<ul style="list-style-type: none"> <li>• Public willingness to pay higher private health insurance premiums to get better care</li> <li>• Public's willingness to pay higher taxes to improve the health system</li> </ul>	<ul style="list-style-type: none"> <li>• Out-of-pocket payments</li> <li>• Salary reduction owing to sick leave.</li> <li>• Payment for over-the-counter drugs</li> </ul>
<b>Availability of resources</b>	<ul style="list-style-type: none"> <li>• Availability of doctors</li> <li>• Availability of specialised doctors</li> <li>• Availability of healthcare facilities in the area</li> </ul>	N/A	N/A	N/A
<b>Confidence and trust</b>	N/A	N/A	<ul style="list-style-type: none"> <li>• Public trust in the health system</li> <li>• Public level of support for the current health system</li> <li>• Public trust in private and governmental doctors</li> </ul>	N/A

Themes	Jadoo et al. (2014)	Balabanova et al. (2012)	Hardie & Critchley (2008)	Mastilica & Chen (1998)
<b>Patient-centred care *</b>	N/A	N/A	N/A	N/A
<b>Health utilisation</b>	N/A	<ul style="list-style-type: none"> <li>• Respondents' health utilisation patterns</li> <li>• Reasons of not seeking formal care when needed</li> <li>• Choices to obtain care</li> <li>• Out of pocket expenditure on healthcare.</li> </ul>	N/A	N/A
<b>Other</b>	N/A	N/A	<ul style="list-style-type: none"> <li>• Healthcare industry work experience</li> </ul>	N/A

\* Definition of patient centred care: the extent to which the health system is putting patients' choices and decisions at the centre of healthcare delivery and is being measured through patient experiences with quality of care (Kitson et al., 2012).

**Table 4.4: Measures used by researchers to explore the common themes**

There was also wide variation in the methods, questions, and models covered by the independent research (see Table 4.1), making it difficult to generalize drawbacks of the methods used in each study. Drawbacks of each individual study are mentioned in the section describing each survey in Appendix III, but some overall limitations are also worth mentioning here. A general weakness was that the survey format did not allow researchers to fully explore why some respondents answered in the way they did, nor did it fully probe respondents to see if they really understood the nature of the task at hand. However, the latter is a common weakness of the survey approach (Jadoo et al., 2014). Thus, considering qualitative validity tests to assess survey questions' clarity, such as face validity, is important prior to fully implementing the self-administered survey tool of the current study.

After reviewing the independent research, there is clearly a lack of studies on developing countries; the only ones found that met the inclusion criteria were conducted in Turkey (Jadoo et al., 2014) and in the former Soviet Union (FSU) (Balabanova et al., 2012). Furthermore, fewer questions reduces costs, this is a potentially a weakness in terms of gaining breadth of understanding. Finally, independent studies are less likely to provide validity and reliability indices.

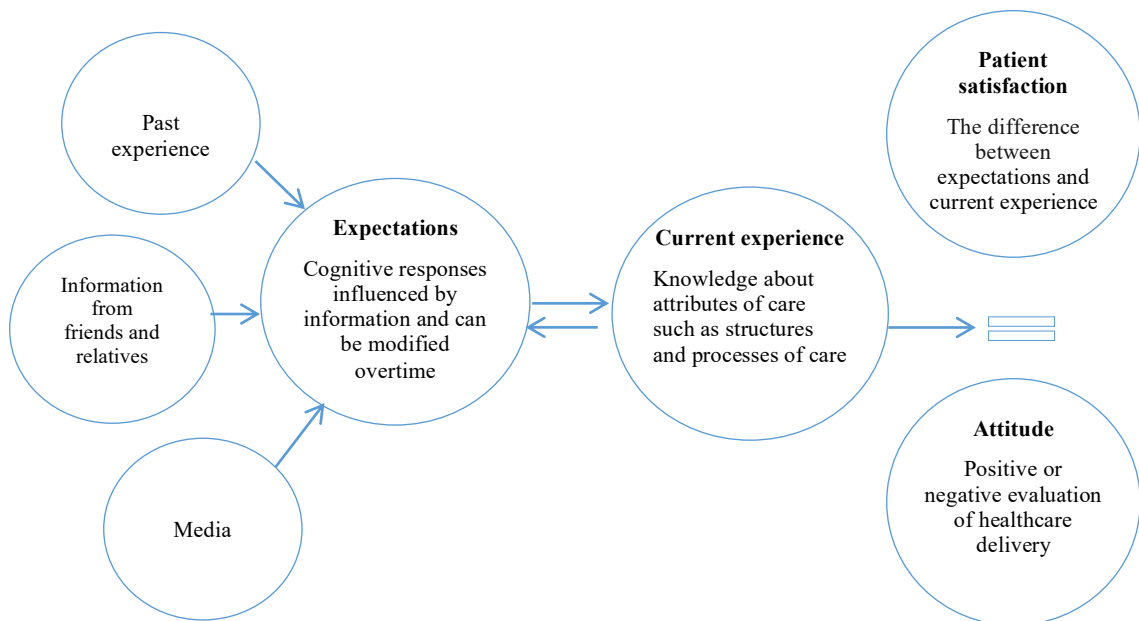
## **4.5 Factors influencing public attitudes towards the health system**

Attitudes can be used as measures of health system performance. Therefore, it is important to understand how attitudes may be mediated by “cognitive factors” such as expectations and experiences. This section focuses in particular on the theoretical concepts and literature on patients' experiences and expectations and how they influence attitudes towards healthcare. Of course, “predisposing factors” such as individual differences, including socio-demographic factors (Duckett et al., 2013; Footman et al., 2013; Gershlick et al., 2015; Jadoo et al., 2014), health insurance coverage (Blendon & Benson, 2009; Hardie & Critchley, 2008; Lillie-Blanton et al., 2000; Utz el al., 2011), and the type of healthcare facility (Hardie & Critchley, 2008; Russell, 2005) also influence public attitudes towards health care. This difference will be discussed in depth in the findings of the FGDs of the thesis (Chapter 8) and in the questionnaire results (Chapter 11). This section's goal is to hypothesis ways in which expectations may apply to understanding public attitudes towards the healthcare system of KSA. This process will aid in the planning of this thesis' phases.

Expectations regarding health care have been defined as cognitive responses (i.e., beliefs about care, such as medical care, waiting time, etc.), which are influenced by information (such as past experiences, friends and family, and the media) and can be modified over time (Haas, 1999; Worthington, 2005). Once established, beliefs are expressed as expectations and can affect service users' attitudes, i.e., a negative or positive evaluation of the health services received (Fishbein & Ajzen, 1975; Ross et al., 1987; Haas, 1999).

“Patient satisfaction” has traditionally been used as a measure of patients’ perspectives on the outcome of care they received (Haas, 1999). It has been defined as the difference between what patients expected and what actually happened at the healthcare facility (Williams, 1994).

Some researchers described several psychological theories to conceptualise the difference between expectations and patient satisfaction and the interaction between expectations and experience, which result in either satisfied or dissatisfied patients. For instance, a traditional patient satisfaction theory rests on social-psychological theory and assumes that the expression of satisfaction is an expression of an attitude (an affective response) related to both the belief (expectation) that healthcare contains certain attributes (dimensions) and the patient’s evaluation of these attributes (Linder-Pelz, 1982; Fishbein & Ajzen, 1975; Jenkinson et al., 2002; Ahmad et al., 2011), which is usually arises from their current experience of the structure and processes of care (Oyvind et al., 2011). In other words, patients’ expectations of the healthcare they are about to receive (i.e., what they believe will or should happen) will likely influence their attitudes towards the outcome of care based on the extent to which their expectations were fulfilled while they receive the healthcare (Ross et al., 1987). Figure 4.2 shows a diagram explaining the differences between expectations, experiences, satisfaction and attitudes, and the relationship between these concepts in healthcare delivery.



**Figure 4.2: Differences between expectations, experiences, satisfaction and attitudes, and the relationship between these concepts in healthcare delivery**

However, it is important to note that many researchers concluded that no simple relationship exists between what service users expect before a clinical encounter and their satisfaction with the health service received (Haas, 1999). The literature offers mixed research support for an association between expectations and patient satisfaction (Kravitz, 1996; Sitzia & Wood, 1997). For example, a research study found that fulfilment of patient expectations by the physician was



strongly correlated with visit satisfaction (Like & Zyzanski, 1987). However, another research study found no relationship between patients' satisfaction and their met or unmet expectations (Peck et al., 2004). This is especially true in healthcare because expectations of healthcare outcomes are complex psychological processes influenced by a range of individual factors, including, as stated before, past experiences and transmitted knowledge (e.g., from friends or via the media) and as a consequence are likely to differ from patient to patient (Worthington, 2005). In addition, patients do not necessarily think of themselves as normal consumers with the freedom to choose a particular provider from the available services, or with the power, information, and motivation to challenge medical authority (Lupton et al., 1991; Worthington, 2005). Thus, they might be less able to criticise the service they receive. Therefore, it is important that this research focus on exploring the intervening cognitive factor of public attitudes "expectation" and the public's actual experience with the health services in the qualitative arm of the study. This process of in-depth exploration will aid in the construction of evidence-based questionnaire attitude items in this thesis.

## **4.6 Summary**

This chapter has explored the range of surveys used to measure public attitudes towards health systems worldwide. The overall outcome of this chapter is an understanding of what measures need to be taken into consideration when constructing a survey of public attitudes towards the health system. Surveys in this field have explored a range of themes, including the public's overall view of the healthcare system in their country, access to care, satisfaction with the health system, healthcare affordability and expenditure, service quality, and trust in the health system. Some surveys, such as BSA, were general and superficial; others, such as Commonwealth Fund survey, WHS, and the PETU survey, were more comprehensive. Surveys vary in terms of the themes or dimensions of performance covered. Therefore, in order to decide which themes or dimensions to consider in the present study, a conceptual framework is needed to help in mapping the important performance dimensions to be included in public opinion on the Saudi health system survey. This will be explained in the following chapter.

# **Chapter 5 Assessing the performance of health systems:**

## **Selecting a framework**

### **5.0 Introduction**

This chapter explains approaches that can be taken to effectively evaluate health systems, outlining diverse performance assessment frameworks. It then explains the rationale for selecting the particular framework employed in this research and concludes with a more detailed examination of the performance indicators relevant to the selected framework. The selected framework will be used as a conceptual model for the following phases of this thesis: the systematic review (Phase 2), FGDs study (Phase 3), and the survey development (Phase 4).

### **5.1 Health systems performance assessment frameworks**

Health systems analysis involves collecting data about system inputs, processes, and outputs to investigate how health systems combine to produce outcomes that might affect both individual and population health (Berman & Bitran, 2011). Health systems performance assessment (HSPA) can motivate health system reforms by providing timely support to policymakers (Bennett & Peters, 2015), marking a significant purposeful effort to improve the performance of the healthcare system (Roberts et al., 2008).

In addition, HSPA helps ‘translate the health system’s reform into meaningful tracking and evaluation of systems performance’ (Bennett & Peters, 2015, p. 10). Therefore, HSPA, such as applied by the Commonwealth Fund in the USA, can be used to monitor and evaluate health system performance over time, revealing factors that cause the system to perform poorly or well (such as politics, history, and organisational activities). Thus, health trends can be assessed and issues identified, enabling policymakers to reprioritise and reallocate resources as necessary (Massyn et al., 2013; Bennett & Peters, 2015).

Moreover, HSPA is important internationally for facilitating learning and benchmarking through comparative analysis and cross-country comparisons (Bennett & Peters, 2015). For example, international agencies such as WHO, the Commonwealth Fund, and OECD utilise cross-country comparisons to identify similarities and differences in the financing and delivery of healthcare to determine the most effective or equitable regimes (WHO, 2000; Papanicolas & Smith, 2013b).

In addition to the international organisations that have developed HSPA frameworks, many countries have established their own performance frameworks, e.g. the NHS Balanced Scorecard in the UK, which was developed to enhance local NHS organisations’ accountability in delivering the Department of Health targets (Chang et al., 2002). This chapter, however,

excludes country-specific performance frameworks and focuses solely on international performance frameworks that can be applied to a developing country, i.e. KSA.

Since the late 1990s, a number of organisations have developed frameworks for evaluating and assessing the performance of health systems. This section will provide a descriptive analysis of four international frameworks, including the WHO framework for Health System Performance Assessment (Murray & Frenk, 2000), the Control Knobs framework (Roberts et al., 2003), the Commonwealth Fund's Commission (2006) on a High Performance Health System framework, and the OECD's Healthcare Quality Indicators (HCQI) framework (Arah et al., 2006). These four frameworks were selected for consideration because they are the frameworks that predominate in global policy; for example, the WHO framework for Health System Performance Assessment highly contributed to developing the World Health Report and assessed the performance of many health systems worldwide (WHO, 2000; Murray & Frenk, 2000). In addition, the Control Knobs framework (Roberts et al., 2003) has been used by the World Bank to assess health systems and identify solutions to strengthen their performance. Moreover, both the Commonwealth Fund's High Performance Health System framework (2006) and OECD HCQI (Arah et al., 2006) framework have been used in large projects to facilitate cross-country comparison, most notably between OECD countries (Davis et al., 2014; Papanicolas & Cylus, 2015).

Moreover, unlike other performance frameworks such as the Systems Thinking framework (Atun & Menabde, 2008), the four selected frameworks provide clear conceptualisation of the key performance measures of health systems, such as quality of care. The performance measures of each of the selected frameworks are explained below.

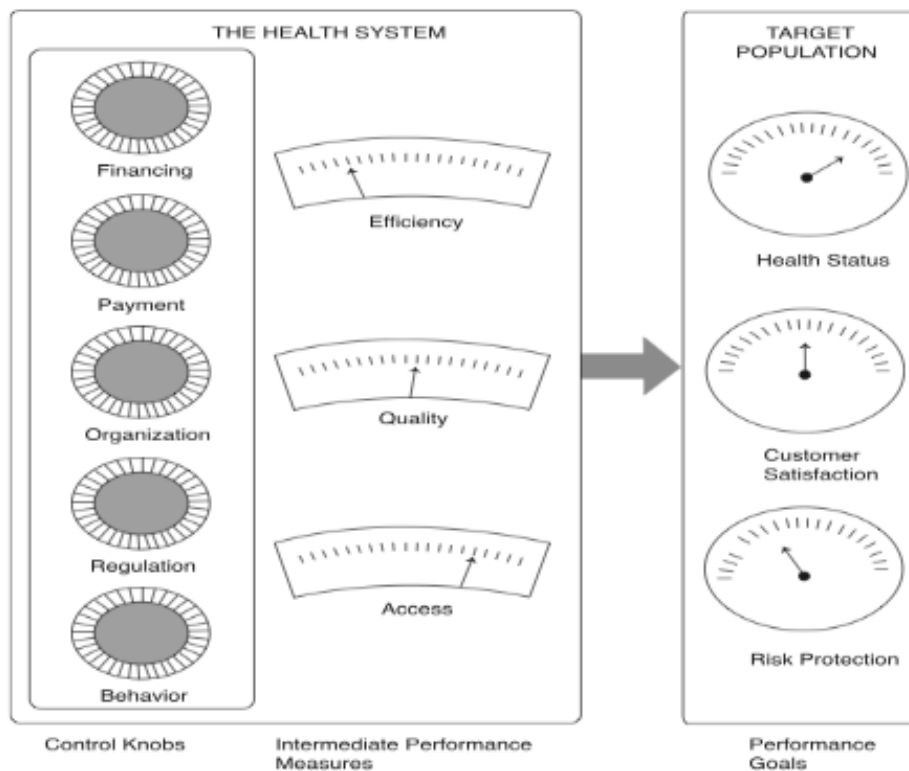
The WHO framework for Health System Performance Assessment analyses health systems' performance, utilising performance dimensions based on complex combined measures, driven by the health-related goals of each organisation, health improvement, responsiveness to expectations, and fairness in financial contribution. Therefore, the WHO framework for Health System Performance Assessment (Figure 5.1) focuses on the functions of healthcare systems rather than causes and solutions for poor performance (Roberts et al., 2008).

<b>Components for assessment</b>	<b>Average level</b>	<b>Distribution</b>
<b>Goals</b>		
<b>Health improvement</b>	✓	✓
<b>Responsiveness to expectations</b>	✓	✓
<b>Fairness in financial contribution</b>	—	✓

**Figure 5.1: WHO framework for Health System Performance Assessment**

**Source:** Murray & Frenk, (2000)

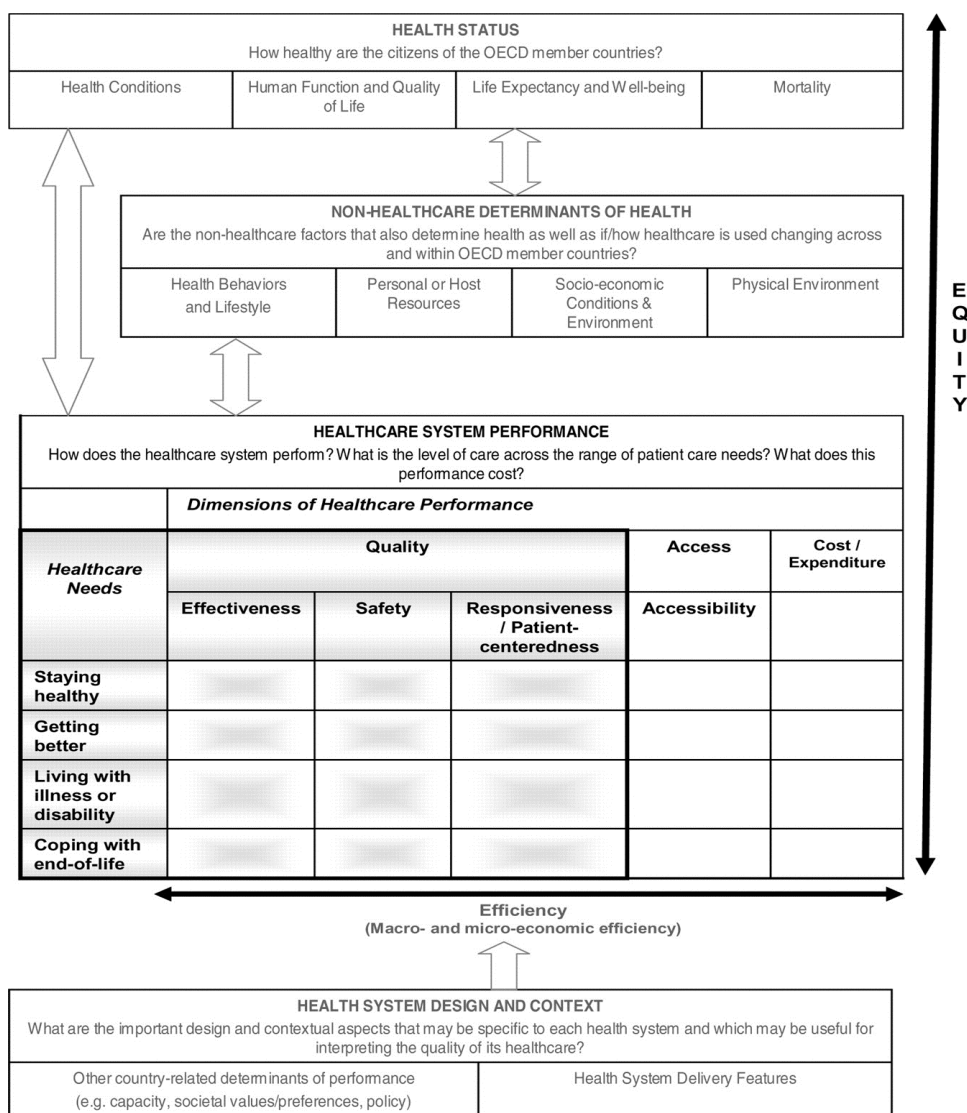
Whereas the Control Knobs framework outlines five key policy instruments (so-called Control Knobs) that can be adjusted to improve health outcomes: (1) financing, (2) payment, (3) organisation, (4) regulation, and (5) behaviour (Roberts et al., 2003). Assessments for the necessity of health policy changes can be based on the identification of deficits in outcome (World Bank, 2011). The Control Knobs framework establishes a linear relationship between policy and outcomes (Gilson, 2012). The ‘policy’ is the five Control Knobs given above, whereas the ‘outcomes’ are the three performance dimensions, or what called ‘performance goals’, in the framework: population health status, citizen satisfaction with the health system, and the degree to which the system protects citizens from financial risk. Alongside these performance dimensions are three additional performance dimensions, or what are called ‘intermediate performance measures’ in the framework: efficiency, quality, and access (see Figure 5.2). This framework forms the basis for the World Bank’s *Flagship Program on Health Sector Reform and Sustainable Financing* (Arah et al., 2006; Shaw & Samaha, 2009b; Smith et al., 2009; Berman & Bitran, 2011).



**Figure 5.2: The 'Control Knobs' framework**

**Source:** Roberts et al., 2003; Papanicolas & Smith, 2013b.

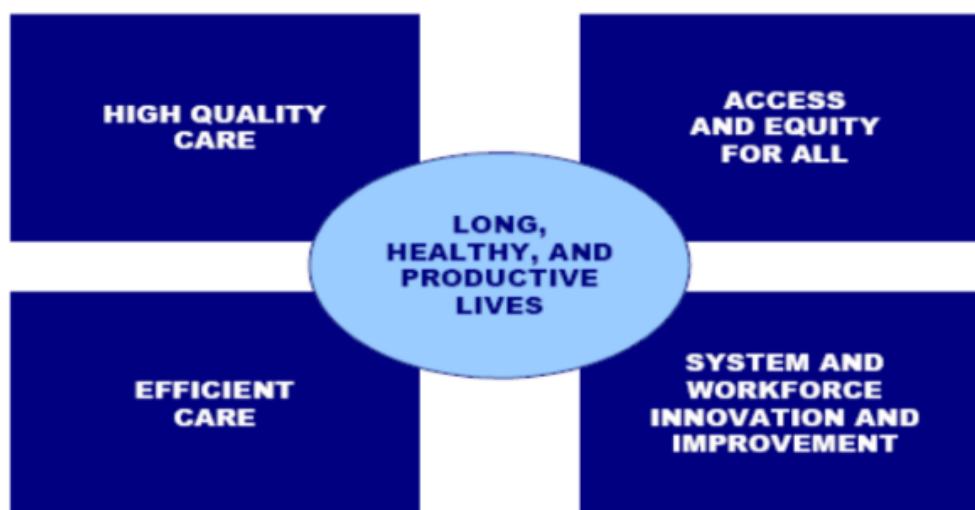
OECD's HCQI performance framework (Arah et al., 2006) focuses on improving health, efficiency, and equity. The OECD aims to ensure access to healthcare services, quality, healthcare outcomes, appropriate levels of healthcare expenditure (macroeconomic efficiency), and value for money (microeconomic efficiency; Arah et al., 2006; Papanicolas & Smith, 2013b). The health system performance dimensions are represented in the OECD HCQI's framework (see Figure 5.3): effectiveness, safety, responsiveness/patient centeredness, access, and cost/expenditure.



**Figure 5.3: OECD HCQI performance framework**

**Source:** Arah et al., 2006, Papanicolas & Smith, 2013b

The Commonwealth Fund’s performance framework for a High Performance System (2006) (see Figure 5.4) has four performance dimensions that are intended to achieve the intrinsic goal of long, healthy and productive lives: high quality care, efficient care, access and equity for all, and system and workforce innovation and improvement (Commonwealth Fund, 2006; Papanicolas & Smith, 2013b).



**Figure 5.4: Commonwealth Fund framework for a High Performance System**

**Source:** Commonwealth Fund, 2006

The following section will provide in-depth details of the key similarities and differences between the performance frameworks mentioned above and will select the best framework to be used for this study.

## **5.2 Criteria for selecting a health system performance assessment framework**

This section will critically analyse the four international frameworks explained in section 5.1: the WHO framework for Health System Performance Assessment (Murray & Frenk, 2000), the Commonwealth Fund's Framework for a High Performance System (2006), the Control Knobs framework (Roberts et al., 2003), and the OECD's HCQI framework (Arah et al., 2006). This assessment will determine a conceptual framework to employ in the current research study.

Before selecting a specific framework, the frameworks were assessed according to the following criteria, suggested by (Papanicolas & Smith, 2013b):

1. What is the explicit purpose of the framework?
2. How does the framework define the boundaries of health systems?
3. Where has the framework been used (i.e. in which countries)?

In addition, given that the current research seeks public attitudes in Saudi Arabia, a further two questions were asked:

4. Does the framework acknowledge public responsiveness or patient-centeredness?
5. To what extent does each framework emphasise the public involvement in evaluating and improving health system performance?

As explained in section 5.1, the nature and scope of each framework is varied and is primarily a product of the divergent aims of assessment frameworks. These variations are cross-compared in Table 5.1.



	<b>WHO framework for Health System Performance Assessment (Murray &amp; Frenk, 2000)</b>	<b>Control Knobs Framework (Roberts et al., 2003)</b>	<b>The OECD (HCQI) Framework (Arah et al., 2006)</b>	<b>Commonwealth Fund Framework for a High Performance System (2006)</b>
<b>What is the explicit purpose of the framework?</b>	To analyse the relationship between the functions and objectives of healthcare systems to improve the population objectives (WHO, 2000).	To examine the ways in which government policy interventions and health reforms can improve health systems and support the long-term improvement of a country's health and healthcare (Shaw & Samaha, 2009b).	(1) To measure the technical quality of healthcare that could be utilised to develop a set of indicators to investigate the quality of care in many countries through comparable data. (2) To contribute to improved coordination between international organisations for international data comparison (Kelley & Hurst, 2006).	To illustrate roadblocks to affordability, efficiency, coverage and equity in health system in many countries through comparable data (Gauthier et al, 2006; Papanicolas & Smith, 2013b).
<b>How does the framework define the boundaries of health systems?</b>	The health system is defined as all of the actors, institutions and resources whose primary objective is to improve public health.	The health system is defined as a means (the structural components of the entire health system) to an end (the ultimate goals of the health system, including public health; Roberts et al., 2003).	The health system is based primarily upon quality of healthcare services. Quality of care is defined as 'the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge' (Papanicolas & Smith, 2013b:81).	'The way in which healthcare services are financed organised and delivered to meet societal goals for health' (Papanicolas & Smith, 2013b, p. 34).
<b>Where has the framework been used?</b>	In the WHO Report (2000), the framework assesses the performance of the health systems of each of its 191-member states.	The framework has been utilised in a variety of academic contexts. It is most often utilised in the context of low- and middle-income health systems where government policies exert the greatest influence upon health outcomes (Gilson, 2012). It has also been used in the World Bank flagship training program.	The framework has been expanded to include the health systems of 32 OECD countries, including two non-OECD European Union member states (Papanicolas & Cylus, 2015). These countries actively contribute to ongoing research projects through data comparison.	The High Performance framework was utilised to inform subsequent research by the Commonwealth Fund; such as the 2014 international comparison between 11 high-performance healthcare systems. This framework was exclusively used in high-income countries (Davis et al, 2014).
<b>Does the framework acknowledge public responsiveness or patient-</b>	Yes. The framework includes responsiveness as one of the performance goals	Yes. The fifth control knob (behaviour/persuasion) acknowledges the importance of provider-patient and state-patient relationships while 'Citizen	Yes. Responsiveness (or patient-centeredness) is interpreted as the degree to which a health system places the patient at the centre of delivery and is assessed through	Yes. Quality of care and service delivery are assessed 'with the patient's needs and preferences in mind' (Davis et al, 2014, p. 18).

	<b>WHO framework for Health System Performance Assessment (Murray &amp; Frenk, 2000)</b>	<b>Control Knobs Framework (Roberts et al., 2003)</b>	<b>The OECD (HCQI) Framework (Arah et al., 2006)</b>	<b>Commonwealth Fund Framework for a High Performance System (2006)</b>
<b>centeredness?</b>		satisfaction' is classified as an intrinsic goal.	patient experiences of healthcare.	
<b>To what extent does each framework emphasize the public involvement in evaluating and improving health system performance?</b>	Not explicitly emphasised. For example, responsiveness is evaluated in terms of patients' non-medical expectations of the healthcare system.	Explicitly emphasised in most of the performance goals, including: <ol style="list-style-type: none"> <li>1. Quality dimension: perceptions of clinical quality and on service quality</li> <li>2. Access dimension: perceptions of effective accessibility and physical accessibility.</li> <li>3. Emphasised the importance of understanding public value on health system.</li> </ol>	Although the framework acknowledges patient-centeredness, however, the framework focuses mostly on cost-effectiveness of care delivery.	Not explicitly emphasised.

**Table 5.1: Health System Performance Assessment Frameworks**

Source: adapted from Papanicolas and Smith 2013b

The following subsections will discuss each criterion presented in Table 5.1 by providing further analysis to identify which framework is best suited to fulfilling the purpose of this study.

### ***5.2.1 What is the explicit purpose of the framework?***

As presented in Table 5.1, the four frameworks are similar in their purpose, which is to evaluate the performance of health systems. Most of them have been designed for cross-country comparisons, and the purpose of the WHO framework for Health System Performance Assessment (Murray & Frenk, 2000) is to make cross-country comparisons amongst almost all countries worldwide. Both the Commonwealth Fund for a High Performance System and the OECD HCQI frameworks were explicitly designed for the purpose of comparing OECD countries' health systems performance. However, the purpose of the Control Knobs framework is to evaluate each national system separately by explicitly linking the performance assessment of a health system with the policy of that system.

### ***5.2.2 How does the framework define the boundaries of health systems?***

Health is an outcome of a number of determinants; some of these can be directly influenced by the health system policy (e.g. improvement in quality of care), and others require long-term action of policies not directly related to health (e.g. environmental policy). Thus, when considering international performance assessment frameworks, it is important to understand how each framework conceptualises the health system and how it sets the boundaries of the health system. That is because these boundaries reflect the role of the health system and the responsibilities that lie within the health system. It has been suggested to narrow the boundaries of the health system to include only the actors (such as health providers) and organisations (such as healthcare facilities, or MOH) responsible for improving health (Papanicolas & Smith, 2013b).

The WHO's conceptualisation of a health system is quite broad. Its holistic view includes not only public health and health promotion but all other factors that are beyond the control of the health system but influence health outcomes, such as age, education, and income (Papanicolas & Smith, 2013b).

However, the Commonwealth Fund for a High Performance System, OECD HCQI, and Control Knobs frameworks conceptualise health systems with narrower boundaries than the WHO framework for Health System Performance Assessment (Murray & Frenk, 2000). These frameworks set the boundaries of a health system to the actors, institutions, and organisations that interact to meet the goals the system desires to achieve as well as the health policies that regulate these interactions.

### ***5.2.3 Where has the framework been utilised?***

As explained earlier, the WHO framework for Health System Performance Assessment has been used widely across 191 countries, including low-, middle-, and high-income countries (Valentine et al., 2003). Similar to the WHO framework for Health System Performance Assessment, the Control Knobs framework has also been used in many countries, mostly in low- and middle-income countries (Gilson, 2012). It has also been used in the World Bank Flagship training programme, which includes country-specific training courses, most notably in developing countries, to assist and support health policymakers to diagnose the health system implemented in their countries and to suggest possible strategies to strengthen the health system and its policies (Shaw & Samaha, 2009).

However, the OECD HCQI and Commonwealth Fund for a High Performance System frameworks have been used almost exclusively to evaluate performance of the health systems of OECD countries as well as a few developed countries, such as Japan (Papanicolas & Smith, 2013b), making them less relevant to non-Western countries than the WHO Health System Performance Assessment and Control Knobs frameworks.

### ***5.2.4 Does the framework acknowledge responsiveness or patient-centeredness?***

Variations in the interpretations of goals inevitably influence the extent to which public and patient views are integrated into the performance assessment frameworks. Although the frameworks discussed above have not provided an in-depth analysis and exploration of public- or patient-centeredness, some of them were less explicit in this concept than the others. For example, the WHO framework for Health System Performance Assessment (Murray & Frenk, 2000) acknowledges the importance of public views on health system in the responsiveness performance dimension; however, the framework clearly focuses on the service quality concept (such as the patient-provider interaction; Valentine et al., 2010) and neglects the clinical concept or effectiveness of care (such as patients' views on the outcome of their care or medical quality received; Papanicolas & Smith, 2013b). In addition, the access dimension has not been conceptualised in-depth, and the WHO framework for Health System Performance Assessment (Murray & Frenk, 2000) does not give an explicit explanation of how it can be measured from the patient's perspective.

OECD HCQI (Arah et al., 2006) does not explicitly explain the public's role in evaluating its performance dimensions. It conceptualises responsiveness or patient-centred care as the way in which a health system achieves the public's legitimate non-health expectations. But it does not explain how the public's satisfaction with the health system or their views on access to care can be captured.

The Commonwealth Fund for a High Performance System framework constitutes a democratic liberal approach to health system analysis, where the ultimate goal of healthcare is to ‘get everyone up to some minimum level of opportunity’ (Roberts et al., 2008, p. 124). A clear issue of the Commonwealth Fund for a High Performance System framework is that it does not explicitly define patient responsiveness or patient-centeredness but includes both in the definitions of quality, ‘the provision of the right (effective), coordinated, safe, responsive/patient-centred and timely care’ (Papanicolas & Smith, 2013b, p. 38).

In the Control Knobs framework, however, patient perspectives have been acknowledged in many of its performance dimensions. For example, citizens’ satisfaction with the health system is considered an intrinsic performance dimension. In addition, in the access performance dimension, which is considered the first step of people’s interaction with the system, the Control Knobs framework clearly conceptualises this dimension based on citizens’ views and experiences and by evaluating the physical availability (the availability of health professionals and health facilities in a community) and effective availability (the procedures needed to get access to care, such as the appointment and referral systems) of health services to the population. In addition, in the quality dimension, the Control Knobs framework acknowledges patients’ viewpoints not only on medical (clinical) quality but also on non-medical (service) quality, such as respect, emotional support, and involvement in care delivery. In addition, as illustrated in Table 5.1, the fifth Control Knob (behaviour/persuasion) acknowledges the importance of provider-patient and state-patient relationships. This reflects the Control Knobs framework’s understanding that patients’ attitudes and behaviours have a key role in influencing health system performance. Therefore, it recommends that health policy researchers explore it and understand it in order to identify ways of influencing the public behaviours on health and healthcare to assure better population health in a country (Papanicolas & Smith, 2013b).

### ***5.2.5 To what extent does each framework emphasise the importance of public involvement in evaluating and improving health system performance?***

All the discussed frameworks do acknowledge the importance of exploring patient perspectives (see Table 5.1). However, some variations have been identified in the emphasis each framework places on public involvement in evaluating and improving health system performance.

For example, both the WHO framework for Health System Performance Assessment (Murray & Frenk, 2000) and OECD HCI frameworks are clearly focused on the cost-effectiveness of health systems (Petrini, 2010) and how they contribute to assure better objective health outcomes within the populations they serve. This can raise issues on how the public values the health system. For example, as given above, the WHO framework for Health System Performance Assessment acknowledged the concept of responsiveness in terms of patient-provider interaction and patient-system interaction; however, the framework has been criticised widely in

the literature. One reason for these criticisms is that the WHO framework for Health System Performance Assessment depends on a single numerical measure of the performance of a whole system (Papanicolas & Smith, 2013b), which might, unintentionally, distract policy-makers from focusing and finding solutions for issues of their system requiring attention. An example that was used to illustrate the misuse of the framework for national policy was in Spain. In 2000, the Spanish health system was ranked the third best in Europe, and on the day the report was released, there were public demonstrations against the Spanish healthcare policymakers. That was due to the very long waiting lists (access barriers) and short consultation times (poor service quality). The health minister used the WHO report as evidence of the protestors' unjustified complaints and demands (Navarro, 2000). Access to care is not included as a performance dimension in the WHO framework, and this might be one reason for the dissatisfaction with the WHO report results in Spain. This gives an indication that using a framework like WHO framework for Health System Performance Assessment may discourage the public from being involved in evaluating the health system and having their say on how the health system and its services might be improved.

Although the Commonwealth Fund for a High Performance System framework has been used to explore public views on the health systems of many countries (Schoen et al., 2007; see Chapter 4), it focuses to a great extent on health outcomes and health equity, i.e. healthy, long, and productive lives (see Table 5.1; Papanicolas & Smith, 2013b). In addition, the framework has been criticised in the literature for lack of clarity on the concept of public experience on care provision (Papanicolas & Smith, 2013b).

The Control Knobs framework works differently as it establishes a continuum between *interventions* (i.e. health system procedures to provide care, such as organisation and regulations of healthcare delivery) and the *outcomes* or the health performance (i.e. peoples' health, their satisfaction with care, their perceptions of access, the system's ability to protect them from financial hardship due to illness, and as mentioned above, their perceptions of the quality of medical as well as non-medical care). This continuum helps health policy researchers to consider whole system interaction and how people value the health system of a country in which the framework is to be applied (Papanicolas & Smith, 2013b), which in turn helps to detect the weaknesses in the health system from the public perspectives and then find ways of improving healthcare delivery to meet public expectations.

For example, basing their methodology upon the Control Knobs framework, Villa et al. (2008) identified four goals of the Marche region of the Italian National Health Service: (1) the health status of the population, (2) access to services, (3) patient and citizen satisfaction, and (4) health services affordability. Thus, having defined their performance dimensions through the Control Knobs framework, Villa et al. (2008) evaluated the reforms initiated in the health system of the Marche region against public experience and satisfaction.

### ***5.2.6 Which framework best suits the purpose of this study?***

As discussed earlier, the frameworks discussed in this chapter lack conceptual clarity as to what constitutes responsiveness (Papanicolas & Smith, 2013b). Nonetheless, the Control Knobs framework offers the clearest account of this concept.

It gives the greatest weight to public views of the health system compared with other aspects of performance and explicitly focuses on citizens' satisfaction, their views on healthcare-related issues, and how they value their care, including views on clinical quality, service quality, perceptions of access to the health system, and affordability of care. In addition, the control knobs' framework suggests 'a mechanical approach with a more or less comprehensive package of universally valid elements and measures, to be constructed or implemented in any particular country' (Van Olmen et al., 2009, p. 8).

Understood this way, the Control Knobs framework provides the best conceptualisation of health system performance to underpin this study of public attitudes at a time where policymakers have shown increased interest in public engagement and at a time when change is manifest at many levels of the Saudi health system, e.g. national and regional administrative reform, health insurance coverage reforms (AlKhamis, 2013; AlKhamis et al., 2014), barriers to access, and the dramatic changes in the education and standard of living, which leads to higher expectations of high-quality care amongst the Saudi Arabian population (AlMalki et al., 2011; Khaliq, 2012).

It is for these reasons that the Control Knobs framework has been selected to underpin this study.

## **5.3 The Control Knobs framework: Suggested performance indicators**

The previous sections covered the different performance dimensions of the identified performance frameworks; however, for each dimension, there are multiple indicators (or measures) commonly utilised to assess the performance of health systems. Some of these are objective measures, based on statistics on specific trends, and others are subjective measures. The choice of which measures to use depends on the health system and the research aim. For instance, assessment of the efficiency of a healthcare system can be performed objectively using actual health statistics data, such as mortality and morbidity rates, or the same assessment may be made subjectively using, for example, patient surveys and patient-reported outcome measures (PROMs).

The Control Knobs framework can therefore be used in two ways, to assess a health system objectively or subjectively or both. As this study aims to explore public attitudes towards the

Saudi health system using the Control Knobs framework as an overarching conceptual framework, this section presents the indicators recommended by Control Knobs framework to assess a health system subjectively and match them with relevant items identified in the overview of public opinion surveys in Chapter 4. This will then contribute to developing an evidence-based survey instrument exploring public attitudes towards the health system in KSA (Chapter 9).

### ***5.3.1 Health status***

The Control Knobs framework suggests assessing the health status of a population using several measures. Some of these are objective measures, such as proportion of health status, mortality, morbidity, and life expectancy rates, and some are subjective measures, including public attitudes towards different diseases or causes of death in a country. In deciding which health issue need to be prioritised, Control Knobs framework suggests that a nation pay special attention to the diseases or health choices that are causing the greatest harm in the society (Roberts et al., 2008).

Measures related to population health status were not found in the surveys of public opinion of health systems explored in Chapter 4. However, most of them included questions on respondents' self-rated health status (SRHS), such as the PETU survey (Munro & Duckett, 2015), Hardie and Critchley's (2008) survey and Jadoo et al.'s (2014) survey.

### ***5.3.2 Citizen satisfaction***

Evaluating citizens' satisfaction is a core performance goal in the Controls Knobs framework. The framework's approach is a departure from the WHO formulation, which considers only 'legitimate expectations' when responding to public voices (Roberts et al., 2008, p. 70). The framework suggests that if a country faces a trade-off between achieving satisfaction and achieving other goals, such as providing unnecessary but care-like injections, it is the reformer's responsibility to decide whether or not to respond to certain public desires – but political accountability requires the reformer to explicitly explain the reasons why he or she did not respond to the public's desires and argued openly over the public's choices (Roberts et al., 2008).

However, because of the extensive work that has already been done to develop and validate reliable satisfaction survey instruments, Control Knobs does not explicitly identify measures of satisfaction and leaves it to the researchers to assess citizens' satisfaction using existing satisfaction surveys (Roberts et al., 2008).

### ***5.3.3 Financial risk protection***

Financial risk protection means the capacity of a health system to provide access to essential quality health services without exposing them to financial hardship (Smith & Witter, 2004;



Roberts et al., 2008). Similar to the health status dimension, the Control Knobs framework suggests objective and subjective measures to assess risk protection. The objective measure is the probability (before the fact) or frequency (after the fact) that an individual will be impoverished by illness or prevented from seeking adequate care because of lack of income (Roberts et al., 2008), whereas the subjective measure is household data on healthcare expenditure (Roberts et al., 2008). The Control Knobs conceptualisation of risk protection is similar to previous international surveys. For example, in order to measure a health system's ability to protect the public from financial risks due to illness, the Commonwealth Fund's International Health Policy Survey (Commonwealth Fund, 2013) asks respondents about the amount of out-of-pocket expenses spent on medical care and how difficult it is for them to pay medical expenses (See Table 4.2). Similarly, an independent researcher survey asks respondents questions related to out-of-pocket payment expenses and if they have experienced salary reduction owing to sick leave (Mastilica & Chen, 1998; see Chapter 4 section 4.4).

### **5.3.4 Quality**

The Control Knobs framework conceptualises quality of care in different ways, suggesting that it can be measured at a disaggregated level, using perceptions of particular treatment of a particular patient at certain health facility, or with inclusive judgments (of hospitals or health system), reflecting aggregations (averages) of such encounter-level experiences (Roberts et al., 2008). Similarly, Campbell et al. (2000) define quality of care for a population as 'the ability to access effective care on an efficient and equitable basis for the optimisation of health benefit/well-being for the whole population' (p. 1617). This definition is suitable for this study, which focuses on the Saudi health system as a whole rather than individuals' experiences with particular healthcare institutions. The Control Knobs framework suggests two measures to assess quality. The first measure is clinical quality; this includes human inputs (healthcare personnel skills and quality of doctor's decision-making) and non-human inputs (availability of equipment and supplies). This is very similar to measures used by previous surveys, such as Mastilica and Chen's (1998; see Chapter 4, Table 4.4).

The second measure is related to service quality. This includes the wider non-clinical aspects of healthcare provision, including hotel services (such as perceptions of quality of food, health facility cleanliness), convenience of care (such as travel time, waiting time, and health facility opening hours), and interpersonal relations (such as the emotional support given by the healthcare providers, their politeness, and respect for the patient). It can be argued that measures of convenience of care overlap with access to care dimension, such as travel time and waiting time. However, there is a slight difference between the two: convenience of care is measured once people get to a facility, whereas access issues relate to people's ability to get to facilities in the first place. Measures related to interpersonal relations or doctor-patient relationships were widely used in previous literature, such as in Jadoo et al. (2014) and Mastilica and Chen (1998); see Chapter 4, Table 4.4.

### **5.3.5 Access**

Access is defined as the extent to which healthcare services are easily reachable, including both physical and financial accessibility (Gulliford et al., 2002; Arah et al., 2006). In the Control Knobs framework, two types of items are suggested to assess access to care for a health system. These are effective availability, which relates to how easy is it for patients to access care, including the cost to get to a health facility and travel times (Roberts et al., 2008). These items are similar to those used to assess access to care in WHS and BSA (see Chapter 4, Tables 4.2 and 4.3). The second type of access is physical availability, which refers to ‘whether services are offered in a specific area’ (Roberts et al., 2003, p.114). Physical availability focuses on the distribution of healthcare resources, such as doctors, nurses, and health facilities, across a specific geographical area (Roberts et al., 2008). This matches items used in both the PETU (Munro & Duckett, 2015) and Mastilica and Chen’s (1998) surveys, which examined access to care by asking respondents for their views on social equality in accessing healthcare.

### **5.3.6 Efficiency**

Efficiency is defined as how services are produced and what services are produced. The system as a whole is efficient when ‘the right services are produced-given one’s goals- and are produced in the right way’ (Roberts et al., 2008, p.113). The Control Knobs framework suggests two measures to assess the efficiency of a health system. The first measure is called technical efficiency: does the system produce maximum outputs at minimum costs? The second measure is allocative efficiency; it refers to whether a health system is ‘producing the right collection of outputs to achieve its overall goals’, such as customer satisfaction (Roberts et al., 2008, p. 113). This particular performance dimension has not been explicitly examined in existing surveys of public opinion on health systems (see Chapter 4), given the public’s lack of access to the relevant financial and performance data and the complexity of interpreting such data. However, BSA briefly touched upon allocative efficiency by asking respondents whether the NHS wastes money on unnecessary services (see Table 4.2).

## **5.4 Summary**

This chapter has identified a number of health system performance assessment instruments and described the selection process that led to the adoption of the Control Knobs framework (Roberts et al., 2003) to frame the different phases of this research study: the systematic review, the FGDs study, and the construction of the national survey instrument to assess the current situation in KSA. The framework evaluates population health status, citizen satisfaction with the health system, the degree to which the system protects the public from financial risks arising from illness, and levels of healthcare quality, access, and efficiency. These dimensions will be

used as a conceptual model for the following phases of this thesis: the systematic review (Phase 2), FGDs study (Phase 3), and the survey development (Phase 4).

# **Chapter 6 Public and patient attitudes towards healthcare in Saudi Arabia: A systematic review of qualitative and quantitative studies**

## **6.0 Introduction**

This chapter presents a systematic review of public attitudes towards the health system and healthcare in Saudi Arabia. It begins by establishing the rationale and objective of the research. The review methods are described, and the results are presented. The chapter concludes with a discussion of the key findings and limitations of the review.

## **6.1 Rationale for the review**

As said earlier in Chapter 3, the Kingdom of Saudi Arabia (KSA) has experienced rapid socioeconomic change, giving rise to new public health challenges and extensive health reform (AlMalki et al., 2011; AlSharqi, 2012; Yusuf, 2014), including expansive health reforms (Alkhamis, 2013). The most recent of these reforms, initiated in 2006, led to the implementation of the Cooperative Health Insurance (CHI) scheme to provide compulsory employment-based health insurance coverage for non-Saudi citizens and Saudi nationals working in private companies. Health reforms are pushing towards privatisation, with the private health sector expected to take on more roles in the provision of health services for the population (Alkhamis, 2013; Alkhamis et al., 2014).

As explained in Chapter 1, it is now widely accepted that grounding healthcare in users' needs and perspectives results in higher-quality services. This has led many countries to increase the use of public and patient perspectives in the design, delivery, and evaluation of health services (Elwyn et al., 2012). Thus, public and patient perceptions of health service delivery are increasingly used to evaluate health system performance (Bowling et al., 2012).

Most of the literature on health services research in KSA has focused on patients' views of quality and access to care at specific facilities offered by different types of healthcare providers (AlOmar, 2000; AlDossary et al., 2008; AlSharqi, 2012; Yusuf, 2014). For example, a recent systematic review conducted by AlMutairi & Moussa (2014) assessed healthcare delivery quality in KSA, utilising the Institute of Medicine's (IOM, 2001) quality indicators as a framework. In another systematic review, conducted by Alahmadi and Roland (2005), the focus was on the quality of primary care services and barriers to achieving sufficient quality in primary PHC centres. Another systematic review explored the key issues of quality of healthcare at university hospitals in KSA (Aljuaid et al., 2016). These studies have not

systematically addressed public opinion on other dimensions of performance, such as the efficiency of health services or financial risk protection.

To our knowledge, no reviews have comprehensively examined the health system in KSA and its performance based on the users' perspectives. Therefore, this systematic review seeks to explore the available literature on public and patient opinions and attitudes towards the health system of KSA and its performance. The major themes arising from this review were used to inform the data collection tools for Phase 3 (focus groups discussions [FGDs]) and Phase 4 (questionnaire survey development), discussed later in this thesis (Chapter 9).

## **6.2 Objective**

The objective of this review is to identify and synthesise the existing qualitative and quantitative literature that has explored public and patient attitudes towards the health system in KSA.

## **6.3 Methods**

We conducted a systematic literature review in line with the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) Statement (Moher et al., 2009).

### ***6.3.1 Eligibility criteria***

Only electronically available studies conducted from January 2007 to January 2017 were eligible for inclusion in this review in order to ensure it would cover the Saudi health system reforms implemented in late 2006 (Walston et al., 2008; AlMalki et al., 2011). The eligibility criteria were further limited to studies published in English since English is the standard language of publication for health-related studies in KSA, and the leading KSA medical journals, such as *Saudi Medical Journal*, *Saudi Journal of Biological Sciences*, and *Saudi Dental Journal*, only accept papers written in English. This language restriction has also been followed in a recent systematic review study about healthcare in KSA (AlJuaid et al., 2016).

The SPIDER tool (Cooke et al., 2012) was used to conceptualise the eligibility criteria. SPIDER was selected because of its appropriateness for reviews that do not examine interventions and is useful when identifying both qualitative and mixed-methods research. This tool comprises five elements: sample, phenomenon of interest, design, evaluation, and research type. Table 6.1 shows the SPIDER elements with brief examples of search categories for each element.

<b>SPIDER</b>	<b>In this review</b>	<b>Search term (see Appendix IV)</b>
<b>S</b> -sample	People aged 15 years old and above residing within KSA	Group 1
<b>PI</b> -phenomenon of interest	Health system Health policy Any healthcare service	Group 2
<b>D</b> -design	Cross-sectional surveys Interviews FGDs <sup>7</sup>	Group 3
<b>E</b> -evaluation	Views or satisfaction of participants on, access, quality, risk protection, health status, efficiency	Group 4
<b>R</b> -research type	Primary studies	Group 3

**Table 6.1: Review eligibility criteria based on the SPIDER tool**

**Source:** The author

#### 6.3.1.1 *Sample*

The studies included in this review must have sampled people aged 15 years or over<sup>8</sup> residing in KSA (whether or not they are Saudi citizens), within any setting. There were no restrictions on whether or not respondents had used Saudi healthcare facilities. Studies where participants are identified as medical students, health professionals, experts, or policymakers were excluded because of their professional relationship with, and specialist perspectives on, the Saudi health system. However, studies that sampled professionals and experts together with lay participants were included if data from the lay participants only were extractable.

#### 6.3.1.2 *Phenomenon of interest*

The studies included in this review must have aimed to explore public attitudes towards some aspect of the performance of Saudi health services or the Saudi health system or both. This review included any type of healthcare services, such as services provided at primary care centres or dental clinics in any health sector, including governmental or private care or any healthcare provision, such as nursing, in KSA.

Studies relating to health needs, health literacy, healthcare utilisation, and health behaviour, such as healthy lifestyles or the impact of healthy lifestyles on people's health status, were

<sup>7</sup> Focus group discussions

<sup>8</sup> The choice of age has been decided based on the target population included in the biggest Saudi national study (El Becheraoui et al. 2015)

excluded. In addition, studies measuring quality of life (QOL) or similar phenomena were excluded.

#### **6.3.1.3 Design**

Eligible studies explored people's attitudes using cross-sectional survey techniques, interviews, and FGDs. Studies that used data from patients' medical records were excluded because data obtained from medical records are usually clinical data related to the diagnosis and treatment received during the clinical encounter, rather than the patients' attitudes towards healthcare delivery.

#### **6.3.1.4 Evaluation**

Studies included in this review had to have explored public attitudes towards the healthcare services or health system performance in KSA or both. According to the *Collins Dictionary* (2012), the word *attitude* encompasses viewpoint, opinion, feeling, belief, trust, and confidence.

#### **6.3.1.5 Research type**

All relevant primary studies, including qualitative, quantitative, and mixed-methods studies were eligible for inclusion. Systematic reviews, editorials, opinion pieces, letters, and similar material were excluded. However, reference lists of relevant systematic reviews were searched to ensure comprehensive coverage.

### **6.3.2 Information sources**

Table 6.2 shows the different types of sources searched.

#### **6.3.2.1 Bibliographic databases**

Bibliographic databases were selected in consultation with the author's supervisors and the health subject librarian at City, University of London. The databases searched were Embase, MEDLINE, Global Health, Health Policy Reference Centre, Academic Search Complete, and SocINDEX.

#### **6.3.2.2 Grey literature**

To reduce the potential for publications bias, additional searches of 'grey literature', including theses, were conducted by searching the ETHOS database.

#### **6.3.2.3 Scanning reference lists of eligible studies**

The reference lists of the included papers were scanned to identify further studies falling within the criteria of this review. In addition, two important and relevant systematic reviews were identified (AlMutairi & Moussa, 2014; AlJuaid et al., 2016), and their references were scanned as well to identify additional eligible studies.

#### 6.3.2.4 *Hand-searching of key journals*

The tables of contents of the country's leading medical journal, the *Saudi Medical Journal*, were also searched by hand.

Type of source searched	Name of source
Bibliographic databases	EMBASE (1996 to 2015)
	MEDLINE (Daily Update)
	Global Health (1973 to 2015)
	Health Policy Reference Centre
	Academic Search Complete
	SocINDEX
Key journals	<i>Saudi Medical Journal</i> (from 2006–2017)
Thesis databases	ETHOS

**Table 6.2: Type and name of sources searched<sup>9</sup>**

#### 6.3.3 *Search strategy*

The search terms for each SPIDER section are given in Appendix IV. These were chosen based on MeSH terms and then supplemented with free-text keywords. Appendix V shows the search strategy developed for MEDLINE (Ovid). This was adapted for use with the other bibliographic databases.

#### 6.3.4 *Study selection*

Three independent reviewers, the author, one supervisor, and an external reviewer, screened the titles and abstracts of all retrieved references against the review's eligibility criteria. Duplicate references were identified and removed. The full texts of all studies whose title and abstract met the eligibility criteria as well as those whose eligibility was uncertain were obtained. Any disagreements regarding inclusion or exclusion on full text were resolved by discussion between the reviewers. Where consensus was not reached after a full-text review, a fourth researcher was available to consult in order to reach a final decision.

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<sup>9</sup> Date last searched: January 2017.



### ***6.3.5 Data collection process***

The author undertook data extraction for the included studies using a custom electronic data extraction form on EPPI-Reviewer (Thomas et al., 2010). The data items are given in Box 6.1. In the mixed sample studies, only data clearly relating to lay participants were extracted. One of the study supervisors checked the extracted data. The reviewers resolved differences of opinion through discussion to reach a consensus, consulting a third researcher to help reach a final decision when consensus was not required.

- |   |
|---|
| <ul style="list-style-type: none"><li>• Author name</li><li>• Title</li><li>• Year of publication</li><li>• Focused question/objectives</li><li>• Study design</li><li>• Methods</li><li>• Performance dimensions addressed in the study</li><li>• Sample size</li><li>• Validity and reliability of selected tool</li><li>• Results</li><li>• Statistical significance</li><li>• Limitations</li><li>• Recommendations</li></ul> |
|---|

**Box 6.1: Review data items**

### ***6.3.6 Quality assessment***

This review used the 16-item QATSDD quality assessment tool (QATSDD; Sirriyeh et al., 2011). Unlike the Critical Appraisal Skills Programme (CASP; CASP, 2107) or other quality appraisal tools, QATSDD has demonstrated good reliability and validity and allows standardisation in reviews, including qualitative, quantitative, and mixed-methods studies. In addition, it allows the researchers to calculate the overall scoring for each study and then to classify them according to their methodological robustness. The total score of each paper was calculated by adding up the scores of each of the QATSDD quality assessment items divided by the total number of items in the tool. After that, the percentage of scores was calculated; papers that scored over 75% were considered ‘high quality’, those between 50% and 74% ‘good’, those scoring between 25% and 50% ‘moderate’, and those below 25% ‘poor’.

Criteria for appraisal of qualitative studies can be contested. Spencer et al. (2003) stated that unlike quantitative research, ‘qualitative research should be assessed on its “own terms” within premises that are central to its purpose, nature and conduct’ (p. 17).

However, in keeping with this research study's subtle realist pragmatic approach, the QATSDD tool supported the study's researchers' aim to achieve the best possible scientific 'neutrality' in presenting the evidence of public and patients' attitudes towards healthcare and health system performance in KSA (see Chapter 1, Section 1.4 for further information about the philosophical approach of this thesis). Using the QATSDD quality assessment tool, the author assessed the quality of the included studies, and another reviewer checked the accuracy of the quality assessments. The quality score for each paper was calculated using an Excel spreadsheet, and the final score was documented for each paper. The synthesis of findings section (6.3.8) discusses the strengths and limitations of the included studies from which they arise.

### ***6.3.7 Data management***

The web-based research synthesis software EPPI-Reviewer 4 (Thomas et al., 2010) was used for this review. All reference management, screening, data extraction, and coding were undertaken electronically using this software.

### ***6.3.8 Synthesis of findings***

Data synthesis involved drawing out themes through the use of narrative thematic synthesis, a common strategy similar to a thematic analysis (Braun & Clarke, 2006; Thomas & Harden, 2008; Snilstveit et al., 2012). This approach is suitable for systematic reviews that include both qualitative and quantitative papers because it offers a structured way to organise and integrate the findings from both types of study. With this method, both inductive and deductive approaches were used. This was achieved using two steps. Firstly, the results of each study were read and reread and data were highlighted, compared, and contrasted to identify dominant themes and sub-themes emerging directly from the data. Secondly, the author actively sought to identify data falling within any of the Control Knobs framework performance dimensions (health status, citizen satisfaction, financial risk protection, quality, access, and efficiency; Roberts et al., 2003) when relevant. The rationale for selecting this framework is given in Chapter 5, Section 5.2.

Studies were expected to be heterogeneous and so it was not anticipated that a statistical meta-analysis would be conducted.

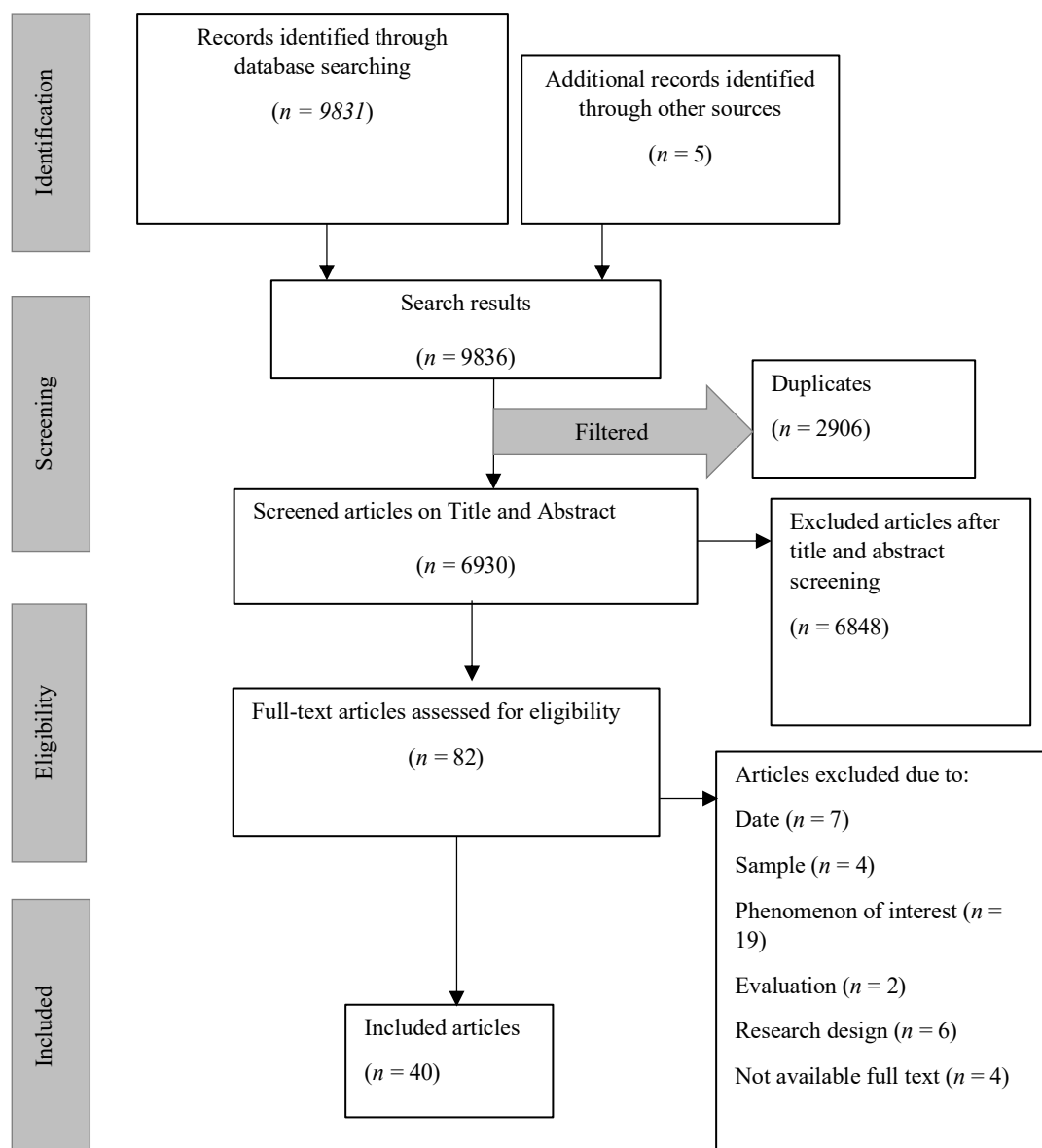
## 6.4 Results

### 6.4.1 Literature search and review process

Figure 6.1 summarises the results of the literature search and review process. The number of citations identified through the electronic database after the application of electronic search was 9,831 (EMBASE  $n = 5,100$ ; MEDLINE  $n = 1,969$ ; Global Health  $n = 1,196$ ; Academic Search Complete  $n = 1,167$ ; Health Policy Reference Centre  $n = 380$ ; SocINDEX  $n = 19$ ; additional records identified through other sources [hand search of *Saudi Medical Journal*]  $n = 3$ ; theses from the ETHOS database  $n=2$ ).

Abstracts of 6,930 papers were reviewed after duplicates ( $n = 2,906$ ) were removed. In total, 82 papers from the electronic search met the criteria for full-text review, and 40 papers were ultimately included in the study.

As explained earlier, the reference lists of two relevant systematic reviews (AlMutairi & Moussa, 2014; AlJuaid et al., 2016) were searched, but none of the studies fell within the criteria of this review, i.e. most of them were reviews, were based on the perceptions of health professionals, or were conducted before 2007. Only one study was found to be eligible (Atallah et al., 2013), but this paper had been already identified in the database search of this review. Therefore, no further studies were identified from the two systematic reviews.



**Figure 6.1: PRISMA flow diagram of study selection (Moher et al., 2009)**

### **6.4.2 Study characteristics**

Table 6.3 summarises specific characteristics of the 40 included studies. All 40 studies were patient-satisfaction studies (i.e. satisfaction with specific services). Within this, two public opinion surveys were identified (El Bcheraoui et al., 2015; Hamam et al., 2015), one of them being a household survey (El Bcheraoui et al., 2015). The majority of studies were conducted in the central province of KSA ( $n = 25$ ), though two nation-wide studies (Al-Borie & Damanhour, 2013; El Bcheraoui et al., 2015) were identified. The majority of studies adopted self-report questionnaires and surveys ( $n = 33$ ); three were comprised of face-to-face surveys (AlHassan, 2009; Suliman et al., 2009; AlJamaan et al., 2014); there was one phone survey (AlBarakati, 2009), and there were two qualitative studies (Mahrous, 2013; Saati, 2013). No mixed-methods studies were identified.

Selected study characteristics	Number of studies (Total <i>n</i> = 40)
<b>Geographical area <sup>10</sup></b>	
Central province	25
<i>Riyadh (Capital)</i>	19
<i>AlQassim</i>	2
<i>AlDawadmi</i>	1
<i>Not specified</i>	3
Eastern province	8
Western province	8
Southern province	2
Not specified	3
<b>Setting (as specified by the authors)<sup>11</sup></b>	
Quasi-governmental <sup>12</sup>	15
Governmental	13
Private	7
Other (e.g. home visits)	2
Not specified	4
<b>Type of study</b>	
Quantitative	38
<i>Self-administered survey</i>	33
<i>Phone survey</i>	1
<i>Face to face survey</i>	3
<i>Household survey</i>	1
Qualitative	2
<i>FGDs<sup>13</sup></i>	1
<i>Individual interviews</i>	1
Mixed method	0

**Table 6.3: Selected characteristics of the included studies**

### ***6.4.3 Methodological issues and quality appraisal of the included studies***

As suggested by Aveyard (2014), critical appraisal can facilitate the achievement of a hierarchy of evidence in relation to the methodological quality of the studies, and in the case of this research, it enables the findings to be based on the best available and highest quality data, thus

<sup>10</sup> Some studies were conducted in multiple regions.

<sup>11</sup> Some studies were conducted in multiple settings

<sup>12</sup> Quasi-governmental hospitals, such as University hospitals and National Guard hospitals, are managed by agencies other than the Ministry of Health. They provide healthcare services at all levels for specific groups within the population (mainly other government agencies' employees and their dependants).

<sup>13</sup> Focus group discussions

enhancing the rigour and quality of the review's findings and methods. As outlined in the methods section above (section 6.3.6), the QATSSD quality assessment rating tool was used.

The three 'poor' scoring quantitative studies (AlJamaan et al., 2014; AlMrstani et al., 2014; AlShahrani et al., 2015) had many methodological limitations, mainly consisting of a lack of clear reporting of the methods used (AlMrstani et al., 2014), or had a small sample size ( $\leq 100$ ) (AlJamaan et al., 2014; AlShahrani et al., 2015) with no consideration of whether the sample used offered the statistical power necessary to effectively reach a level of significance in quantitative analysis.

Nineteen 'moderate' rated studies also revealed limitations in the reporting of the methods. However, the methodology of these studies was more rigorous than those rated 'poor' and included discussion of recruitment methods (AlOnazi et al., 2011; AlArifi, 2012), sample size (AlArifi, 2012; AlQahtani & Al Dahi, 2015), data collection methods (AlBarakati, 2009; Atallah et al., 2013; Al-Abbad, 2015), and methods of analysis (Al Hassan, 2009). One qualitative study was weak in substantiating the findings with direct quotations from participants (Mahrous, 2013).

Thirteen 'good' papers provided a clearer theoretical framework (Al-Borie & Damanhour, 2013), more detailed information on the validity and reliability of the research tool (Khawaja et al., 2011; Alshammari, 2014), and user involvement in study design (AlTurki & Khan, 2013).

Five 'high quality' studies (Suliman et al., 2009; AlGhanim, 2011; AlMomani & Korashy, 2012; Saati, 2013; Suleiman, 2013) attained a quality rating of at least 75% and provided a clear rationale and description of their methods. Although these studies were given high scores, the issue of lack of depth in reporting the theoretical framework affected the quality of studies by AlMomani and Korashy (2012) and Suleiman (2013), whereas a lack of user involvement in designing the study tool reduced the quality of Saati (2013) and Suliman et al. (2009).

Overall, validated tools were used to measure experience and satisfaction in many of the quantitative studies ( $n = 17$ ). Non-validated author generated tools were used in eight studies, while 13 studies did not clearly describe the validity assessment of the selected tools.

More explanation on the methodological strengths and weaknesses of each study is given in Appendix VI.

#### ***6.4.4 Synthesis of findings***

A summary of methods and main findings of the included studies is given in Appendix VII. The majority of the studies reviewed were carried out in particular areas of KSA, most notably in urban areas such as Riyadh, Jeddah, Dammam, and Tabuk.

All themes identified as arising directly from the data were found to map onto two of the six dimensions of the Control Knobs health system performance framework: quality of care and access to care. Few studies addressed the affordability of care, an aspect of access to care.

Synthesis of the findings produced mostly evidence on the attitudes towards healthcare quality, especially doctor-patient communication and interaction, access, and, to a lesser extent, the affordability of care.

### **6.4.5 Quality of healthcare**

The documentation of provision most commonly explored across included studies was patients' perceptions of the quality of healthcare, especially doctor-patient communication and interaction. Fifteen studies (42% of the total included studies) focused on this. Surprisingly, only one study explored perceptions of the safety of healthcare delivery (AlOtaibi & Abdelkarim, 2015).

#### **6.4.5.1 Professional-patient communication**

Studies exploring professional-patient communication found that satisfaction was moderate to good. Of the 15 studies, two found that most participants felt their doctors practiced most of the communication-related behaviours that characterise theoretically 'ideal' doctors (ArRejaie et al., 2014; Al-Mobeeriek, 2012, p. 89). Examples of traits of such ideal doctors include the provision of moral support, considering patients' feelings, explaining the procedure, and encouraging patients to ask questions (Al-Mobeeriek, 2012; Kurtz, 2002). Three studies suggested that those with a poor level of education were less likely to be satisfied with doctor-patient communication and interaction (Al Qahtani & Al Dahi, 2015; AlTurki & Khan, 2013; Al-Borie & Damanhour, 2013).

Studies exploring perceptions of doctor-patient communication reported patients' concerns on health professionals' inability to speak the Arabic language, the use of overly technical language, and low levels of empathy, a particular concern amongst non-Arab health professionals.

In terms of language as a barrier to communication, one qualitative (Saati, 2013) and four quantitative studies revealed dissatisfaction with the quality of communication when patients received care from non-Saudi health professionals whose native language was not Arabic (AlKhathami et al., 2010; AlFozan, 2013; Atallah et al., 2013; Suliman et al., 2009) and who never or rarely used an interpreter despite the presence of language barriers (AlKhathami et al., 2010). Saati's (2013) study revealed similar findings of dissatisfaction with interactions with health providers whose native language was not Arabic. One participant stated: 'They do not understand me and I do not understand them' (Patient 3, early treatment phase, p. 37).

Four studies revealed that respondents found difficulties in understanding the information provided by the healthcare provider due to the use of overly technical language (AlBarakati, 2009; AlTurki & Khan, 2013; Al-Abbad, 2015; Harakati et al., 2011).

However, different results were found in Saati's (2013) qualitative study, which revealed that patients reported that Saudi health providers used simple language to convey information to

patients, which made them feel more comfortable about the health services received. ‘They explained everything regarding my condition in a simple way for my husband, my family and me...which makes me comfortable with the treatment services’ (Patient 20, mid-treatment phase, p. 37).

Six studies revealed that patients perceived low levels of empathy from healthcare workers. One of them reported that empathy had the greatest influence on participants’ satisfaction compared to other aspects of quality of care and suggested that training health professionals in communication skills is crucial to ensuring better care in KSA (AlGhamdi, 2014). One study ( $n = 448$ ) found respondents dissatisfied with how little nurses allowed them to express their feelings during clinical encounters, restricting discussion of patients’ emotional problems; female participants were more satisfied with the overall level of care compared to males (AlMomani & Al Korashy, 2012). This study was methodologically strong, which suggests that its findings should be considered an important contribution to the synthesis. Another study of patients receiving dialysis during night shifts reported lower perceived empathy in terms of respectful care, listening to patients’ concerns, and understanding their emotions and feelings compared with patients receiving the same treatment during morning shifts (AlOnazi et al., 2011). Another found that 50% of respondents felt that doctors’ style of communication was insensitive, especially when informing patients about their illness (Harakati et al., 2011). Both studies are, however, methodologically weak, and therefore their validity and contribution to our understanding of healthcare providers’ empathy is uncertain. Health insurance status was a factor in one study, with insured participants more satisfied than the uninsured with healthcare providers’ communication style and the time taken to discuss the medicines required (AlSaqer et al., 2015).

One study suggested that the nationality of the healthcare providers could be a predictor of the patients’ perceptions of their empathy as the majority of patients reported that Arabic-speaking nurses were more capable of showing empathy than non-Arabic nurses (AlKhathami et al., 2010). This is confirmed by Saati (2013), who revealed that respondents were more satisfied with the level of empathy shown by Saudi health professionals; non-Saudis were perceived as less willing to understand and respond appropriately, thus making patients less likely to seek care from non-Saudi health professionals.

‘I feel they do not want to help me’ (Patient 3, early treatment phase, p. 37).

‘Sometimes the foreign or non-Saudi nurses are not tactful...I prefer to deal with Saudi nurses...I avoid non-Saudi nurses to avoid any problems’ (Patient 3, early treatment phase, p. 37).

In terms of overall quality of services, only one study found satisfaction with service quality to vary by location. Participants living in Riyadh (the capital city) were found to be more likely to be satisfied, especially with health professionals’ empathy, than people living in other parts of the country (Al-Borie & Damandouri, 2103). This study was scored as ‘good’ and featured a



large sample size and detailed reporting of data collection methods, thus increasing the importance of its findings for this review.

#### **6.4.5.2 Patient safety**

Only one quantitative study ( $n = 100$ ) explored patient satisfaction with procedures intended to ensure safe care. It found that 72% of participants reported that private pharmacists were illegally dispensing antibiotics without prescriptions (AlOtaibi & Abdelkarim, 2015). Participants regarded this practice as prioritising profit over patients' patient interests and as constituting serious malpractice. In contrast, one study with a larger sample size ( $n = 1,699$ ) revealed that only 30% of the participants perceived the pharmacist as a vendor, showing high satisfaction with the pharmacist's role in the healthcare team (AlArifi, 2012). The nationality of the patients was shown to be a factor in the latter study, with non-Saudi patients more satisfied than Saudi nationals with the care provided by private pharmacists (AlArifi, 2012).

#### **6.4.6 Access to care**

Eleven studies (25%) explored patient opinions on access to care. These have been mapped into three sub-themes: working hours of healthcare facilities, geographical distance from healthcare facilities, and timely care and waiting times.

##### **6.4.6.1 Working hours of healthcare facilities**

Of the 11 studies, five (45%) reported patient dissatisfaction with healthcare facilities' working hours and felt that the appointment time offered to them was inconvenient (AlBarakati, 2009; Al Hassan, 2009; AlGhanim, 2011; AlZolibani, 2011; AlMoajel et al., 2014); these views were especially prevalent amongst male participants and participants living in urban areas (AlZolibani, 2011). Inconvenient working hours were one of the key reasons for patients visiting pharmacies instead of PHC centres in Riyadh when their illness was not serious (Al Hassan, 2009) or for bypassing PHCs altogether (AlGhanim, 2011). The latter study ( $n = 800$ ) showed a significant association of satisfaction with age and level of education, with younger and less educated participants reporting lower satisfaction.

Some caution should be exercised with regards to the trustworthiness of some studies investigating this theme. For instance, Al Hassan's study (2009) is gender-biased since it included only male participants. However, AlGhanim (2011), which revealed similar conclusions relating to dissatisfaction with working hours of PHCs to Al Hassan's (2009) study, provided more reliable evidence of dissatisfaction with working hours of healthcare facilities in their cross-sectional study with a larger and more representative sample ( $n = 800$ ).

##### **6.4.6.2 Geographical distance from healthcare facilities**

Some studies found the location of healthcare facilities to be inconvenient and a barrier to access. In examining the reasons for female patients' failure to keep their appointments, AlBarakati (2009) found that the majority of respondents reported missing their appointment

because of transportation issues. The majority of respondents indicated that they relied on a family member for transportation, and thus they could not keep their appointment when relatives were unavailable to drive them to the hospital. In contrast, a national household survey that was more representative in terms of gender and sample size ( $n = 10,735$ ) than AlBarakati (2009) reported that distance to the clinic was not considered an access issue in KSA (El Bcheraoui et al., 2015).

#### 6.4.6.3 *Timely care and waiting times*

Seven studies reported low levels of satisfaction across a range of settings. At the PHC level, one study found that almost 40% of respondents reported long waits at PHCs to see doctors (AlMoajel et al., 2014).

Within secondary care, three studies reported patients' inability to obtain timely appointments with specialists (AlDebasi & Ahmed, 2011; AlJamaan et al., 2014; AlMoajel et al., 2014), and one reported dissatisfaction with the timing of follow-up care (AlShahrani et al., 2015). One study ( $n = 150$ ) explored the influence of insurance status on patients' perceptions of access to care at emergency departments (EDs) within private secondary care, including time taken to finalise procedures at reception and waiting times (from arriving at the ED to seeing the doctor). The study suggested that insured participants were more satisfied with access to care than those without insurance (AlSaquer et al., 2015).

Within tertiary care, one study found that the majority of participants reported delays in laboratory services, including sample collection and receipt of results, although half agreed that they could easily receive timely answers to their queries about tests over the phone (AlDebasi & Ahmed, 2011). In contrast, one quantitative study identified high levels of satisfaction with the time taken to dispense prescriptions from tertiary care pharmacies (Al Essa et al., 2014), although this study was limited by its small sample size ( $n = 49$ ). Another found that half of the participating cancer patients failed to secure referrals to tertiary care; around 30% believed their condition was adversely affected by delays in the referral system (AlJamaan et al., 2014). It is worth mentioning that this study found that some of the participants who managed to get referrals had possession of special royal decrees (letters from the Prince's Office facilitating access to care) or knew someone who worked at the hospital (AlJamaan et al., 2014). However, the extent to which this affected the actual process of referral or how it influenced overall satisfaction with the referral service was unclear.

With regards to paramedic services, one study ( $n = 1,551$ ) reported that 40% of respondents believed that services responded slowly and took more than 30 minutes to reach a patient's home (Hamam et al., 2015).

### ***6.4.7 Affordability of care***

Issues of affordability of care were not widely addressed. One methodologically weak study found that insured patients were more satisfied with financial costs of care than non-insured patients, which in turn increased their access to care at private healthcare facilities; participants with no insurance were more likely to decide to leave the ED without receiving necessary care because they could not meet the costs (AlSaquer et al., 2015).

However, a stronger study with a larger sample size found that cost had no effect on accessing healthcare; this was explained by services being provided at no cost to the patients in Saudi governmental hospitals (AlBarakati, 2009).

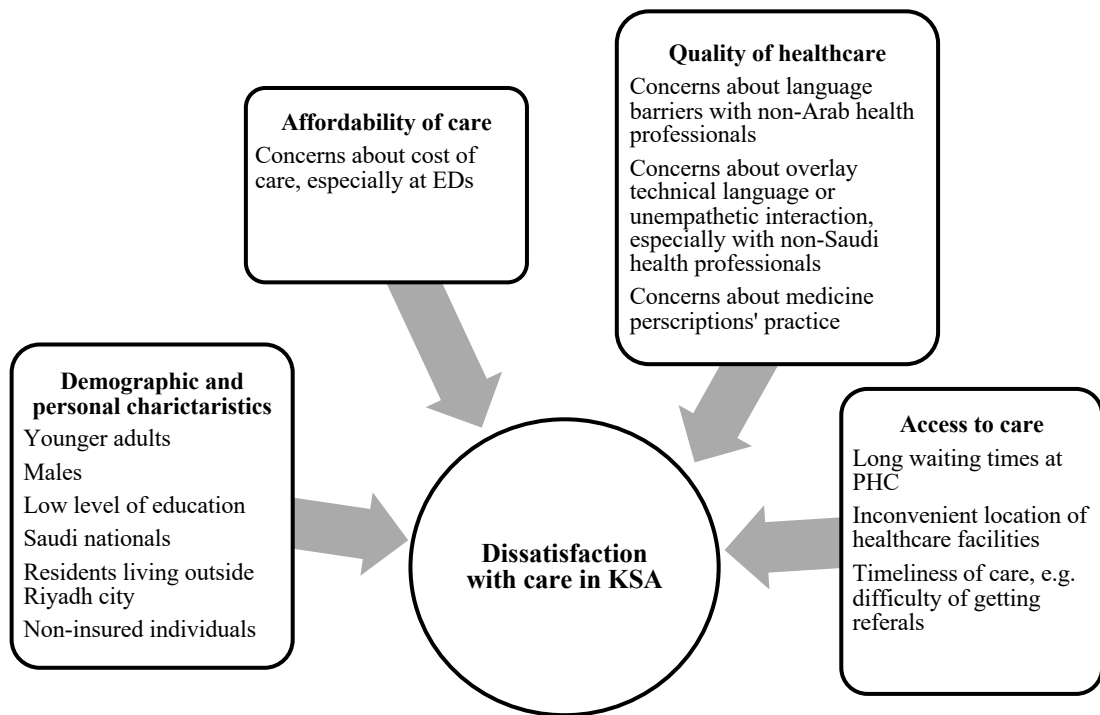
AlJamaan et al. (2015) found that patients who were unable to get a referral decided to pay the medical expenses of their treatment using their own money, which could put cancer patients and their family at financial risk. However, it is unknown whether this important issue has been investigated in AlJamaan et al.'s study (2015) or whether it is merely the authors' opinion as it has not been included in the results section but in the discussion section. The studies by AlSaquer et al. (2015) and AlJamaan et al. (2014), despite their methodological limitations, do suggest that perceived financial burden may impact a patient's ability to get needed care.

## **6.5 Discussion**

The aim of this review was to identify existing qualitative and quantitative literature that explored public and patient opinion about healthcare services and the performance of the health system of KSA.

### ***6.5.1 Summary of main results***

In examining public and patient attitudes towards healthcare in KSA, no public opinion surveys about the performance of Saudi health system were found. The majority of the studies reviewed were carried out in particular areas of the KSA, most notably in urban areas such as Riyadh (the capital), Jeddah, Dammam, and Tabuk. The included studies used a range of qualitative and quantitative methods, which consisted primarily of cross-sectional patient satisfaction surveys. Two of the themes covered by the Control Knobs framework were explored repeatedly across the studies: quality and access to care. Perceptions of affordability of care were explored in a small number of studies. Figure 6.2 summarises what the synthesis suggests about the main predictors of dissatisfaction with care in KSA. The following subsections will discuss the themes identified in the review in the context of related literature.



**Figure 6.2: A summary of the main predictors of dissatisfaction with care in KSA**

#### 6.5.1.1 *Quality of healthcare*

Overall, the studies reviewed showed that participants' satisfaction with the quality of care provisions was moderate to high. However, the review showed low levels of satisfaction with healthcare providers' communication because of language barriers (Suliman et al., 2009; AlKhathami et al., 2010; AlFozan, 2013; Atallah et al., 2013), healthcare providers' unwillingness to listen to patients or understand their perspectives on their health (Albarakati, 2009; Harakati et al., 2011; AlTurki, 2013; Al-Abbad, 2015), and providers' unwillingness to listen to patients' emotional concerns (AlMomani & AlKorashy, 2012). This led to poor patient understanding of the information given by the healthcare provider (Albarakati, 2009; Harakati et al., 2011; AlMomani & AlKorashy, 2012; AlTurki & Khan, 2013; Al-Abbad, 2015). The findings of this review are in line with two previous systematic reviews about the quality of PHC services in KSA, which identified poor interpersonal communication between patients and primary care doctors arising from the fact that most primary care doctors are expatriates who cannot speak Arabic, the language of the majority of patients in KSA (Alahmadi & Roland, 2005; AlJuaid et al., 2016). In addition, a systematic review found that doctors encountered difficulty in interacting with patients because (a) they believe that some patients have low levels of education and (b) patients' desires were not always aligned with what the doctors actually wanted to provide (Alahmadi & Roland, 2005).

Participants living in Riyadh were more likely to be satisfied with doctors' empathy than people living in other parts of the country (Al-Borie & Damanhour, 2013). We can hypothesise that most specialised healthcare services, such as specialist hospitals, are located in Riyadh. People

living there may experience superior services at these facilities and ultimately be more satisfied with their care.

#### 6.5.1.2 *Access to care*

The majority of the included studies examining access to care in KSA reported low levels of satisfaction with access. The main reason for dissatisfaction was the inconvenient working hours of healthcare facilities (AlBarakati, 2009; Al Hassan, 2009; AlGhanim, 2011; AlZolibani, 2011; AlMoajel et al., 2014;), especially in PHCs (AlGhanim, 2011; AlMoajel et al., 2014). This finding was further supported by Alahmadi and Roland's (2005) systematic review, which concluded that patients in KSA were dissatisfied with the working hours and waiting times within primary care.

The results of this review differ in some respects from those of Alahmadi and Roland's (2005) systematic review, which reported that PHCs tended to be patients' first choice when they were acutely ill. However, the results of the current review suggest that patients avoid interacting with primary care (AlGhanim, 2011) and instead choose to seek care at pharmacies (Al Hassan, 2009). Neither study, however, identified qualitative evidence exploring the reasons why patients choose to avoid interaction with PHCs, which could have provided a more in-depth understanding of the reasons that people avoid interacting with PHC centres.

Geographical distance from healthcare facilities (AlBarakati, 2009) and timeliness of care (AlDebasi & Ahmed, 2011; AlJamaan et al., 2014; AlMoajel et al., 2014; AlShahrani et al., 2015; Hamam et al., 2015) were also found to be reasons for dissatisfaction with access. In addition, AlGhanim's (2011) study reported positive associations between age and patient satisfaction with access. These findings are in accord with the literature – for example, an Australian study found that older participants reported high satisfaction with PHC services and public hospitals (Hardie & Critchley, 2008). The frequent healthcare visits of older patients might explain this (Hardie & Critchley, 2008).

#### 6.5.1.3 *Affordability of care*

Very few studies explored affordability of care (AlBarakati, 2009; AlJamaan et al., 2014; AlSaquer et al., 2015). It is unclear why the included studies do not focus on the aspect of affordability of care, but this might be because the Ministry of Health (MOH), which provides free-of-charge health services, is responsible for the majority of healthcare services (60%) provided in KSA (Yusuf, 2014). However, evidence in this review reveals patients' difficulties in accessing timely care at governmental hospitals, leading patients to shift to private care and pay out of their own pockets, causing them financial burden (AlJamaan et al., 2014). In addition, it seems some patients do not seek care at private hospitals because of the high costs involved (AlSaquer et al., 2015). Health insurance coverage played a crucial role in influencing participants' opinions of the cost of care, with insured patients being more satisfied with the cost of care at EDs than patients with no health insurance (AlSaquer et al., 2015). The other study

suggested that some patients do not seek care at private hospitals for financial reasons (AlJamaan et al., 2014). These studies, however, have methodological limitations, especially with regards to sample size.

## **6.5.2 Limitation of findings**

### **6.5.2.1 Generalisability**

All but one of the studies were conducted in major cities, most commonly Riyadh ( $n = 19$ ), where most of the sophisticated health facilities, such as specialist hospitals, are located. The results of these studies may therefore not be applicable to other areas with more limited facilities. Therefore, the results of these studies may not be applicable to rural or remote areas with more limited healthcare services. In the wider literature, place of residence is seen as a significant factor that could influence public attitudes towards the health system as people living in rural areas usually have low levels of satisfaction with the health system (Duckett et al., 2013; Jadoo et al., 2014).

In addition, only small numbers of cross-sectional questionnaire surveys and qualitative studies were identified, restricting the conclusions that can be drawn. For example, one issue that the majority of respondents in the current study's FGDs (Phase 3) raised, regardless of their socioeconomic status, was the necessity of having personal connections, or what is known in the Arab world as *wasta*, in order to access healthcare services at governmental hospitals. Thus, people without *wasta* become disadvantaged and might suffer from severe delays in care (see Chapter 8, section 8.2.3.2.1 for further information about this access issue). Another study explored the issue of *wasta* and its influence on women's careers in KSA (Abalkhail & Allan, 2016), but it did not explore this issue within the Saudi health system context. This issue has received little attention in the Saudi healthcare literature, with the exception of AlJamaan et al. (2014), who suggested that some of the participants who managed to get a referral to a specialised hospital knew someone who actually worked in the hospital. However, the authors did not provide an explicit account of what is meant by personal connections or how this issue has been explored or evaluated, and it was not clearly stated in the main results of the study. It is possible that the limited evidence of *wasta* identified in this review significantly underestimates the scale of this phenomenon.

In addition, perceptions concerning safe-care, which is considered a main concept of the quality of healthcare provision (Luxford et al., 2010), were rarely evaluated, with only one study investigating perceptions of the safety of drug prescriptions (AlOtaibi & Abdelkarim, 2015).

### **6.5.2.2 Completeness**

Most of the studies included in the review ( $n = 38$ ) focused on patient satisfaction and views on particular services, and were conducted in the context of specific types or levels of care, rather

than examining the public at the regional or national level. This likely resulted in a highly fragmented and partial picture of the Saudi public's satisfaction with the system as a whole.

Furthermore, all but two of the studies utilised questionnaire surveys, limiting the opportunity to explore participants' perceptions and related experiences in any depth.

A number of studies addressed the issue of professional-patient communication. However, decision-making in treatment plans, in particular shared decision-making, has not yet been adequately explored in the Saudi literature. Patient involvement in the decision-making process has been shown to improve satisfaction with care and to improve adherence to treatment plans (Elwyn et al., 2012). Perceptions of the affordability of care were also rarely investigated.

While the impact of participants' age, gender, and educational level on satisfaction was addressed in several studies (AlDebasi & Ahmed, 2011; AlGhanim, 2011; AlKhashan et al., 2011; Kaliyadan et al. 2013; AlGhamdi, 2014), the relevance of nationality was only superficially touched upon. This is somewhat surprising given that non-Saudis are ineligible to receive free care at government hospitals. The salience of nationality for attitudes towards healthcare is therefore likely to be greater than the evidence presented here suggests. The influence of socio-economic status was also not explored in any depth, despite the fact that it has elsewhere been found to be an important determinant of satisfaction, especially in relation to access to care (Becker & Newsom, 2003).

### ***6.5.3 Limitations of the review process***

Language restrictions were placed on the search strategy since only papers published in English were included. Although this may cause language bias, as stated above, health-related Saudi studies are usually published in English. In addition, limiting the search strategy to six databases may have led to the omission of relevant studies. Nevertheless, the authors have selected the databases that were most relevant to the scope of this review and included a grey literature database to reduce publication bias as much as possible.

Limiting the studies to the date span of 2007 to the present excludes older studies, but this timeframe was important for the purpose of this review, which aimed to explore public opinion of Saudi healthcare services after the health reforms initiated in late 2006.

## **6.6 Conclusions**

This review has identified the existing qualitative and quantitative literature that explored public and patient opinion about the performance of the health system in KSA.

### ***6.6.1 Implications for practice and policy***

The findings of this study have significant implications for healthcare practice and policy in KSA. Many of the issues identified in this review are problems related to health professional-

patient communication, such as language barriers and doctors' unwillingness to allow patients to express their emotional concerns during the clinical encounter. This can be addressed by establishing more effective communication channels between the public, health providers, and policymakers. The public should be an integral part of all aspects of care, and its involvement and opinion in healthcare will ensure better interventions that are effective in achieving patient-centred care in KSA. Greater priority should also be given to healthcare facility resources, especially PHCs, in order to address the access issues identified in this review.

### ***6.6.2 Implications for research***

Future research is needed to capture the opinions of the public on the health system of KSA, rather than an exclusive focus on patients' opinions. This can be performed by implementing national- and regional-level surveys of public attitudes towards the Saudi health system. As public and private health sectors in KSA differ in terms of infrastructure, regulations, workforce, and financing, further research is needed to identify how attitudes differ between these sectors.

All but two of the studies were questionnaire surveys. These surveys both limit the participants' ability to discuss issues that are important to them and are prone to researcher influence in terms of the questions asked (Lieblich et al., 1998). Qualitative research is thus needed to gain a greater understanding of patient attitudes towards the Saudi health system (public and private sectors) and to identify the issues – political, economic, and cultural – underlying those attitudes.

In the light of ongoing reforms like the introduction of CHI and the expanding role of the private sector, further research into the factors that drive patients' choice of provision is needed. This includes perceptions of timely access, cost, and quality of care provided in both sectors.

In terms of providing a clearer picture of public perceptions of the health system and its performance in KSA – especially following recent health reforms such as the introduction of CHI and the new plan aiming to enhance the role of the private sector – further research is needed to measure and understand perceptions of care in KSA, in particular around, access, affordability, and doctor-patient communication and interaction.



# **Chapter 7 Qualitative study of public attitudes towards the health system of KSA: Methods**

## **7.0 Introduction**

This chapter sets out the methods for the thesis's qualitative component (Phase 3), exploring the prevailing attitudes towards the health system in KSA. It first discusses the qualitative approach this thesis has implemented and details the procedure employed to select Phase 3 methods. The chapter then discusses the steps taken to select study sites and attain the required ethical approvals from these sites. Then, it comments on the recruitment strategy adopted to select the study sample from amongst the residents of the Eastern Province of KSA. This chapter also describes the steps taken to construct the data collection tool (based primarily on the Control Knobs [Roberts et al., 2003] performance assessment framework) and to implement the series of focus group discussions (FGDs). The chapter concludes with an analytical plan for the qualitative data and summary.

## **7.1 Selecting a methodology**

As discussed in Chapter 1, anecdotal evidence obtained from data available on social media indicates that many people in KSA are dissatisfied with KSA's health system. However, the results of the systematic review (Phase 2, Chapter 6) revealed little research evidence to prove this anecdotal evidence, and the research that does exist has investigated a limited range of themes. Also, as given in Chapter 6, research conducted previously in KSA rarely employed qualitative approaches to investigate public opinion about healthcare and the health system in KSA. Furthermore, none of the existing public attitude surveys reviewed in Chapter 4 is appropriate to KSA context. Thus, to inform the quantitative study instrument, we must first learn more about the key aspects of people's opinions about and attitudes towards the KSA health system. Therefore, Phase 3 of the study aims to carry out a qualitative exploration of people's opinions about and attitudes towards healthcare in KSA, thereby informing Phase 4 with the development of a robust and valid survey instrument in a manner that enables the quantifying of public opinion regarding the Saudi health system. This way, we can ensure the new tool captures such aspects. We know that open-ended, 'naturalistic' approaches to qualitative methods are the most appropriate here because they offer detailed insight into underdeveloped and complex topics (Denscombe, 2003; Ritchie et al., 2013).

In addition, to capture the targeted participants' views and concerns, it is advisable to involve them in the process of constructing a questionnaire; for this reason, data were collected qualitatively to produce information and to develop the quantitative study instrument (Creswell, 2014). The following sections will describe details about the qualitative study methods, while

Chapter 10 will discuss the constructed questionnaire's validity methods.

## **7.2 Study design**

Qualitative research methods employed in the health literature include interviews, observations, and FGDs. For the purposes of this study, we can discount a number of these as inappropriate. Purely observational studies are unsuitable because they do not allow the participant and the researcher to interact, which is key to understanding opinions as they relate to our concerns. FGDs offer strengths in terms of exploring public attitudes as they provide rich data about people's opinions by involving people with broadly similar views in the process of debating a particular question/issue (Robling et al., 2004).

Unlike individual interviews, FGDs allow research participants to not only agree with one other but to question one other. In trying to convince others, they explain their arguments, re-think their points of view, and, sometimes, experience surprise over why they hold a particular point of view; they gain insight into an idea's formation and in how far away it is from the views of other group participants (Kitzinger, 1994). In addition, in FGDs the facilitator can detect and explore differences of opinion among a group's research participants as well as find ways to encourage them to justify the reasons for these differences. This careful consideration and discussion can ultimately help with the process of theorising why such diversity exists – a process that would be difficult to carry out using individual interviews or questionnaires (Kitzinger, 1994).

The following sections describe the steps taken to select the study sites, develop the topic guide, and end with the data analysis plan of FGDs.

## **7.3 Sampling**

At this stage, consideration of the 'regional' aspect of this study is crucial. Study sites were selected purposively (including location, type, and levels of healthcare facilities) using a two-stage process. The first stage involved selecting geographical regions, while the second focused on the characteristics of individual healthcare facilities. The following section explains each stage in depth.

### ***7.3.1 Selection of sites for recruitment***

For several reasons, this qualitative study was conducted in the Eastern Province of KSA. Firstly, as mentioned in Chapter 2, this province is the largest region in KSA. According to the Central Department of Statistics (2016), it is the third most populous region, after Riyadh and Makkah, and is inhabited by a diverse population, including both Saudis and expatriates, with expatriates constituting around 33% of the Eastern Province's population. Secondly, the Eastern Province is considered one of the largest industrial provinces in KSA. It is the location of the

largest petrochemical companies in the Middle East, making it an attractive home for both Saudi and non-Saudi nationals. Thirdly, the Eastern Province encompasses both urban areas (11 cities) and rural areas (30 villages), providing opportunities to explore a potentially wide range of attitudes towards the Saudi health system. Fourthly, based on the researcher's (i.e., the PhD candidate's) professional experience (a 1-year internship in several health facilities in the Eastern Province, 10 years working in the College of Public Health, Imam Abdulrahman Bin Faisal University, and about 3 years of field training for students in several health facilities in the Eastern Province), both Saudis and expatriates are encountering difficulties in the current health system, with the most sophisticated health services located in Riyadh city (See Chapter 6, Section 6.5.2). The Eastern Province was an appropriate site for investigating these difficulties and exploring public attitudes towards the healthcare and health system in KSA. Finally, the researcher is familiar with this area and its geographical and administrative characteristics, enabling her to more easily obtain the ethical approvals and sign-offs required to access the study sites.

The sample included Saudi national citizens, expatriates, and urban and rural inhabitants. Recruitment was carried out at healthcare facilities. Sites were selected purposively within the Eastern region to ensure maximum variation by location (rural/urban), type (government/private), and level of provision (primary/secondary) while also avoiding unnecessary high travel costs for the researcher.

Six site approvals were obtained: two PHC centres, two governmental hospitals (one of which is quasi-governmental), and two private hospitals. Table 7.1 displays the name,<sup>14</sup> type, level, and location of the selected healthcare facilities.

<b>Type and name of health facility</b>	<b>Level of healthcare provided</b>	<b>Location</b>
<b>Quasi-governmental Hospital A</b>	Secondary care	Urban area
<b>Governmental Hospital B</b>	Secondary care	Urban area
<b>Private Hospital A</b>	Secondary care	Urban area
<b>Private Hospital B</b>	Secondary care	Urban area
<b>Governmental PHC Centre A</b>	PHC	Rural area
<b>Governmental PHC Centre B</b>	PHC	Rural area

**Table 7.1: Summary of the name, type, level, and location of the selected hospitals and PHC centres**

Due to the geographical inequities in provision across KSA (AlOmar, 2000; AlMalki et al., 2011; Yusuf, 2014), the researcher was unable to find either governmental or private hospitals

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<sup>14</sup> *Hospital names have been anonymised.*

in the rural areas. Thus, only one type of care (PHCCs) was available for inclusion in rural areas.

### **7.3.2 Sampling participants**

Purposive sampling, also known as judgment sampling, took place. It included participants who had received care at numerous different healthcare facilities and who had experienced different levels of care. According to Marshall (1996), purposive sampling is most common within qualitative research. To assess public attitudes, it is advantageous to apply the maximum variation technique and stratify the sample according to essential characteristics, including age, gender, and socio-economic class. According to the literature, as explained in Chapter 6 (Section 6.5.2), one's place of residence could affect his or her opinions of the health system. Thus, to select a productive sample for the research question, the researcher selected subjects from both rural and urban areas. The participants who met the criteria outlined in the following sub-sections were drawn from a large population of Saudi nationals and expatriates living in the Eastern Province.

Wilmot (2005, p. 4) states, 'focus groups tend to be more productive and manageable if participants have some commonality'. Therefore, a purposive segmentation strategy was employed to achieve semi-homogeneous focus groups. To establish trust, great respect was shown for Saudi social norms. The FGDs were segmented according to gender (male/female, reflecting the Saudi Arabian cultural practice that prohibits gender mixing). FGDs were also segmented by age (>50, <50), nationality, socio-economic status (based on monthly income, with households earning less than 5,000 SR per month considered low class, between 5,000 and 20,000 considered middle class, and above 20,000 considered upper class; AlShubaiki, 2005; AlNuaim, 2013), and education level (highly educated/less educated, determined based on whether the participant had earned a degree) to limit knowledge variation.

#### **7.3.2.1 Inclusion criterion**

1. Adults (aged 18 years and above) living in the Eastern Province of KSA.

#### **7.3.2.2 Exclusion criteria**

1. People with communication difficulties that would prevent them from contributing to focus group sessions in this context (e.g. people with a hearing disability or who speak neither Arabic nor English).
2. Children (younger than 18 years of age) because of a combination of factors that make it more difficult and time consuming to explore their views. Firstly, directly inviting children to a study is complex as invitations must often go through gatekeepers, and both the parents' and the child's consent is necessary for participation. Secondly, such work requires the development of child-friendly materials, tools, and timeframes, which

are not supported by funding arrangements for this study, though this may be a priority area for future work.

3. Due to the study's focus on lay public and patients' attitudes, people working as healthcare providers and health assistants in KSA were deemed ineligible for participation.

### 7.3.3 Sample size

As explained in section 7.3.2, segmented or semi-homogenous FGDs were necessary. Thus, it was important to sample across nationality, gender, age ( $\geq 50$ ,  $< 50$ ), socio-economic status, residential area, and education level. Therefore, the sample would include younger Saudi participants with less education, older Saudi participants with less education, younger non-Saudi participants with more education, and older non-Saudi participants with more education (see Table 7.2). These groups would be selected across genders, socio-economic classes, and geographical health sectors (see section 7.3.1). To achieve maximum diversity in the results, a minimum of eight FGDs were planned, with the flexibility to add more if required to achieve saturation (see next section).

	Male	Female
<b>Segmentation method</b>		
Saudi, younger, highly educated	1+	1+
Saudi, older, highly educated	1+	1+
Non-Saudi, younger, less educated	1+	1+
Non-Saudi, older, less educated	1+	1+
Total	4	4

**Table 7.2: Segmentation strategy used in the FGDs recruitments**

Recommendations vary in terms of the adequate size of an FGD (Stewart & Shamdasani, 2014). Some suggest that the optimum size for an FGD is between six and eight participants (Gill et al., 2008). However, others suggest that smaller focus groups are beneficial as they reduce the likelihood of participants experiencing frustration over a lack of opportunities to speak and share their ideas (Kitzinger, 1994, 1995; Gill et al., 2008). In addition, to gain in-depth information from each participant, scholars support small-sized FGDs of between four and six participants (Parsons & Greenwood, 2000; Krueger & Casey, 2014). They argue that larger groups are more suitable for marketing-related studies (Krueger & Casey, 2014). As this study sought to explore, in depth, a complex topic relating to public attitudes towards and opinions about the Saudi health system, it employed small focus groups of four to six participants each. The anticipation was that this would give each participant an opportunity to contribute.

The recruitment process continued until the saturation point – i.e. the point at which the discussion produced no new major themes – was reached (Guest et al., 2006; Walker, 2012).

The FGDs were conducted in two waves. The first wave included seven groups (31 participants in total). Preliminary analysis was conducted, and the researcher's supervisor checked it. Based on the preliminary analysis, the decision was made to hold more FGDs to achieve saturation in terms of emergent themes and to ensure adequate inclusion of male participants, as the number of female participants represented in the data in the first wave was double that of the male participants. A second wave of FGD was implemented, including five FGDs (23 participants in total). A total of 54 participants were included over 12 FGDs. The demographic characteristic of each FGD is given in Chapter 8, section 8.1.

## 7.4 Recruitment

In February 2015, the study sites were contacted to discuss a visit from the researcher. In May 2015, recruitment of participants for the first wave of data collection took place. Recruitment of the second wave of data collection was held during May 2016.

Researchers in KSA typically do not use FGDs, especially in the healthcare field (see Chapter 6). Therefore, several recruitment strategies, as described below, were necessary to increase the response rate (Ritchie et al., 2013). In addition, it was anticipated that some participants might not show up at the time of the FGDs; therefore, it was recommended that more recruitment be implemented for each FGD (Krueger & Casey, 2014). Table 7.3 shows the recruitment strategies, the time taken for recruitment in connection with each strategy, and the level of recruitment achieved. Two recruitment strategies were used and will be discussed below.

*Flow population* (Ritchie et al., 2013): Samples were generated by approaching potential participants in the study setting. Before the start date of the FGD recruitment, simple and readily understandable materials – posters and brochures, in both Arabic and English – were prepared. (See Appendix VIII for the English version of the brochure.) Representatives from each selected setting were also contacted before the researcher's visits to gain their help with the recruitment. The hospital representatives' role was to help the researcher by placing brochures in waiting areas, introducing the researcher to potential participants in the male waiting areas, organising the FGD slots with the researcher, and reserving private meeting rooms.

To ensure all the activities were respectful and did not interrupt the flow of work, meetings with hospital representatives were held by appointment only, and reminder calls were made before each visit. A schedule for hospital visits was arranged with each hospital representative within a 2-week period, allowing for full-day visits during regular working hours at each site. After reviewing the availability of private venues in each setting, the researcher prepared a schedule with a proposed time and venue for each FGD session.

Two small posters were placed in the waiting area of each site, and brochures were placed on a small table, one in the male waiting area and one in the female waiting area. Potential participants were approached by the researcher and given copies of the brochures.

After the required information for segmentation (such as nationality, age, and educational level) was received from potential participants who showed an interest in the study and who chose to opt in, the potential participants received the schedule and were given the opportunity to choose their preferred time slot. Both the brochures and the information sheet contained the researcher's contact information. The participants were advised to contact the researcher once they arrived at the FGD venue so that the researcher could accompany them to the meeting room.

*Snowball sampling:* The snowball sampling technique seeks existing participants' help in recruiting and identifying potential participants (e.g. friends and relatives) for upcoming FGDs (Ritchie & Lewis, 2003; Ritchie et al., 2013). This technique is important for this study as it helps identify hard-to-reach individuals, i.e. non-current health service users. To facilitate this, it was important to establish trust between the researcher and the participants in the early stages of the fieldwork so that the participants felt safe and comfortable sharing their contact information (Thompson, 2014) and then to recruit and identify new potential participants from amongst their friends and relatives. To achieve Saudi participants' trust, it was recommended that the researcher respect Saudi culture and social norms (Thompson, 2014). This was not inordinately challenging for the researcher due to her having resided in KSA, which gave her a full understanding of Saudi culture norms and ways to interact with people appropriately. Some examples of Saudi norms are modesty and the use of a low voice when communicating with males. Establishing trust was useful as many participants were willing to recruit and identify new potential participants from their friends and relatives and shared their contact information (their contact number and/or their email address) to facilitate snowball sampling. The participants were asked to pass on the brochure of the study to their relatives and friends and were also asked to contact the researchers once any of their relatives and/or friends accepted to participate in the study in order to arrange and provide them further instructions about the timing and the venue for their session.

<b>Recruitment strategy</b>	<b>Time taken for recruitment (weeks)</b>	<b>Number of cancelled FGDs because no one showed up</b>	<b>Number of focus groups held</b>	<b>Number agreeing to attend before the FGD session</b>	<b>Number attending and interviewed</b>
<i>Flow population</i>	12	4	6	10	6
				12	5
				14	4
				11	5
				10	5
				9	5
<i>Snowball sampling</i>	11	1	6	8	4
				7	4
				8	3
				7	4
				7	4
				6	5

**Table 7.3: Recruitment approach, time taken to achieve recruitment, recruitment achieved**

## 7.5 Ethical considerations

Several potential ethical issues arose in relation to this study. Examples include the need to ensure privacy and confidentiality and the importance of guaranteeing integrity when utilising participants' data. Special precautions were taken to address these requirements.

To guarantee privacy during the discussion, the FGDs were conducted in private meeting rooms. Most FGDs were conducted at the study sites, although, in accordance with some of the participants' preferences (especially those participants recruited through snowball sampling), FGDs were also conducted at participants' workplaces, in private meeting rooms located in secured buildings.

To ensure participant anonymity, pseudonyms were used to identify each focus group member. Each participant chose a pseudonym, which he or she wrote on a nametag and placed in front of him or her for the purpose of distinguishing his or her answers from those of the other participants. This ensured that participants' real names would be anonymised during the discussion. Transcriptions were made of discussions using the participants' pseudonyms, which were then changed to codes, such as R1 and R2 (meaning Respondent 1, Respondent 2, etc.).



Confidentiality was emphasised during both the beginning and the end of each session. The researcher, who took on the role of moderating all the FGDs, stressed the importance of focus group members respecting each other's privacy and anonymity and emphasised that members should not release the identities of the other participants. The researcher indicated that specific comments made during the discussion were not to be shared outside the session. Focus group notes and transcriptions were locked in a cabinet at King Abdulrahman Bin Faisal University (previously University of Dammam), and only the principal investigator had access to the cabinet during the data collection phase. After the data collection was concluded, all data was transferred to City, University of London facilities and retained in a locked cabinet to which only the principal investigator had access. A backup of the audio records was also saved securely in the principal investigator's laptop, which included a secure access password. Notes, audio-digital records, and transcriptions will be destroyed 10 years after completion of the PhD project in accordance with City, University of London regulations.

To guarantee integrity, participants were informed why they had been selected for the research, the research's subject, the reasons why their information was required, and for what purposes that information would be used. Those willing to participate were asked at the start of the FGDs to sign a consent form available in Arabic or English to ensure that each participant, whether an Arabic or English speaker, fully understood the study's purpose, anonymity, confidentiality, and the events that would occur during and after the FGD (Appendix IX). All the participants were treated equally, with dignity and respect.

It was asked that if anyone chose to withdraw from the study after participating, he or she would notify the researcher of this fact no later than 1 week after the FGD date so that his or her data could be destroyed before the transcription stage. Participants' permission was sought to use the data from the audio recording relating to the other participants of the FGD they attended. Ultimately, none of the participants opted out or withdrew from the study.

## **7.6 FGDs topic guide**

A semi-structured focus group topic guide was designed based on the following:

- The Control Knobs framework (Roberts et al., 2003) performance dimensions: health status, citizen satisfaction, financial risk protection, efficiency, quality, and access (see Chapter 5). This framework was utilised in the FGDs to explore participants' overall satisfaction with the health system. Since each dimension of the Control Knobs framework is broad, to understand how a dimension might be meaningful in a KSA context, it was operationalised using themes from the two literature reviews described in Chapter 4 and Chapter 6 (see Table 7.4).
- Measures with potential relevance to KSA, raised in previous literature examining public attitudes towards health systems (Phase 1). These were included to ensure a

comprehensive range of questions that covered confidence in the health system and services, confidence that the health system could treat diseases, confidence and experiences in terms of the wait for treatment (Helman & Fronstin, 2004; Blidook, 2008; Soroka et al., 2013), and perceptions of the health system's responsiveness to public choice (patient-centred care) (Duckett et al., 2013; Gershlick et al, 2015).

- Key issues arising from the systematic literature review (Phase 2) regarding the health system in KSA. These covered barriers to communication between the health provider and the patient (Al-Khathami et al., 2010; AlFozan, 2013; Atallah et al., 2013); access to healthcare facilities in KSA, including long waiting times at primary (AlMoajel et al., 2014) and secondary care (AlDebasi & Ahmed, 2011); and affordability of care (AlSaquer et al., 2015).
- The author's experiences during internship and training programmes in KSA, completed before she began the study. This dovetailed with issues identified in the literature (above): long waiting times to see clinicians and the lack of availability of proper care after hours.

Table 7.4 maps the topic guide questions against themes from the literature and the Control Knobs framework.

Dimensions of the Control Knobs framework (Roberts et al., 2003)	Measures identified from Phase 1 (Literature review of public attitudes towards health systems)	Themes emerging from Phase 2 (Systematic review)	Sample question(s)
<b>Health status</b>	<ul style="list-style-type: none"> <li>Explored as health determinants and people's responsibility for their own health, such as tobacco and alcohol consumption.</li> </ul>	<ul style="list-style-type: none"> <li>Not addressed in this body of literature</li> </ul>	<ul style="list-style-type: none"> <li>What do you see as the biggest problem(s) facing healthcare and people's health in Saudi Arabia?</li> </ul>
<b>Citizen satisfaction</b>	<ul style="list-style-type: none"> <li>Satisfaction with the way healthcare runs in the country.</li> <li>Views on improvements in the health system.</li> <li>Views on the health system's performance in the future and the necessity of health reforms.</li> </ul>	<ul style="list-style-type: none"> <li>Satisfaction with primary care services</li> <li>Satisfaction with the referral system</li> </ul>	<ul style="list-style-type: none"> <li>Overall, to what extent do you think people are satisfied/dissatisfied with the healthcare services they receive in Saudi Arabia?</li> <li>What are the main factors that influence people's satisfaction with healthcare in Saudi Arabia?</li> </ul>
<b>Financial risk protection</b>	<ul style="list-style-type: none"> <li>Explored as perceptions of the affordability of care and, hence, the extent to which it provides protection from risk.</li> </ul>	<ul style="list-style-type: none"> <li>Not addressed in this body of literature</li> </ul>	<ul style="list-style-type: none"> <li>To what extent do people find it hard to pay medical bills?</li> <li>To what extent do people go without care because they fear medical bills?</li> </ul>
<b>Quality</b>	<ul style="list-style-type: none"> <li>Health system's responsiveness, including the extent to which the health system is patient-centred, is holistic, and promotes shared decision-making.</li> <li>The extent to which healthcare providers provide care with dignity and respect.</li> </ul>	<ul style="list-style-type: none"> <li>Communication barriers with healthcare providers</li> </ul>	<ul style="list-style-type: none"> <li>To what extent do you think people in Saudi Arabia are treated with dignity and respect by healthcare providers?</li> <li>To what extent do you think people in Saudi Arabia get the chance to be involved in making decisions about their own care or treatment?</li> </ul>
<b>Access</b>	<ul style="list-style-type: none"> <li>Access to care during evenings, weekends, or holidays.</li> </ul>	<ul style="list-style-type: none"> <li>The complexity of the referral and appointment system in KSA</li> <li>Waiting times</li> <li>Out-of-pocket expenses</li> </ul>	<ul style="list-style-type: none"> <li>How easy is it for people to get care when they need it?</li> <li>How easy is it for people to get care when they need it at different times?</li> </ul>
<b>Efficiency</b>	<ul style="list-style-type: none"> <li>Efficiency of the system is explored in terms of health system financing and whether the health system wastes money on unnecessary services.</li> </ul>	<ul style="list-style-type: none"> <li>Not addressed in this body of literature</li> </ul>	<ul style="list-style-type: none"> <li>How well organised do you think health services are in Saudi Arabia?</li> </ul>
<b>Other</b>	<ul style="list-style-type: none"> <li>Confidence and trust in the health system to provide efficient care.</li> </ul>	<p>NA</p>	<ul style="list-style-type: none"> <li>To what extent do you think people trust the health facilities in KSA to provide adequate healthcare?</li> </ul>

**Table 7.4: Mapping of the topic guide questions and the sources of the anticipated theme against the Control Knobs framework**

To ensure the relevance of the topic guide questions, the guide was reviewed by two expert teams: an internal team in the Health Services research department, School of Health Sciences, City, University of London, and an external expert working at the NatCen social research centre.<sup>15</sup>

The topic guide was produced in lay language as it was assumed that the participants would not have scientific backgrounds. (Sample questions are presented in Table 7.4) The FGDs were guided by an open-ended, semi-structured approach, following the emergent themes that the respondents mentioned. The focus was on ‘public opinion in general’ rather than in-depth ‘personal experience’, to give participants confidence, and to allow them to share their viewpoints with others, rather than experiencing fears of judgment. Thus, the participants were asked questions such as, ‘To what extent do you think people in KSA trust the health system to provide them with safe care?’ However, if they preferred, they could also share their personal experiences with the care they received.

Two versions of the topic guide were prepared: one in English and one in Arabic. Both versions were piloted (see Appendix X for the English version of the topic guide). The Arabic and the English guides were piloted with two Arab students in the UK (neither of whom was a specialist in the research study area) to ensure they understood both versions and felt the English-Arabic translation was accurate. Ambiguous phrases and technical terms were eliminated after piloting and before the actual implementation of the FGDs.

## 7.7 Fieldwork

During visits to the study sites and when distributing the brochures for potential participants, the researcher adhered to the hospitals’ established formal code for attire (white lab coat). However, because the ‘dress of the interviewer can influence responses’ (De Vaus, 2002, p. 52), the researcher wore traditional Saudi gown (*Abaya*) during FGDs. This assured them that the researcher was not part of the healthcare team. Therefore, they would feel free to express their views without fear of consequences in terms of the healthcare provision they would receive in the future.

Special precautions were taken to ensure that the participants would be comfortable at the FGD venue in each setting. Before the FGDs, the researcher checked the suitability of the meeting rooms, including evaluating the suitability of the space to conduct an FGD session with four to six people, arranging the right number of chairs, and assessing noise levels to ensure clear

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<sup>15</sup> *NatCen social research is the largest independent social research agency that has run British Social Attitudes projects for the last 40 years, including that of the NHS. Currently, public attitudes toward the NHS are run by the Kings Fund.*

recordings. In addition, before each FGD, the digital audio recorder was checked to ensure it worked properly.

It was planned that each focus group would last between 60 and 90 minutes. To maximise attendance, some sessions were scheduled during the evenings. Due to cultural restrictions in KSA that prohibit women from meeting unknown men, the researcher employed a male assistant to help conduct the male FGD sessions. The researcher's male colleague from Imam Abdulrahman Bin Faisal University, who was fluent in both English and Arabic, was recruited and given one day of intensive training in assisting with FGDs. His responsibility was to attend the male FGDs as an assistant and to take notes about the participants' expressions as necessary.

The researcher and research assistant also took reflective notes relating to the general conduct and experience of running the FGDs (see Chapter 8, section 8.5). These notes were written up immediately after each session. Eleven FGDs were conducted in Arabic and one in English, based on the participants' preferences and ability to communicate.

## **7.8 Transcription**

All the audio recordings were transcribed using a clean verbatim approach, which included a word-for-word transcription. Conventions of dialogue transcriptions (such as pauses) were not necessarily intended for the qualitative analytical approach selected, as will be explained in section 7.11. Rather, the content was of primary importance. Ziebland and McPherson (2006) suggest that systematised qualitative data analysis should begin at an early stage in the data collection process. Thus, the researcher undertook transcription and review of notes and audio recordings from the early stages of data collection and onwards. This enabled the introduction of ideas raised in previous groups as probes when conducting subsequent groups (Shuval et al., 2008).

## **7.9 Translation**

The Arabic transcriptions were translated into English using forward translation (performed by the researcher) and backward translation (performed by an independent bilingual translator whose mother tongue was Arabic) in accordance with practices recommended in the literature (Groot et al., 1994). The WHO utilised this method when translating different instruments into languages such as Arabic.

## **7.10 Data management**

Traditionally, researchers 'cut and paste' and utilise coloured pens to categorise data. However, in recent years the use of qualitative data management software has increased in popularity

because it makes the analysis process more accessible, more manageable, and less complex (Wong, 2008).

Several computer software packages have been developed to manage qualitative data. Flick (2009) specifies several issues known to influence decisions about which data management tool to choose: the nature of the data, researchers' familiarity with the software package, and project management. NVivo 10.0 (QSR International Pty Ltd., 2014) data management software was selected to facilitate the storage and systematic sorting of data chunks because of its user-friendly interface, which resembles Microsoft Windows XP applications. To ensure familiarity with the software and its features, the researcher engaged in two full days of intensive training in the NVivo software. In addition, the data analysis process would be undertaken by one researcher (the principal investigator) and checked by a second (the supervisor). NVivo supports researchers working in a team and includes a *merge* tool that permits researchers to work separately while analysing the data and then bring their work together into a single project.

## 7.11 Data analysis

This section describes the research project's data analysis, which explores participants' attitudes and opinions to develop a survey instrument that captures opinions unexplored in the context of KSA.

A Framework Analysis (Ritchie & Spencer, 1994) approach, developed at the NatCen for social research in the UK for use in large-scale policy research, was employed because it was designed to cover public attitudes and is now widely utilised in health-related research (Gale et al., 2013). It offers precise and systematic steps for performing qualitative analysis.

Studies aiming to explore topics associated with unpredictable themes, such as 'cultural beliefs' or health values, must be analysed using an inductive approach (Gale et al., 2013, p. 3). This is where themes are generated from data using open (unrestricted) coding, followed by the refinement of themes. Explanations pertaining to each data analysis stage of the framework approach are given in Table 7.5 and under the following sub-headings.

Stage	Description of each stage
<b>Data familiarisation</b>	Read the transcriptions and any reflective notes that the researchers recorded during the FGD. Review the audio-recorded transcriptions again and take note of any analytical ideas.
<b>Coding</b>	Read the transcripts line by line to discover interesting and relevant ideas. Classify codes into initial or potential themes, and allocate relevant data to each theme inductively or deductively.
<b>Developing a working analytical framework</b>	After some of the transcripts were coded, the research team discussed the labels applied in the transcripts and agreed on a set of codes to apply to subsequent transcripts. Each category should

Stage	Description of each stage
	include an 'other' code to avoid neglecting data that does not fit.
<b>Applying the analytical framework</b>	Index subsequent transcripts using existing categories and codes based on the working analytical framework. NVivo software is used here to speed up the process.
<b>Charting data into the framework matrix</b>	Use a spreadsheet to generate a framework matrix and chart the data. Charting the data means summarising it by case (FGDs). A balance between data reduction and the retention of original meaning is required for effective charting.
<b>Interpreting the data</b>	Ongoing analysis of each theme is necessary to identify how it affects the entire picture. Analytic notes are recommended to reveal which aspects of the data are being captured, what is interesting about the themes, and why. This stage concerns decisions about themes that contribute meaningfully to answering the research questions. These are then refined as final themes. Finally, a scholarly report is produced.

**Table 7.5: Stages of analysis**

### ***7.11.1 Data familiarisation***

As the researcher transcribed every focus group verbatim, it was possible to develop a clear overview of the main ideas raised. Transcribing the audio recordings, reviewing them to check the accuracy of the transcription, and rereading them to obtain a solid understanding of what had been discussed constituted the familiarisation process (Furber, 2010).

### ***7.11.2 Coding***

During the coding stage, the researcher (principal investigator) read and reread the transcripts, and data were compared and contrasted to identify themes or codes. As suggested by Ritchie et al. (2013), coding involved a low level of inference, adhering as strictly as possible to the data. This was important because this stage is typically used solely as a basis for the final stage of analysis (interpretation stage), in which higher order categories are likely to be summative and classified theoretically (Ritchie et al., 2013). Appropriateness and clarity of the low-level coding were paramount.

### ***7.11.3 Developing and applying the analytical framework***

Textual data relating to FGDs 1, 2, and 3 were coded and assigned to each theme and sub-theme using an inductive approach to develop an analytical framework (code set) that could be applied to the remaining transcripts using NVivo 10.0. Later, a second reviewer (the supervisor) refined the codes, reading them in detail and discussing the pros and cons of coding at descriptive

levels. Following this, some coding of transcripts was piloted to inform the framework. The two reviewers discussed and refined the framework several times until agreement was reached about the codes' suitability.

#### ***7.11.4 Charting the data into the framework matrix***

Arrangement of the data into the analytical framework was assisted by the development of a *framework matrix* comprising summaries about the data collected using an Excel spreadsheet (as NVivo 10.0 does not include the feature of generating data matrices). A decision was required about whether to chart data in rows by focus groups or per individual participant. As the FGDs were semi-homogeneous (see section 7.3.2), it could be assumed that participants within a single group might share similar points of view and would feel comfortable expressing their views – though, of course, they may have differed in their opinions. Thus, the researchers opted to chart the overall group opinion while also reporting disagreements and differences of opinion and referring back to who said what. On some occasions, direct quotations were used to provide evidence of agreement or disagreement between the participants within the FGDs.

An additional column, described as 'other', was added to the matrix to capture interesting data that the researchers did not feel fit anywhere else. Thus, when the researchers started interpreting the data, they could find relevance and links to data categorised under 'other'. Data that were considered off-topic were charted in the 'other' column as well because they might have proven useful later.

A balanced data reduction strategy was followed to ensure that the meaning of participants' responses was retained as much as possible and at the same time to keep the matrices visible and manageable during the interpretation when reviewing the matrices. A second researcher (the supervisor) reviewed the data matrices several times, and an agreement was reached before moving to the next stage of analysis concerning data interpretation.

#### ***7.11.5 Interpreting the data***

The iterative process of analysing the FGDs enabled the identification of the higher order themes that seemed to be important in describing the public's prevailing attitudes towards the health system of KSA.

At this stage, the matrices were reviewed to provide an overview of the perceptions and experiences found in the different FGDs. Notes were taken to compare and contrast the participants' attitudes towards healthcare in KSA. This informed comparison within and across themes and cases and developed the higher order themes and explanations that would form the final interpretation of data. Charted data and emerging interpretations were routinely checked against full transcripts to view them in their original context. Mind-mapping software (Bubbl mind map; LKCollab LLC, 2016) was used to identify the patterns and connections within the data. Then, explanations of these connections and patterns were noted.



The primary difficulty with the analysis of the FGDs and the identification of the themes involved how closely related and interdependent the themes appeared to be. For example, views related to timely care were closely associated with access to care, trust in the health system, and quality of care. This complexity associated with public opinion of healthcare has been reported elsewhere in the literature (Raposo et al., 2009). Therefore, any relationships and interdependencies were outlined to provide a more in-depth understanding of the issues arising from the FGDs.

Apart from this complexity, efforts were made to disaggregate each theme while remaining sensitive to their interdependence by describing each item in relation to its association with other themes as well as with the dimensions of attitudes towards health systems described in Chapter 9.

## **7.12 Rigour**

Based on Lacey and Luff's (2001) recommendations, several strategies were followed to establish the data's trustworthiness and rigour. Reliability was established through the use of a detailed description of procedures undertaken for data analysis. In addition, the researchers referred to external evidence (previous qualitative and quantitative studies conducted in KSA) to measure the appropriateness of the conclusion reached in the data analysis.

Furthermore, the validity of the data was judged by checking whether the data presented were accurate. Validity checks were undertaken, including applying the Consolidated Criteria for Reporting Qualitative Research (COREQ) checklist, a 32-item checklist designed to guide quality reporting of qualitative methods and results (Tong et al., 2007). As suggested in the literature, the researcher kept a reflective diary during FGDs in an attempt to understand the influences that might have affected each FGD session (Mauthner & Doucet, 2003; Koch, 2006; Tong et al., 2007). This can be found in Appendix XI. An independent reviewer checked the notes, transcriptions, and matrices to ensure the accuracy of the Arabic-English translations. All relevant positive and negative attitudes were presented fairly, with systematic use of the original data (direct quotations) to ensure that the interpretation accurately reflected the data gathered and thus to establish the credibility of the data analysis. Feedback on the write-up of findings was sought across the research team to ensure that the study's aims, objectives, and rigour/quality were met.

## **7.13 Summary**

This chapter discussed the research methodology of the qualitative phase of this thesis (Phase 3). It discussed and justified the use of qualitative and FGD methods. The participants were recruited from two government hospitals, two private hospitals, and two PHC centres located in

both urban and rural areas of the Eastern Province of KSA. A series of FGDs was undertaken. Data were transcribed and analysed using thematic framework analysis.

# Chapter 8 Qualitative study of public attitudes towards the health system of KSA: Findings and discussion

## 8.0 Introduction

This chapter presents the findings from the FGD study (Phase 3). It begins by detailing the participants' characteristics and then continues by reporting the findings concerning the research questions. This is followed by a discussion of the collected data. The chapter concludes with a discussion of the strengths and weaknesses of the qualitative study, followed by the role of the researcher during the FGD sessions.

## 8.1 Participant characteristics

As described in Chapter 7, a stratification strategy was employed to achieve semi-homogeneous focus groups. This strategy stratified the FGDs according to age, gender, nationality, residential area, socio-economic status (with people earning less than 5,000 SR classified as poor), and educational level (with people lacking a degree classified as less educated). Table 8.1 and Table 8.2 summarise the characteristics of each FGD and the demographics of all the participants involved in the FGDs. The qualitative methods chapter (Chapter 7, section 7.3.2) provides an additional explanation of participants' demographic segmentation.

	Age group	Gender/nationality	Residential area	Socio-economic status	Educational level
<b>FGD 1</b>	(45–51)	Female/Saudis	Urban area	High	Highly educated
<b>FGD 2</b>	(21–24)	Female/mixed	Urban area	Middle	Highly educated
<b>FGD 3</b>	(37–61)	Mixed/mixed	Rural area	Low	Less educated
<b>FGD 4</b>	(47–85)	Male/mixed	Rural area	Middle	Less educated
<b>FGD 5</b>	(30–51)	Female/mixed	Rural area	Low	Less educated
<b>FGD 6</b>	(24–29)	Female/Saudis	Urban area	Middle	Highly educated
<b>FGD 7</b>	(33–46)	Male/non-Saudis	Urban area	Middle	Highly educated
<b>FGD 8</b>	(27–37)	Male/non-Saudis	Urban area	Middle	Highly educated
<b>FGD 9</b>	(26–45)	Male/Saudis	Urban area	Middle/High	Less educated
<b>FGD 10</b>	(32–47)	Male/non-Saudis	Urban area	Middle/high	Highly educated
<b>FGD 11</b>	(26–30)	Male/Saudis	Urban area	Middle	Less educated
<b>FGD 12</b>	(43–50)	Female/Saudis	Urban area	Low	Less educated

**Table 8.1: FGD demographic characteristics**

<b>Demographic characteristic</b>	<b>No. of participants (<i>n</i> = 54)</b>
Nationality	
Saudis	34
Non-Saudis	20
Age	
<50	37
>50	17
Gender	
Male	28
Female	26
Economic status	
>5,000	17
5,000–10,000	26
> 10,0000	11
Level of education	
Highly educated (with degree)	30
Less educated (without degree)	24
Living	
Rural	12
Urban	42

**Table 8.2: Demographic characteristics of the participants involved in the FGDs**

## 8.2 Findings of the FGD study

To present the findings from the FGDs (see box 8.1), the decision was made to use the participants' logic in explaining their views and the issues they encountered when they sought health services. The process started by providing an overview of participants' perceptions of the population's health status in KSA – more specifically, the participants' experiential understanding of the ways in which life circumstances shape health choices. Then, the focus was directed towards the overarching views on the Saudi health system, with a particular focus on the main financier and provider of healthcare in KSA (Ministry of Health [MOH]) and its performance. Next, the organisation of the findings was based primarily on what participants discussed with regards to their interactions with different sectors of the Saudi health system (public and private), starting with access and then moving on to the concerns they raised about the quality of facilities. After that, the focus was directed towards the clinical encounter, i.e. doctor/patient relationships and communication in these sectors, and how this affects healthcare decisions. The following sections present an analysis of the findings.

### **1. Experiential understanding of how life circumstances shape health choices**

- 1.1. 'Collective' social and environmental factors
- 1.2. 'Individual' choices

### **2. Sense of pride in the organisation of government health provision**

- 2.1. Free-of-charge care
- 2.2. Vaccination programs
- 2.3. 'Saudisation' of health workforce
- 2.4. Availability of medical technology

### **3. Concerns about access**

- 3.1. Barriers to accessing care at government PHC centres
  - 3.1.1. *Receptionists' attitudes and behaviour*
  - 3.1.2. *Referral from primary to secondary care.*
- 3.2. Organisational barriers to accessing the government health sector
  - 3.2.1. *Personal connections: "wasta"*
  - 3.2.2. *Appointment system in specialised care*
- 3.3. Financial barriers to accessing the private health sector
  - 3.3.1. *Price and out-of-pocket payment*
  - 3.3.2. *Cooperative health insurance and its limitations*

### **4. Concerns about the quality of facilities and medical supplies**

- 4.1. Concerns about the availability and quality of medicines at PHCCs
- 4.2. Low-quality buildings in the government health sector
- 4.3. Concerns about medical technology in the private health sector

### **5. Concerns about the clinical encounter**

- 5.1. Concerns about the clinical encounter at the government health sector

- 5.1.1. *Doctors' lack of respect for patients' time*
- 5.1.2. *Doctors' insensitive and controlling behaviour*
- 5.1.3. *Doctors' control over clinical choices*
- 5.2. Concerns about the clinical encounter at the private health sector
  - 5.2.1. *Variations in experience by payment type*
  - 5.2.2. *Language barriers*
  - 5.2.3. *Patients' distrust of private doctors*
  - 5.2.4. *Concern with the under-regulation of private provision*

**Box 8.1: Categorical organisation of the FGD findings**

### ***8.2.1 Experiential understanding of how life circumstances shape health choices***

To put participants at ease, the FGDs began with simple questions that everybody would be interested in discussing (Gill et al., 2008) such as, 'How healthy do you think the Saudi population is?' Participants were encouraged to be engaged in the discussion. This ensured the participants would be enthusiastic and express their views more openly. Then, more complex issues related to access and perceptions of clinical encounters were discussed.

Evidence exists that numerous factors influence 'health'. For instance, Dahlgren and Whitehead (1991) related the social ecological theory to health using the social model of health. They argued that, while individuals' genes and health choices could promote or negatively influence health, the social and community influences surrounding people play a vital role in either providing 'mutual support' that protects the population from diseases or providing no support, which has an adverse effect on disease prevention. This model's last layer is the individual choices of healthy behaviours.

Based on the results of the FGDs, it appeared that some participants, especially the older ones, saw this model's 'social influence' factor. For them, 'health' arose from wider choices, i.e. the social circumstances that significantly shape people's health behaviours. On the other hand, younger and some non-Saudi participants saw 'health' as the result of individuals' choices, which is classified as the narrowest layer in the social model of health. The following sub-sections describe these views in detail.

#### ***8.2.1.1 'Collective' social and environmental factors***

Older participants showed their positive perceptions of health status in KSA. They felt that compared to the past, health status in KSA had improved collectively due to changes in the standard of living.

*'Thank God we have a good health status...because of our high standard of living. I mean the availability of better nutritional sources and healthcare.'* [R1, FGD1, Saudi woman]

One participant also felt that the strictness of the Saudi Arabian system and the rules of the Islamic religion, including laws regarding sexual practices, the consumption of alcohol, and social responsibility (e.g. for those who are homeless) protect people from some diseases.

*'People here can't practice anything which may lead them to get AIDS and other sexually transmitted diseases...they don't drink...and we have residential insurance, it's very rare to see homelessness in our streets.'* [R2, FGD1, Saudi woman]

However, when participants talked in more depth about the issues of public health in KSA, their views were more negative. They raised several issues related to Saudi society that they felt had a direct impact on the health of the population in KSA.

For instance, participants cited the chaotic lifestyle in KSA as a problem with respect to health and sleeping habits.

*'I think that the issue here in KSA is not an individual issue but a social issue...when I went to America...they think about the members of society and shops close early...in KSA we do not have this concept.'* [R2, FGD12, Saudi woman]

Another participant in the same FGD had a similar point of view. She felt that people had gone to bed earlier in the past, which ensured they had better sleeping patterns.

*'In the past, people were better than us; they used to sleep from Isha prayer to Fajr prayer. Of course, this [was a] healthy habit for their bodies. Nowadays, people don't sleep till Fajr prayer, and it is unhealthy.'* [R1, FGD12, Saudi woman]

These participants believe KSA has undergone rapid westernisation, which has created new entertainment opportunities, such as restaurants with extended hours of operation. This rapid change has created opportunities for the excessive consumption of unhealthy food and makes it difficult for parents to control their children's sleep habits. Participants demanded interventions to eliminate this issue.

*'I think that the large number of restaurants which are open until 2:00 a.m., especially fast food, is one of the basic reasons.'* [R2, FGD2, Saudi woman]

*'Our culture is very different from that of the USA. It needs to change, the long working hours for the shops make us unable to control our kids.'* [R2, FGD12, Saudi woman]

Some participants stated that non-Saudis who lived in KSA were also affected by this unhealthy lifestyle.

*'Even we who come from overseas after a while, we become a copy of you.'* [R1, FGD5, non-Saudi/Sudani woman]

*'My mother is Filipino and my aunt came to live with us. She wasn't suffering from any illness, but after she lived here in KSA, she had hypertension. The type of food here causes diseases.'* [R5, FGD6, Saudi woman]

One diabetic Saudi participant shared her health habits, explaining how she continues to consume sugar – even though she knows it is harmful to her health – because it is available everywhere.

*'I suffer from diabetes and my husband...keeps stopping me [from] consuming sugary food, but I steal and get some sweets. I'm hungry for sugar.'* [R3, FGD5, Saudi woman]

This lack of a healthy lifestyle in terms of food consumption was further emphasised in the FGDs. Some participants highlighted the excessive consumption of meat in KSA as a health risk. They also linked this to the rapid changes in the standard of living, which has led to diseases in KSA.

*'Half of the Saudi population has Naqras (gout) disease because of the excessive consumption of meat.'* [R1, FGD4, non-Saudi/Syrian man]

*'The Saudi Arabian population depends on meat to a great extent... Excessive meat consumption negatively affects people's health.'* [R3, FGD2, non-Saudi/Bahraini woman]

Some older participants blamed the KSA educational system for not teaching children how to live healthily.

*'I know this is not our topic, but education is tied to health because if children at the schools are taught how to be healthy, they would get the health awareness.'* [R1, FGD1, Saudi woman]

Similarly, some younger participants highlighted the importance of health promotion in KSA's educational system.

*'I think we need to provide effective health education for the children at the schools...but it shouldn't be from a theoretical perspective or as an exam. They should be educated in a practical way using leaflets and related practical activities.'* [R3, FGD2, non-Saudi/Bahraini woman]

With regards to another healthy option, many participants stated that people in KSA do not engage in regular physical exercise.

*'People in Saudi Arabia do not practice sports.'* [R3, FGD8, non-Saudi/Egyptian man]



They believed that part of the reason for this lack of exercise is that, due to changes in living standards, most people nowadays own a car and can buy fuel at low prices. This has led Saudis to become highly dependent on cars.

*'People are highly dependent on cars.'* [R4, FGD8, non-Saudi/ Egyptian man]

*'The fuel is very cheap here in KSA.'* [R4, FGD11, Saudi man]

*'In KSA, there are no activities like walking or exercise. If they need to walk ten feet away from their house, they will use their car.'* [R2, FGD10, non-Saudi/Bakistani man]

In addition, some participants felt that in many areas of the country, the weather is a barrier to exercise, negatively influencing people's physical and psychological health.

*'The weather is not suitable for outdoor sports.'* [R3, FGD8, non-Saudi/Egyptian man]

*'The weather and hot climate cause asthma and allergies.'* [R2, FGD9, Saudi man]

*'The weather plays a big role, the weather overseas is nice and cool but here the weather is so hot, and the humidity is too much...oh God, we can't do anything. The weather has an effect on our mood.'* [R4, FGD11, Saudi man]

In contrast to what Saudi older participants believed, some non-Saudis felt that the strictness of the country's traditions was the reason for limited exercise and, thus, poor health status.

*'I think...the commitment to Islamic traditions in Saudi Arabia is the cause of poor health... I mean, if there is a kind of freedom in Saudi Arabia, I am not objecting to the Islamic part, but the extreme strictness affected many things negatively...for example, I have never seen a Saudi woman running on the Corniche here.'* [R3, FGD8, non-Saudi/Egyptian man]

#### 8.2.1.2 **'Individual' choices**

Participants who saw 'health' as a result of individuals' choices – mainly younger ones and some non-Saudis – felt that good health had been achieved through improvements in health knowledge and individuals' education levels and in health awareness promoted through social media.

*'Nowadays there are improvements in educational level, and through social media, Saudi women and men are improving their health due to this; they are more knowledgeable.'* [R1, FGD6, Saudi woman]

*'People started to be more aware of the importance of maintaining their health and therefore became healthier...they started avoiding the old bad habits...for example, they become more concerned [about] exercises. They started including fruits in their daily meals.'* [R2, FGD2, Saudi woman]

However, they criticised individuals' health decisions, including eating patterns. For instance, younger participants highlighted the notion that people in KSA choose to eat certain foods even though doctors have warned them that these foods may be hazardous to their health and may worsen chronic diseases such as hypertension and diabetes.

*'It is impossible here to find an elderly person who doesn't have hypertension or diabetes. The people don't value their health. Even when a person has diabetes, he doesn't pay attention to his diet and he keeps eating all food even if the sugar level is high.'* [R3, FGD6, Saudi woman]

In addition to deficiencies in KSA's educational system, which, according to the participants, does not provide sufficient programs targeting health, some younger participants blamed parents for not raising their children to live healthy lifestyles and to give up salty foods, which may make it even more difficult for children to live healthily when they grow up.

*'Although people in Saudi Arabia have started to be more aware and they are more concerned about their lifestyle, they can't keep the challenge because they are not used to it...the mum and dad have an important role...to get their kids used to lightly salted food.'* [R4, FGD6, Saudi woman]

One non-Saudi participant was concerned about people's choice to substitute sugary soft drinks for water. He believed this practice to be particularly widespread in KSA.

*'Every part of the world has a different way of eating. But when it comes to this place, what I've seen, having soft drinks, I see people not having even water. They use soft drinks rather than water. A soft drink is a substitute.'* [R1, FGD10, non-Saudi/Indian man]

Showing further concern about over-consumption, to reduce sugar intake in KSA, some participants supported calls to apply taxes to sugar-sweetened beverages.

*'The sugar content...there should be changes like taxes, there should be a transformation in this matter.'* [R1, FGD10, non-Saudi/Indian man]

Unlike participants who believed that the low levels of physical exercise were the result of hot weather and the standard of living, younger participants felt that individuals made the choice not to exercise. They also stated that this issue is particularly prevalent among Saudis and is not seen as widely among non-Saudi people living in the same weather conditions in KSA.

*‘Expatriates, I don’t know but I think they take care of their health more than we do, especially in walking Masha Allah.’<sup>16</sup> They walk most of the time and rarely drive.’ [R3, FGD11, Saudi man]*

In addition, a few participants continued blaming individuals for not making the right decisions – even when they had to seek healthcare services – because of their carelessness. For these participants, this was not related to health knowledge or level of education but individuals’ incorrect choices.

*‘The level of education does not matter, there are some people who have master’s or even doctorate degrees and they do not value their health.’ [R3, FGD3, Saudi man]*

*‘They want everything to come to them without making any effort...I mean they do not take the treatment plan seriously...and in the end, their health status deteriorates, not because of the healthcare provided but because of their carelessness.’ [R3, FGD2, non-Saudi/Bahraini woman]*

## **8.2.2 Sense of pride in the organisation of government health provision**

Overall, participants expressed high levels of trust and pride in the government health provision. They saw healthcare provision as an embodiment of government goodwill and beneficence and said that the government had taken actions to satisfy and respect the public’s needs. As evidence of this, participants cited the fact that the government was their healthcare provider and that complaints were dealt with swiftly.

*‘We have no doubts that the government is keen to satisfy the citizens. The evidence is that I saw a videotape of a guy who had a direct talk with the health minister and he asked for treatment and medical evacuation for his father. The health minister didn’t treat him with humanity... The health minister was removed immediately from his position the same day.’ [R3, FGD3, Saudi man]*

*‘The Ministry of Health, Princes of the Regions, even our king, they all care about us. In addition, there is a hotline for any complaint.’ [R1, FGD1, Saudi woman]*

### **8.2.2.1 Free-of-charge care**

To some older Saudi participants, the health system, with its core aim of delivering free access to care, was a source of great pride and a symbol of the country’s wealth.

*‘The MOH has no defects and it is aiming to provide a distinctive health service to the citizen.’ [R3, FGD3, Saudi man]*

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<sup>16</sup> This is an Islamic Arabic expression which is usually used to praise someone or something.

Many participants also made comparisons with relatively resource-poor neighbouring countries, underlining how lucky residents of KSA are to have a free healthcare system. Participants used this comparison to justify and rationalise their positive attitude towards the Saudi health system and its capacity to preserve their health.

*'Healthcare in Saudi Arabia is better because of the free healthcare services. Other countries don't have this service, so they don't have regular follow-ups and check-ups.'*  
[R2, FGD2, Saudi woman]

Although participants also voiced concerns about healthcare in KSA (as the next section will discuss), on balance they felt that they are better provided for than are people in other developed countries.

*'Thank God we are in a good position. People in the U.S. might wait nine months to see a dentist. We are better off than others.'* [R1, FGD1, Saudi woman]

The aim that basic health provision should be open and free to all, including expatriates, was central to participants' belief in good government, national prowess, and the moral standing of KSA as a whole.

*'Our primary healthcare centres are open to everybody: I mean Saudis or non-Saudis; that's why we have a good health status, and we are better than neighbouring countries. Foreign people who live in other countries, even the Gulf countries, cannot get access to care without paying.'* [R3, FGD1, Saudi woman]

*'The government aims to provide this service to everybody in Saudi Arabian society.'*  
[R3, FGD3, Saudi man]

They linked this feature of equity in care in Saudi Arabia with Islam, which requires social unity.

*'I feel that Saudi Arabia is an Islamic country which has achieved social unity in society; that is how I live here.'* [R2, FGD1, Saudi woman]

Participants felt that KSA gave its citizens appropriate additional healthcare compared to what non-citizens received. They felt that it was the citizens' right to have additional health benefits and believed that non-citizens should be required to take out additional health coverage for secondary care.

*'This is their right; I mean the national citizens to be differentiated from us and to receive these benefits. I wish my country would treat its citizens as Saudi Arabia does.'*  
[R1, FGD7, non-Saudi/Egyptian man]

As an added benefit for the Saudi national population, participants stated that the government health sector, provided through the Ministry of Health (MOH), maintains the policy of paying

medical costs if no beds are available at governmental hospitals or if no medical expertise is available to treat the patient's health issue.

*'There is a very good feature here in our country, which is that if the patient is critically ill and there is no available bed at the governmental hospital or if his case is insurmountable, so he cannot be treated at [the] governmental hospital, the government is responsible for transferring the patient to a private hospital and paying all the medical expenses.'* [R3, FGD3, Saudi man]

Some non-Saudi participants also expressed pride in the health system in Saudi Arabia, stating that it performs better compared to the systems in their home countries.

*'The health system here is more powerful than the system implemented in my home country.'* [R4, FGD7, non-Saudi/Turkish man]

However, disagreeing with this, other non-Saudi participants expressed their concern with the quality of services in what they perceived to be a rich country. They felt that Saudi Arabia is very wealthy compared to their home countries and has the economic power to ensure far better healthcare delivery than it currently does. They believed the government has no excuse for providing poor or disorganised service.

*'The economic status of this country is excellent and that's why the health services should be much better.'* [R2, FGD7, non-Saudi/Sudani man]

*'When you compare the capital that's invested in the hospitals, it is greater than in Pakistan and India. It is way higher...your capital is there, your investment is there, everything is there. But the return on that investment... It is not up to that level.'* [R2, FGD10, non-Saudi/Bakistani man]

Likewise, a small number of Saudi participants had some concerns about the MOH's ability to efficiently manage the health budget. They explained that one reason for this issue is the government hospitals' inability to manage the budget they receive.

*'The hospitals get an adequate budget but the problem is in organising and managing the resources.'* [R2, FGD2, Saudi woman]

In addition, one participant in the same FGD felt that although the government offers an adequate budget for the provision of medical technology resources, such as electronic medical records, some healthcare providers do not use them, thereby wasting resources.

*'Sometimes there is a waste of money, for example, the hospitals purchase computer-based medical electronic systems and we can see the doctors are still using paper-based medical records.'* [R2, FGD2, Saudi woman]

Another participant shared that a possible reason for the inability to correctly manage the health budget is that the government spends a significant amount of money on overseas aid rather than on local citizens who are in dire need of similar healthcare services.

*'We always hear that the government covered medical expenses for non-Saudi people who live out of the country, in Africa and so on...the Saudi citizen might need the same service, but he can't get it. It's supposed to be that the Saudi citizen gets the priority and then, once there is a capability, they can treat people who live outside the country.'*  
[R1, FGD3, Saudi man]

Although both Saudi and non-Saudi participants felt that the size of the health budget was appropriate, Saudi participants had concerns about how the health budget, which is typically subsidised from their country's revenue, is spent. The non-Saudi participants did not explicitly state this as an issue. Their concerns concentrated more on the quality of health provision, which will be explained later in this chapter.

#### 8.2.2.2 ***Vaccination programs***

In addition to the way in which the healthcare system has been structured for Saudis and non-Saudis, the national vaccination program emerged as a consistent source of pride. Almost all participants expressed a high level of trust in the vaccination programs.

*'We trust the vaccines provided there more than anywhere else. Because they always provide us with accurate and fresh doses.'* [R4, FGD1, Saudi female]

Non-Saudi participants held similar attitudes towards the vaccination programs implemented at MOH facilities.

*'We highly trust it, more than any vaccination program, more than the one implemented in our home country.'* [R3, FGD7, non-Saudi/Egyptian man]

Vaccines are always provided free of charge and are always accessible, even during the busy hajj season, when many people come to KSA from all over the world and receive this service.

*'I was in Makkah to perform Hajj and I entered a governmental hospital and received...vaccinations and I did not pay anything, the service is free.'* [R3, FGD8, non-Saudi/Egyptian man]

As further evidence of the high trust participants placed in vaccines in KSA, one participant stated that the vaccines are exported to neighbouring countries because of their high quality.

*'The Saudi Ministry of Health is highly trusted, even [by] other countries, to the extent that if a vaccine were invented, the neighbouring countries, especially Gulf Cooperation Countries, wouldn't certify it until the MOH certified it and exported the vaccine to them.'* [R2, FGD1, Saudi woman]

### 8.2.2.3 **'Saudisation' of the health workforce**

Most participants, mainly Saudi nationals, felt that 'Saudisation,' which means recruiting a health workforce consisting of Saudi nationals, is increasingly implemented at governmental hospitals. Participants regarded this as a positive development and a "medical renaissance" [R1, FGD1, Saudi woman]

*"Saudisation" is increasing and the percentage of Saudi nurses and doctors is increasing.* [R2, FGD2, Saudi woman]

*King Fahd Hospital [a quasi-governmental hospital] is very good. I have noticed many Saudi workers there, they changed the doctors to Saudis.* [R2, FGD11, Saudi man]

One reason why participants seemed pleased with this perceived transformation of the governmental health sector was due to their belief that non-Saudi healthcare providers are not trustworthy.

*The foreign doctors give you a prescription with no proper diagnosis.* [R1, FGD3, Saudi man]

This probably stemmed from concerns about the medical qualifications of non-Saudi health providers, as will be explained later in the chapter.

Another concern with the high non-Saudi workforce involved high staff turnover, understood as relating to non-Saudis prioritising money over loyalty to the system and KSA.

*All non-Saudi employees would leave their jobs if they had another offer.* [R3, FGD1, Saudi woman]

Participants believed that the 'Saudisation' of the workforce addressed this and thereby stabilised the system.

### 8.2.2.4 **Saudi health workforce: Knowledge and skills**

'Saudisation' was also seen as positive because while trust in non-Saudi doctors was comparatively low, participants expressed high levels of trust in Saudi doctors, who were seen as honest, loyal to their patients, and more knowledgeable about their country and its needs.

*I trust Saudi doctors... I trust their diagnosis and treatment plans because they are honest medical professionals.* [R1, FGD3, Saudi man]

*The health workforce, which comprises Saudi nationals, knows exactly what our country needs.* [R2, FGD2, Saudi woman]

Some Saudi participants valued, in particular, the availability and quality of Saudi medical education. They said it contributed to the expertise of Saudi health professionals. Participants

saw education as improving because of increased government spending and new types of scholarship programs available for medical students to become specialists.

*'The government opened many medical schools in the region...and a lot of medical specialities. The government spends a lot of money to improve the level of education at the medical schools.'* [R4, FGD1, Saudi woman]

*'And even the scholarship programs, a lot of medical students have been sponsored in pursuing their studies in the U.S. to study very rare specialities.'* [R1, FGD1, Saudi woman]

Because Saudi health professionals have a strong educational background, some participants, not only Saudis, believed that they provide a high level of care and are more likely than non-Saudi doctors to use evidence-based practice when they treat patients.

*'Saudi doctors' level of care is very high.'* [R1, FGD1, Saudi woman]

*'I have experienced a Saudi doctor, God bless him, he was very good.'* [R4, FGD8, non-Saudi/Egyptian man]

*'They also follow evidence-based practice because of their educational background.'* [R1, FGD6, Saudi woman]

In addition to 'Saudisation' and the strong education system in Saudi medical schools, participants expressed a high level of satisfaction with the knowledge and skills of doctors in governmental hospitals. This was because of the level of qualification – higher than in the private sector – necessary for a doctor to receive a job in governmental hospitals.

*'At government hospitals, the job requirements for the health workforce maintain high standards than private hospitals... Thus, healthcare providers are well educated so they can practice their job correctly.'* [R1, FGD6, Saudi woman]

*'The governmental hospitals are attracting the right kind of talent.'* [R4, FGD10, non-Saudi/Indian man]

Because of this, some participants felt that healthcare at governmental hospitals, especially teaching hospitals, was of a higher quality than that in private hospitals.

*'I'm sure if there are more hospitals like the teaching hospital, the private sector would lose out due to competition and no one would go there.'* [R3, FGD9, Saudi man]

#### **8.2.2.5 Saudi health workforce: Cultural insights**

Another feature of 'Saudisation' was the belief that Saudi national doctors had a better understanding of their patients' specific needs. One older participant shared her experience and



stated that she felt more comfortable interacting with Saudi national doctors and nurses because they understood her religious needs, even if she did not directly mention them.

*'I always become psychologically comfortable when I am treated by a Saudi doctor who is one of our community...when I was asked to have an ECG, the doctor, nurse, and radiologist were Saudis, so every time my headscarf moved, one of them came and put it back over my hair... They can understand what I want even if I don't talk, they feel what I feel.'* [R1, FGD1, Saudi woman]

The benefits of 'Saudisation' were also expressed in terms of cultural awareness, which was related to but beyond religious understanding. Participants saw this as positively contributing to the communication between healthcare providers and patients and said it helps make patients feel comfortable.

*'Saudi doctors have more sympathy for the patients and they know what patients need. Because they are aware of the Saudi culture...they communicate effectively and nobody can compete with them on this.'* [R1, FGD6, Saudi woman]

*'In the delivery room, the Saudi nurse tried very hard to do everything I wanted and preferred to keep me at ease, and she respected my privacy.'* [R1, FGD2, Saudi woman]

However, some younger participants did not see Saudi nationality as a prerequisite for understanding patients' spiritual and cultural needs. One participant said that non-Saudis in governmental hospitals were able to respect cultural and religious needs because governmental hospitals provide orientation programs for the health workforce and educate them about the Islamic religion and Saudi Arabian culture.

*'I heard that when recruiting non-Saudi healthcare providers, they give them a training course to educate them about the Saudi culture, and some other things related to the Islamic religion.'* [R2, FGD2, Saudi woman]

As a demonstration of the capacity of non-Saudi government staff to provide sensitive caring, the participant explained that she had witnessed non-Saudi nurses' understanding of the need to prepare patients for visitors on a Friday, a special Islamic day.

*'There is a nice thing I saw in a specialist hospital. On Fridays the nurses prepare the patients and clean the patients' rooms for the visitors who usually come after Aljoomaa prayer. So, visitors can see their patient clean and their room nice and tidy, and that means the hospital respects this special Islamic day of the week.'* [R2, FGD2, Saudi woman]

#### **8.2.2.6 The availability of medical technology**

Participants believed that MOH or government hospitals, especially specialist hospitals, have access to sophisticated medical technology, which they felt assured the best care.

*'Hospitals provide sophisticated healthcare services.'* [R3, FGD3, Saudi man]

*'Specialist hospitals...totally depend on electronic systems and they use all the technological advances possible to provide the best healthcare services, such as telemedicine.'* [R2, FGD2, Saudi woman]

Although one participant expressed concerns about doctors' use of electronic record systems (see section 8.2.4), overall, participants were proud of the medical technology available at national health facilities.

*'The Ministry of Health is paying greater attention to healthcare... we can see a lot of improvements in the government health sector.'* [R2, FGD6, Saudi woman]

*'Some positive changes happened in the last few years, especially with regard to the medical equipment.'* [R2, FGD4, Saudi man]

*'It [has been] proven that the governmental hospitals had a lot of advancement in science and technology.'* [R1, FGD5, non-Saudi/Sudani female]

These data show that in the early discussions about KSA's healthcare system, participants voiced pride in and satisfaction with the services that the government administered. However, in terms of participant experiences, negative views regarding access to and standard of care in both governmental and private sectors were disclosed. The following sections discuss each of these concerns.

### **8.2.3 Concerns about access**

Based on the health policy applied in KSA, people seeking healthcare in KSA have two options: publicly funded government health services and privately funded health services. Access to these sectors varies depending on one's nationality. Non-national Saudis can access primary care but cannot be treated in government secondary or tertiary services. Instead, as stated earlier, non-nationals must participate in health insurance – known as cooperative health insurance (CHI) – through their employers. This means the only option available to non-nationals for secondary or tertiary care is private health organisations. On the other hand, Saudis can, in theory, access primary care – and, through this, secondary and tertiary government services – free of charge.

In addition to nationality, participants described other factors that they believed influenced access to private or public care. These will be explored in turn.

#### **8.2.3.1 Barriers to accessing care at government PHC centres**

Many of the barriers that participants described in terms of accessing care in the government health sector were probably caused by primary care facilities, which one participant described as a “major problem” in the Saudi health system [FGD1, R1, Saudi woman]. This has been linked

to the participants' actual experiences inside these centres, including receptionists' unpleasant attitudes and behaviour, the referral system, and regular movements of PHCC locations. Nevertheless, as explained in section 8.2.2.2, participants were clearly highly satisfied with the vaccination programs that PHCCs provided.

#### 8.2.3.2 *Receptionists' attitudes and behaviour*

Some participants felt that receptionists at PHC services, who can be classified as the first employees a patient sees when the patient decides to interact with the health system, lacked the appropriate skills or professionalism to deal with patients.

*'The receptionists at the governmental primary care centres are lacking in etiquette. They are lacking professionalism and they treat people as if they are at the receptionists' home.'* [R2, FGD2, Saudi woman]

*'You might ask them a question [and] they don't pay you any attention. They do not reply to you.'* [R1, FGD5, non-Saudi/Sudani woman]

Another participant complained that receptionists are always in a bad mood and lack the ability to deal with crowding at the healthcare centre, which leads them to behave in a way that discourages patients from waiting until they receive the healthcare services for which they came, thereby reducing overload and demand on the system.

*'They are never in a good mood...if the centre is crowded, they behave as if they want us to leave the centre. They say something like, "The centre is crowded", as if they want me to leave.'* [R4, FGD1, Saudi woman]

However, as stated in section 8.2.2.2, because of the high trust in vaccines that PHCCs offer, participants tolerated the receptionists' unpleasant behaviour to receive high-quality vaccines for their kids.

*'A lot of people visit the primary centres despite the staff disrespect because we trust the vaccines provided there more than anywhere else.'* [R4, FGD1, Saudi woman]

Some participants explained that the reasons for the receptionists' poor communication skills were their older age and relatively limited education.

*'That's because of their low level of education... They are not trained enough to deal with patients. This might be one factor, and also their age, they are older people.'* [R4, FGD1, Saudi woman]

*'Their educational level does not exceed the intermediate certificate.'* [R3, FGD1, Saudi woman]

To ensure the pleasant and respectful care that every patient deserves, participants suggested completely changing the reception staff at PHCCs.

*'We demand to change them.'* [R4, FGD1, Saudi woman]

### 8.2.3.3 *Referral from primary to secondary care*

As is the case with many health systems worldwide, such as the NHS in the UK, to receive secondary care, people must get a referral from PHC centres. This enables them to open a medical file and seek specialised care. Saudi participants can get referrals to specialised care, so they repeatedly raised the issue of the complexity of the referral system at governmental PHCCs. They noted that this deterred them from accessing services at governmental hospitals in KSA.

*'The referral system is complicated and time consuming so I avoid it as much as possible'* [R4, FGD2, Saudi female]

One reason why participants found it difficult to get a referral – and, consequently, why they avoided it – was that, as stated earlier, participants felt that receptionists discouraged them from progressing through the healthcare system and from seeking referrals to doctors. The receptionists did not communicate this discouragement directly; instead, they appeared to do so indirectly.

Others commented that PHC centres delay the process of referring patients to specialist care, which in turn affects patients' health.

*'Some primary care centres are frustrating...if I had a critical illness and I needed a referral, I could wait for about six months to be referred.'* [R2, FGD1, Saudi woman]

In addition, some participants felt that, in government health facilities, health providers try to convince patients to get care at the primary care facility rather than seeking a referral form for specialised care.

*'They insist on providing the service for patients, even if they need to be referred to get specialised care. However, in reality, the patient is in dire need of a specialised hospital to treat his case.'* [R3, FGD3, Saudi man]

While participants may be clinically mistaken about their need for a referral to specialised care, at the very least, the problem rests with a lack of transparency in the referral process and the role that primary care centres play in this situation.

*'Nobody knows the referral mechanism.'* [R3, FGD9, Saudi man]

*'People still lack the knowledge and the awareness that there are primary healthcare centres in each district, and that they can get referrals through these centres to access*

*the healthcare services at the general hospitals...they don't know the correct pathway to get the adequate treatment.'* [R2, FGD2, Saudi woman]

The frequent movement of primary care facilities' locations could explain this in part, as these facilities are often rented rather than owned by the government.

*'The location of the PHCCs is unknown... I mean in district 71, every two months they change their rented building, and there is no direction or signs to get to the new building at all.'* [R3, FGD11, Saudi man]

Some participants complained that even when they successfully overcame the obstacles present in the referral process, when they accessed secondary care, they might not be referred to the doctor they expect. Two participants stated that their doctors suddenly decided to transfer their case to junior doctors or interns without seeking their permission to do so.

*'I really don't know the reason for that. I was used to my old doctor, and now he refuses to see me. He transferred me to a resident doctor and he only treats new cases.'* [R1, FGD12, Saudi woman]

*'I made recurrent visits to the hospital and I asked to book with a head of department or academic doctor. I was always shocked that they transferred me to an intern.'* [R3, FGD3, Saudi man]

This issue deterred some participants from seeking further healthcare at those facilities.

*'This causes me not to make any further follow-ups at this hospital.'* [R3, FGD3, Saudi man]

#### 8.2.3.4 **Organisational barriers to accessing secondary government care**

In addition to dissatisfaction with PHCCs provision, participants expressed dissatisfaction with access to publicly funded secondary care. According to participants, the main issues at specialised care services were the need for personal connections, *wasta*, to access care and the appointment system.

#### 8.2.3.5 **Personal connections: Wasta**

In seven out of the 12 FGDs, participants, mainly Saudis, stated that the greatest barrier to accessing the government health sector is the need for personal connections, or *wasta*. As Chapter 1 explained, *wasta* is an Arabic word referring to 'an informal system of connections or personal relations that provides social support to family members' (Abalkhail & Allan, 2016, p. 166). Having *wasta* indicates prestige; one non-Saudi woman referred to 'you and your *wasta*' [R1, FGD5, non-Saudi/Sudani woman]. Participants stated that the main way to gain quicker access to care at governmental hospitals is through *wasta*.

*'Wasta plays a role, it facilitates the procedures to access care. You can pick up the phone and talk to a person you know, and he will find you an appointment tomorrow. People who do not have wasta become disadvantaged.'* [FGD12, R1, Saudi man]

Participants identified several pathways to implement *wasta*. One is through personal connections with individuals who have authority in designated government healthcare facilities.

*'If you personally know the hospital administrator, you know [that] instead of being admitted to the hospital after two months, you will be able to be admitted to the hospital in two days.'* [FGD3, R1, Saudi man]

Connections can even allow patients to access specialised care without referrals.

*'If your husband has a good and high position in the hospital, you will be able to get access to specialist doctors without the need for a referral...because my brother is a consultant... I can get access to any physician directly.'* [R3, FGD1, Saudi woman]

Further, people with connections can gain access to free services for which they are ineligible. For example, one participant shared his experience of being able to access cheaper or free specialised care despite his being a non-national.

*'My cousin was working at the Medical Complex Hospital. For this reason, I was able to get excellent healthcare there... the medical expenses... can be significantly reduced with wasta.'* [R1, FGD4, non-Saudi/Syrian man]

He went on to explain that his access stopped when his relative left his post at the medical facility: 'But now I'm suffering' (R1, FGD4, non-Saudi/Syrian man).

*Wasta* can also arise out of connections with high-ranking individuals outside the healthcare system.

*'You have to...get a letter from the Princes' office (Amara) to receive care at specialist hospitals, national guard, and military hospitals.'* [R3, FGD3, Saudi man]

Related to this issue, one participant felt that most patients treated at governmental hospitals are more likely to be members of the wealthier economic class, who probably have good relations with high-ranking individuals.

*'We know and are pretty certain that people [with] high incomes are the ones who enter governmental hospitals because they are the ones who probably have good relations and wasta.'* [R3, FGD9, Saudi man]

Participants also cited fame as a means to improve access. One participant mentioned an incident she witnessed in the ER waiting area. A football player was treated with more respect because one of the hospital staff recognised him.

*'One day I was waiting in the ER waiting area and one famous football player entered the ER... One of the hospital staff came and he knew him, so he greeted him...he skipped the queue and took this patient's form and walked him to the doctor's room.'* [R1, FGD2, Saudi woman]

Participants were generally upset about the need for *wasta* to gain access to governmental care. They felt that this undermines the idea of equal and respectful care of nationals. Of particular concern was the seemingly endless waiting lists to which individuals without *wasta* were subject. They felt that patients with *wasta* are more likely to skip the queue, leaving others to wait longer to access care.

*'They should wait; they will be treated but they should wait. But the person who has wasta, he can be treated easier and faster.'* [R2, FGD2, Saudi woman]

*'If you don't have wasta, you would have to wait on an endless waiting list.'* [R3, FGD1, Saudi woman]

Even rich participants who had *wasta* were unhappy with the way they entered the hospital. They preferred to obtain access to care in a way that was fairer to other patients.

*'I know a doctor who asked me to wait and told me that he would find me a wasta to get my surgery done with a good and specialised doctor...but I want to enter the hospital in a systematic way.'* [R3, FGD9, Saudi man]

Equally, participants felt that people have no alternative but to access government care via *wasta* because this is 'how it works in KSA' (R4, FGD7, non-Saudi/Turkish man).

On the other hand, participants explained that they were still proud of their government health system and that *wasta* operates outside high-level health policymaking.

*'As a health policy, there is no difference between members of the population.'* [R3, FGD3, Saudi man]

*'The rules and regulations from the Ministry of Health don't have this differentiation.'* [R1, FGD3, Saudi man]

They felt that the shortcomings in terms of access to care in KSA, especially *wasta*, emerged due to insufficient monitoring of health organisations and a lack of procedures in organisations that do not adhere to the MOH's rules and regulations.

*'There must be regulations and monitoring of the employees. The hospital manager should see who enters and who goes out. I mean if they can strengthen the hospital securely and make regular visits to see what is going on at the hospitals...nobody can violate the system, whatever the circumstances...to solve the problem of wasta, I suggest [that] the MOH focus on hospitals' management.'* [R3, FGD9, Saudi man]

#### 8.2.3.6 *Appointment system in specialised care*

Another perceived difficulty involved in obtaining access to specialised care was the appointment system in governmental secondary health facilities. After obtaining a referral letter from PHCCs to receive treatment at the secondary or tertiary level, patients must contact the receptionists or administrators to open a file in the secondary care facility then book the appointments at the doctor's clinic. Many participants complained about the appointment system; one described it as 'complicated and not convenient' [R4, FGD2, Saudi woman].

Another stated:

*'The delay in getting appointments and care is a severe issue at the governmental hospitals and the patients sometimes are critically ill and they become bored of that. It's a story (not straight forward) not like the private hospitals.'* [R1, FGD6, Saudi woman]

One problem was the failure to notify the patient if his or her appointment was cancelled. This seemed disrespectful of patients' time and feelings.

*'In some governmental hospitals, your appointment might be cancelled...without letting you know in advance.'* [R3, FGD3, Saudi man]

*'Sometimes once [my father] reaches the hospital, the receptionist informs him that his appointment has been cancelled because the doctor is away without letting him know in advance...they don't even let us know about the cancellation by sending us a message.'* [R2, FGD2, Saudi woman]

The participant continued expressing her dissatisfaction with the appointment cancellation policy. She had put a significant amount of effort into reaching the hospital due to her father being disabled.

*'It is significantly more difficult for us to take him to the hospital...he is disabled.'* [R2, FGD2, Saudi woman]

Some participants mentioned the difficulty of making appointments over the phone. One explained that patients had to visit the clinic or building to get an appointment and that this practice is inconvenient, especially for elderly people.

*'My grandmother was getting treatment in a governmental hospital and she was suffering from different kinds of diseases...her doctor advised her to book appointments with several doctors...we visited several buildings to make the appointments...we found that there is no system that allows the patient to get different appointments with different doctors at the same building or over the phone.'* [R4, FGD2, Saudi woman]

Although there is no monetary cost to attend governmental health facilities, participants still had expenses in terms of time and travel. Although participants did not generally identify



transportation costs as an area of concern, one participant described her father's visit to the hospital as a 'journey' (R2, FGD2, Saudi woman), identifying the fact that driving to the hospital carried a cost.

Many participants believed that the frequent appointment changes were due to doctors' control over the allocation of appointments, with doctors having the ability to either change or cancel appointments on short notice without letting the patient know about the cancellation.

*'In specialist hospitals, the doctor himself makes the appointment for the patients.'* [R2, FGD2 Saudi woman]

*'Sometimes the doctor himself cancels the appointments without prior notice.'* [R4, FGD8, non-Saudi/Egyptian man]

*'In some governmental hospitals, your appointment might be cancelled for reasons related to your doctor.'* [R3, FGD3, Saudi man]

#### **8.2.3.7 Financial barriers to accessing private health sector**

This section will discuss access issues in the private sector. Participants in all the FGDs perceived the price of private care as the main barrier to access.

*'So people choose to go to private hospitals and their monthly budget could be affected because of that.'* [R1, FGD1, Saudi woman]

*'Patients could use up all their savings to get care in the private sector.'* [R1, FGD3, Saudi man]

Participants stated that one reason why the price is too high is that the MOH has significant shortcomings in terms of controlling the price of services in private care. They demanded more regulation for this.

*'I believe the pricing system at private hospitals is set with inflated prices. The government should intervene on this.'* [R1, FGD2, Saudi woman]

Participants of both high and low socio-economic statuses acknowledged this issue collectively and had not narrowed their opinions based on their experience or ability to pay for medical expenses.

#### **8.2.3.8 Price and out-of-pocket payment**

Although all Saudi national citizens receive free healthcare services, because of the difficulties discussed above, some Saudi participants described deciding to seek private care using out-of-pocket payments, i.e. expenses paid from patient's budget and not covered by insurance. They said that 'People have started depending on private hospitals' (R4, FGD4, Saudi man).

They explained that this is largely ‘because of the bureaucracy that exists at the governmental hospitals’ (R3, FGD3, Saudi man) and said that *wasta* is the main barrier to access at the governmental level. Unlike in the private sector, financial means cannot overcome these issues.

*‘Wasta exists everywhere in the governmental health sector... This makes people reluctant to visit the governmental hospitals, and so they seek care from the private sector.’ [R2, FGD9, Saudi man]*

Severity and urgency of need also contributed to people’s health-seeking decisions. One participant shared her difficulty with finding *wasta* to obtain an urgent knee replacement procedure, which led her to end up at private care.

*‘I was very sick and could not bear the pain. We looked for a wasta to facilitate my admission procedures... I couldn’t wait and I had my knee surgery at a private hospital.’ [R3, FGD12, Saudi woman]*

While participants did not see *wasta* as an issue in the private sector, two price-related issues emerged. The first was a concern about the cost of care and medicines, which is out of reach for someone on an average income in KSA and also disproportionate to the costs of medicine in other countries.

*‘The huge expenses of private care are not equivalent to the individual’s average income.’ [R3, FGD3, Saudi man]*

*‘Medical bills at private care blackmail national citizens.’ [R1, FGD1, Saudi woman]*

*‘When it comes to Saudi Arabia, the prices are at [a] minimum three times higher than the prices in Pakistan or India. So that is a very big problem... Same product, same company, same formula, same, same, same.’ [R3, FGD10, non-Saudi/Bakistani man]*

Participants believed that because doctors’ admission charges and medical bills are very high, people may be less willing to seek care or adhere to doctors’ treatment plans.

*‘Medical expenses are very expensive here. I had to pay 1000 Riyal for doctor’s admission and blood tests for my wife... After that, when she became sick I asked her ‘Are you really sick, do you really need to go to the hospital?’ [R2, FGD7, non-Saudi/Sudani man]*

*‘I self-assess my health situation. If I feel that I need to visit the doctor, I will go but I won’t adhere to all the requests or medication my doctor suggests because of the price of medical bills.’ [R4, FGD1, Saudi woman]*

*‘There are some people who ignore some appointments at the private hospitals because some healthcare services are very expensive.’ [R1, FGD2, Saudi woman]*

Earlier, participants had reported that they believed patients do not attend their follow-up appointments because of carelessness. However, here the belief emerged that this might be due to the price of care.

*'Health is very important to people, and everyone is keen to be in good health, but I couldn't afford it, it exceeds my ability to pay.'* [R1, FGD12, Saudi woman]

Secondly, participants flagged high variation in cost amongst different hospitals as a concern. Participants stated that they did not understand the reasons for these differences in price.

*'It differs from one hospital to another...some hospitals, if you want to see the doctor, you will pay 500 Saudi riyals.'* [R3, FGD11, Saudi man]

Trying to explain the high cost of care, one participant suggested that people in KSA believe that the more expensive a doctor is, the more patients believe he or she is a good doctor.

*'People here believe that if a doctor's admission charge is expensive, then this is an indicator that this particular doctor is good, so everybody goes to this doctor.'* [R1, FGD5, non-Saudi/Sudani woman]

Finally, the participants raised the issue of access to medicine because of the high prices.

*'The issue in the healthcare here is the medicine charges... the medicine here in Saudi Arabia is very expensive.'* [R3, FGD7, non-Saudi/Egyptian man]

Some cited the buying of medicines abroad as a result of the inflated prices of medicines in KSA.

*'I prefer to go to India and pick up medicines rather than picking [them] up from here.'* [R4, FGD10, non-Saudi/Indian man]

### **8.2.3.9 Cooperative health insurance and its limitations**

Not all those who visit private hospitals must pay for their treatment out-of-pocket. Those who are not Saudi nationals must take out cooperative health insurance (CHI) since they are ineligible for government care. Participants saw the mandating of health insurance for non-Saudi citizens as indicative of appropriate governance.

*'Requiring non-national citizens to take compulsory health insurance was a wise decision.'* [R1, FGD7, non-Saudi/ Egyptian man]

However, individuals covered by insurance face different financial barriers to access. Insured participants in five out of the 12 FGDs identified insurance class as the main problem. They stated that insured people, especially those from low insurance classes, have insufficient coverage and face high co-payments. They also raised concerns about delays in responding to

claims for treatment from their insurers and the unjustified rejection of treatment coverage for some procedures. Each of these issues is addressed below.

### ***Insurance class***

Non-Saudi participants felt that although health insurance is compulsory for non-Saudi citizens, most insurance companies do not provide adequate coverage for basic healthcare services. Each insurance company has different classes, ranging from VIP or golden class to class D or E. Each insurance class provides different features to its clients, such as limiting the types of health services covered and the providers (or hospitals) who can treat participants. Participants felt that individuals with senior positions, those who earn a high salary, are allocated to a VIP insurance class, whereas people with low positions and low salaries are in a low insurance category, such as C or D.

*'Managers, for example, one ex-manager's salary is 30 thousand riyals and he has VIP insurance.'* [R5, FGD10, non-Saudi/Indian man]

Participants contested the way in which individuals are assigned to a health insurance class – often based on their position in a private company rather than their health status or ability to pay. They argued that, unlike wealthy people, people with limited incomes more likely face exposure to improper nutrition and sanitation, which causes them to contract more diseases.

*'Rich people are more able to maintain their health, they are able to eat well and live in a good environment, so they will not have diseases as much as the poor.'* [R5, FGD8, non-Saudi/ Egyptian man]

However, under the current system, people with limited incomes are more likely to be in a low insurance class, with access only to private PHC centres and not secondary hospitals as needed.

*'So, the patient makes an insurance claim because it is compulsory, but then he finds his insurance coverage is restricted to one or two clinics.'* [R3, FGD7, non-Saudi/Egyptian man]

Participants argued that a high insurance class should be available to all and should cover an extensive range of care. Most of them agreed that people should, at the very least, receive healthcare coverage that meets their health needs and that the state should outlaw inadequate levels of provision.

*'Everyone should have the minimum right to healthcare coverage.'* [R3, FGD10, non-Saudi/Bakistani man]

*'When the company establishes a system on the basis of income or position, the ones with a poor salary will not be able to get a good class in health insurance; therefore,*

*the country itself is supposed to make a decision to cancel the weak categories of insurance – I mean less than class C.’ [R5, FGD8, non-Saudi/ Egyptian man]*

A few non-Saudi participants described a willingness to pay higher co-payments to guarantee access to specialised care in KSA, which is currently not an option in the Saudi health policy.

*‘I’m willing to pay more for my co-payments, so instead of paying 200 Riyals I can pay 1000 Riyals to get better service. We don’t want to be treated at clinics; we want to access hospitals. The service at the clinics is very poor.’ [R1, FGD7, non-Saudi/Egyptian man]*

On the other hand, some participants defended the system by explaining the reasons why higher-paid employees should receive better insurance. They felt that this is because of ‘the way the company is thinking’ (R3, FGD10, non-Saudi/Bakistani man) as they believe that senior employees produce greater revenues than employees with lower positions. Because senior employees add more value to the company, the company must take better care of them.

*‘Coming back to the employee with the high salary, the company considers that he produces more revenue. He adds more value to the company, so the company has to take better care of them... one day of their medical leave costs the company [a much higher] amount of money’ [R3, FGD10, non-Saudi/Bakistani man].*

### ***Co-payment expenses***

Likewise, some participants expressed concern that senior employees – who tend to have high salaries and, thus, a greater ability to pay medical expenses – pay less in co-payments for their insurance.

*‘The classification in the insurance classes is not sensible.’ [R5, FGD8, non-Saudi/Egyptian man]*

*‘For a person who is earning 30 thousand riyals monthly, he can afford all these things with his own money.’ [R5, FGD10, non-Saudi/Indian man]*

On the other hand, low-insurance-class individuals must pay a higher percentage of their salaries for co-payments, which participants saw as problematic and a financial risk for them.

*‘The problem here is the categories of insurance. Some groups pay 2% as a co-payment only and some people in the low insurance class pay 70% of the medical bill. This causes a huge financial strain on them.’ [R2, FGD8, non-Saudi/Egyptian man]*

For this reason, some non-Saudi participants thought that some people visited their home countries to receive necessary treatment.

*'An individual with a low salary cannot absorb the cost of insurance. He has to go either to a primary care clinic in KSA or he has to return to his home country to receive his treatment.'* [R5, FGD10, non-Saudi/Indian man]

### ***Delays in responding to claims for medical procedures***

People with insurance in KSA can access care for minor illnesses through their insurance card (which specifies the class to which they are assigned and their limit of coverage). This means they do not require direct contact with the insurance company before they seek care. However, when it comes to a medical procedure or a surgery, which is typically more expensive than a doctor's admission charge, the insured individual must contact his or her insurance company, provide the company with details (such as a medical report) about the medical claim, and get an approval letter for the procedure. This letter guarantees that the insurance company will cover the procedure before the patient receives it at the hospital.

An issue that repeatedly arose during the FGDs, especially among insured participants (predominantly non-Saudis), was the complex bureaucratic process required to obtain approval for medical procedures. This process could result in severe delays in accessing healthcare for major illnesses, e.g. surgery.

*'Today, my son is going to be admitted to the hospital for the surgery... We spent four or five days...we are going here and there to chase up this paperwork.'* [FGD10, R3, non-Saudi/Bakistani man]

One reason for the delays in responding to medical claims that some participants described was that, unlike in other countries, insurance companies in KSA do not provide 24-hr customer service. Participants felt that the provision of 24/7 services would eliminate long delays in approving claims.

*'I come from Bengaluru. We have insurance companies. We are not so sophisticated but there are some insurance companies, big insurance companies, that work 24 hours a day.'* [R4, FGD10, non-Saudi/Indian man]

*'These insurance companies should have 24-hour service and provide timely approvals. They should work for 24/7. Their offices should be available for 24 hours.'* [R2, FGD10, non-Saudi/Bakistani man]

In addition, participants mentioned the necessity of renewing insurance annually as a Saudi visa requirement (*iqama*), which consumes time and effort.

*'Our health insurance is for one year. Every year we need to renew the insurance... I have some medical history. I need to provide the insurance company all the documentation related to my medical history to make them approve my treatment plan.'*

*It took me two to three days to follow up with the hospital and the insurance company to gather all this data.' [R3, FGD10, non-Saudi/Bakistani man]*

### ***Unjustified rejection of medical procedures***

Participants with CHI also reported that, in addition to the time required to approve a medical claim for medical procedures (as the previous section explained), insurance companies sometimes reject these claims.

*'This is what many of us suffer from. Each employee in a company has insurance, so he goes to a certain hospital and speaks with the insurance representatives and they might then decide that he did not need an operation. Some insurance may accept or reject the surgery.' [R4, FGD11, Saudi man]*

They felt that sometimes these decisions directly contradicted the doctor's medical recommendation and were informed by unqualified consultants without a clear reason for rejection.

*'What about the doctor's opinion?' [R4, FGD11, Saudi man]*

*'The insurance companies, they just have unqualified consultants...how can they decline or reject? The doctor knows medicine and he has some tests for patients and the insurance company rejects the decision. Not because it's not in their scope, it is covered. But because they don't approve.' [FGD10, R3, non-Saudi/Bakistani man]*

To solve the issue of rejections that are perceived as unjustified, participants suggested that healthcare be provided based on the doctor's decision, not the insurance company's decision.

*'In my opinion, healthcare should be provided to the person according to what the doctor sees, not according to the acceptance of the health insurance personnel.' [R4, FGD11, Saudi man]*

### ***8.2.4 Concerns about the quality of facilities and medical supplies***

Another aspect of the patient process that arises, often immediately after or while accessing treatment, is the patient's experience with the medical facilities and supplies. Participants expressed some dissatisfaction with the quality of facilities, in both publicly funded care and private care. With respect to government health facilities, participants discussed issues with poor-quality buildings, including poor-quality rented PHC facilities, outdated buildings at government hospitals (which lacked proper standards of cleanliness), and the availability and quality of medicine that PHCCs provided.

In the private care sector, concerns did not regard the buildings themselves, but, instead, the poor-quality and outdated medical technology. Participants also sometimes switched between

the private and governmental healthcare sectors, leaving the government sector because of the poor quality of the buildings or leaving the private sector because of its low-quality and outdated technology. Both issues will be discussed in turn.

#### 8.2.4.1 *Concerns about the availability and quality of medicines at PHCCs*

The participants repeatedly raised the issue of PHC facilities being out of stock of high-demand drugs, such as hypertension tablets.

*'The service at the primary care centres is poor. They don't keep the medicines they prescribe in stock. They prescribe the medicine to me and ask me to buy it myself from somewhere else. The hypertension tablets, for example, they don't offer it to us, they keep saying it is out of stock.'* [R5, FGD5, non-Saudi/ Kuwaiti woman]

The participants offered reasons for this issue. Some of them believed that, as the major access barrier explained previously in the government health sector, some medicines are prescribed for certain people who have *wasta*, or PHCCs try to divert people into paying for these medicines privately to reduce the cost of care at PHC centres.

*'No, they are in stock, but they don't prescribe them to you, they want you to get it from outside, or they allow you to get it if you have wasta.'* [R4, FGD5, Saudi woman]

Another participant had a different point of view and felt that this issue had emerged from inadequate planning as the number of tablets provided to patients exceeds their needs, i.e. instead of prescribing the exact number of tablets each patient needs, PHC centres prescribe an entire box. This is a reason why medicines run out.

*'I lived overseas, and even at large hospitals they prescribe the tablets based on the number you need. But here in KSA they prescribe the whole box for you, which might last for two months although you actually need tablets for five days only.'* [R1, FGD11, Saudi man]

Aside from participants' perceptions that medicines are unavailable, some Saudi participants believed that the quality of the medicines that PHCCs prescribe is 'very poor' [R5, FGD5, Non-Saudi/Kuwaiti woman] and sometimes offers no significant benefit.

*'If we talk about diabetes for example...they prescribe medicine, but it does not have a benefit.'* [R1, FGD11, Saudi man]

The participant elaborated on and explained the reasons why low-quality medicines are prescribed at PHCCs. He stated that the government contracts with certain pharmaceutical companies that do not supply high-quality medicine to Saudi hospitals.

*'Today we have pharmaceutical companies, some of them are high quality and others are not... I think the companies monopolise it... My uncle got married in India and the*



*doctor there prescribed two diabetes tablets, [and] his health became better... I asked about this in KSA, it doesn't exist. I asked one of my cousins who is a doctor about this, and he said the MOH make contracts with certain companies and can only offer medicine from these companies.' [R1, FGD11, Saudi man]*

Another participant held a different point of view. He felt that the government does not supply some drugs because they are believed to be harmful.

*'But maybe the MOH has strict policies on the content of the medicines, because some medicines are effective but have so many side effects.' [R4, FGD11, Saudi man]*

#### **8.2.4.2 Poor-quality buildings in the government health sector**

Unlike the 'clean buildings' (R1, FGD9, Saudi man) of private care, whose facilities have been described as like those of a five-star 'hotel' (R2, FGD6, Saudi woman), participants expressed concerns about the quality of government health facilities and the infrastructure.

Participants, especially Saudis from the higher economic class, expressed concerns about the quality of the amenities at governmental PHC facilities, which they found to be below their expectations.

*'The rented buildings at primary healthcare centres are not suitable to receive patients or to provide proper care.' [FGD1, R3, Saudi woman]*

*'Primary care needs a full reform, to be honest. The atmosphere, I mean, the building is not suitable, and not tidy and this might cause people to avoid visiting the primary care centre.' [R4, FGD2, Saudi woman]*

In addition, the outdated buildings that house governmental hospitals cause participants to feel concerned about the medical care and the quality of the doctors. This influences their willingness to be treated at these clinics.

*'The building was very old and of poor quality. The door at the doctor's clinic couldn't be closed. So, I said to myself, 'If the building is this poor quality, how will the doctor be?' If the buildings are that poor quality, they need to be entirely rebuilt.' [R4, FGD1, Saudi woman]*

When asked if she intended to revisit the doctor for her follow-up appointments, the participant replied, 'I don't know. I need to think about it, the building was below my expectations' (R4, FGD1, Saudi woman).

Participants also saw the cleanliness of healthcare facilities in the government health sector as a matter of concern. When asked for their perceptions of buildings' quality and cleanliness, a participant said, 'Satisfied? No, there is negligence' (R3, FGD9, Saudi man). Some of them felt that the toilets are not clean, which could have serious implications for hospital visitors' health.

*'I have even noticed lately that there is no care taken to ensure the cleanliness of the toilets at governmental hospitals. It is so harmful to the health of patients.'* [R2, FGD12, Saudi woman]

The participant said that instead of the hospital administrators accepting responsibility for ensuring the cleanliness of the facilities and motivating cleaners to complete their duties, the patients themselves had to motivate the cleaners via monetary incentives.

*'You have to give the cleaners money to clean for you or to do anything.'* [R2, FGD12, Saudi woman]

Some participants commented on the quality of the waiting rooms in governmental health facilities and the adequacy of the number of chairs as compared to the number of visitors to these hospitals. Participants saw this issue as indicating a lack of regard for the well-being of patients waiting for care.

*'Sometimes, and because of the high number of patients in the outpatients, the waiting area becomes extremely crowded, and you can see people standing on the right and left side and unable to find a chair to sit in.'* [R3, FGD4, Saudi man]

Although some rich participants were disappointed with the infrastructure of government health facilities, which were below their expectations, they felt that sometimes they were 'forced to go there to receive efficient care' [R1, FGD1, Saudi woman]. Because of the high trust patients place in the medical care that government hospitals provide and the low trust they place in the private sector, for serious procedures participants believed it was necessary to tolerate the poor quality of the governmental hospital buildings.

#### **8.2.4.3 Concerns about medical technology in the private health sector**

While participants showed high trust in the medical technology available in publicly funded facilities (see section 8.2.2.6), participants had a comparatively low level of trust in the medical technology that private care provided.

*'There is a big gap between the government and private health sector; private hospitals don't have new medical equipment like the governmental hospitals.'* [R1, FGD4, non-Saudi/Syrian man]

*'Governmental hospitals are much better equipped than the private hospitals.'* [R5, FGD10, non-Saudi/Indian man]

One participant shared his experience of needing CTG scans in a private care facility. He stated that because of the poor-quality and outdated equipment, he was in considerable pain.

*'Sometimes when I needed a CTG scan, I felt that I entered a torment room...the equipment was old...this was very painful and after all this pain the picture wasn't*

*clear... I went to another government hospital in the same city and I got better service... the equipment was new so the picture became clear.* [R1, FGD4, non-Saudi/Syrian man]

It seems that participants felt that private clinics focused more on the appearance of high-quality care, while governmental hospitals were concerned more about the actual quality and outcome of care.

### **8.2.5 Concerns about the clinical encounter**

After discussing the access and quality of facilities in both the public and private sectors, FGDs turned to issues of healthcare provision during the clinical encounter. Here, too, significant differences appeared between participants' attitudes towards care provided in public and private hospitals. Therefore, these will be examined separately.

#### **8.2.5.1 Concerns about the clinical encounter at the government health sector**

As indicated in section 8.2.2, despite problems with access, many participants placed a high level of trust in the MOH healthcare provision (i.e., governmental health facilities) once they received access.

*'If you entered the governmental hospital and if God is pleased with you and the governmental hospital agrees to treat you, then you can be assured that your health outcome will be the best.'* [R1, FGD5 non-Saudi/Sudani woman]

*'At the governmental hospitals, when I have been admitted to the hospital I have felt at peace.'* [R2, FG5 Saudi woman]

These opinions were grounded in people's high level of satisfaction with perceived advancements in medical technology at government hospitals, and with the 'Saudisation' of the workforce in this sector (see section 8.2.2.3). However, participants had concerns about their engagement with clinicians; they perceived that doctors failed to respect patients' time, overlooked their emotional needs, and excluded them from health-related decisions. Each issue will be discussed in turn.

#### **8.2.5.2 Doctors' failure to respect patients' time**

Much of the focus groups' initial discussion revolved around the positive aspects of the government healthcare provision. However, dissatisfaction also emerged. Some participants felt that doctors in the government sector intentionally and routinely disrespected patients' time by spending a long time on breaks and by taking a long time between one patient and another.

*'I waited for my doctor for two hours. He had a patient before my visit time and he left his clinic and walked the patient to the x-ray department.'* [FGD4, Saudi man]

Some participants felt that the wait they endured was the result of intentional disrespect.

*'The waiting time to see the doctor at the governmental hospital is very long; it could take us five to six hours to see our doctor, not because of the high number of patients visiting the clinic, but because of lack of respect; they go to have coffee with their colleagues...'* [FG1, R2, Saudi woman]

This participant explained that such lack of respect seemed to be a normal aspect of the government sector experience and was partly the result of doctors imitating one another's working styles.

*'The issue is that some doctors become influenced in this by the working environment that surrounds them.'* [FG1, R2, Saudi woman]

Moreover, one participant felt that after waiting for hours to see the doctor, staff members greeted the doctor in a friendly manner rather than reprimanding the doctor. The participant felt that this shows staff do not hold each other accountable for their disrespect and lack of courtesy toward patients.

*'The thing that made the situation worse was that when the doctor came, he was treated by the staff with generosity as if he had not made any mistake and should not be held accountable for his negligence.'* [FGD4, Saudi man]

Countering the argument that doctors were disrespectful of patients, other participants felt that the long waiting times stemmed from doctors' large care loads in the government health sector. Participants saw this as a justification for the wait times and more positively interpreted the doctor's delay in treatment as well as the overall time allocated to each patient.

*'At government hospitals... the doctor is forced to treat 40 to 50 patients daily. But if we think about the international standards, he should treat 20 patients per day.'* [R3, FDG3, Saudi man]

*'Because of the crowding, doctors at governmental hospitals cannot give the amount of care the patient deserves.'* [R4, FGD12, Saudi woman]

The central theme that emerged was that all participants agreed they had to wait a long time to see the doctors in governmental facilities. Some believed doctors were delaying care intentionally, while others saw delays as the result of doctors' heavy workloads.

#### **8.2.5.3 Doctors' insensitive and controlling behaviour**

After the waiting room, the next step in the patient pathway is the direct contact between the patient and the doctor. In the Saudi health system, direct contact is entirely between the doctors and the patients; nurses administer assistant care only if the doctor directly orders them to do so. Therefore, the following section details only the interaction between patients and doctors.

Participants highlighted two issues with respect to interacting with government doctors. The first issue was the style of interaction or the extent to which doctors are sensitive in dealing with them. The second issue related to the scope of interaction doctors allowed during the clinical encounter, i.e. how much doctors asked about patients and engaged with their wider, non-physical needs. Participants' feedback suggested experiences of doctor interaction may vary perhaps depending on the amount of experience accessing governmental care, the level of education, and, related to this, socio-economic status.

With regards to the style of interaction, although many participants were pleased with Saudi doctors' care for their cultural and spiritual needs (see section 8.2.2), a few of them felt that doctors at government hospitals are not as good at dealing with patients' emotional needs and, thus, providing holistic care. Participants perceived shortcomings as indicating a lack of empathy and consideration, especially while doctors delivered information to patients. This was particularly a concern amongst participants from the lower socio-economic class. One patient discussed her experience and the doctor's perceived lack of sensitivity in delivering information about the pain she would experience during a procedure.

*'I asked them if I could get an anaesthetic injection so I couldn't feel the pain, but the doctor ignored me as if he couldn't hear me...[and then said.] "You won't feel anything, but you will feel like a knife stabbed in your chest for a couple of seconds"... I was extremely scared. The other doctor said to him, "Why are you scaring her?"'*  
[R4, FGD5, Saudi woman]

Another poorly educated woman felt that doctors are arrogant when dealing with patients. Because of this, patients become less willing to seek care.

*'Sometimes they are arrogant, and thus the patients' health deteriorated and they become unwilling to seek care.'* [R2, FGD3, non-Saudi/Bahraini woman]

Examples of this arrogance reveal themselves in participants' concern about the narrow scope of doctors' discussion. Participants who described themselves as rarely accessing governmental care felt that the government employs doctors who do not listen to patients, and that, in conversations, these doctors often exert control over the agenda.

*'They do not allow you to talk...they just inform you about your health case in general and give you your prescription.'* [R2, FGD12, Saudi woman]

This contrasted with participants who described themselves as having regular contact with governmental hospitals. These participants felt that doctors provide enough room for patients to ask questions and discuss issues, especially with patients brave enough to ask questions. They also stated that not knowing how to best communicate with governmental doctors might have negative implications for one's health.

*'I have experience with governmental hospitals and I've been admitted several times. The healthcare is extremely good but for the patients who speak, ask, and discuss, they gain a lot of benefit. But patients who are not brave enough to discuss their case, then their health will be at risk.'* [R1, FGD3, Saudi man]

A poorly educated woman reiterated this point, stating that she was not brave enough to talk freely with her doctor.

*'My doctor becomes angry if I talk and he behaves as if he is a teacher and I am a student.'* [R2, FGD5, Saudi woman]

And another participant, rather than suggesting that doctors should be more approachable, blamed the patients themselves for not being more knowledgeable or assertive:

*'This depends on the patient's level of education. If the patient has a high level of knowledge, he will discuss his issues in more detail with the doctor and he will ask questions. But if he is less educated...he won't be able to discuss his health issues.'* [FGD4, R1, non-Saudi/Syrian man]

#### 8.2.5.4 **Doctors' control over clinical choices**

Continuing along the patient pathway, at the end of the consultation between patients and doctors, a treatment plan must be decided. Participants from all backgrounds found this process to be under doctors' control, rather than the result of shared decision-making.

However, many participants said that they cannot negotiate with their doctors and that they do not fully understand their doctors' treatment plan.

*'There are doctors who don't accept negotiation. He keeps asking, "Am I the doctor or you?... Ok, instead of disagreeing with me, why don't you make me understand?'"* [R1, FG5, non-Saudi/Sudani woman]

Some participants felt that, although government doctors realise that patients have the right to be involved in their medical treatment decisions, the doctors prefer not to negotiate with them about the medical treatment options and rely only on the doctors' medical expertise.

*'A lot of them understand that this is the patient's right. But sometimes you will notice that doctors don't accept that.'* [R1, FG5, non-Saudi/ Sudani woman]

While all patients felt that they lacked power, younger participants tended to feel that they could decide upon the ultimate treatment plan and exercise their rights as patients. They felt that the system protects the patient's rights by compelling them to give their consent before any procedure is performed. Thus, patients cannot be forced to comply with a treatment plan with which they disagree.

*'It is the patient's right to refuse a treatment.'* [R2, FGD2, Saudi woman]

*'In healthcare, nothing is compulsory. The patient needs to sign on a paper, so it depends on whether the patient wants to do it or not.'* [R2, FGD11, Saudi man]

Adding to the difficulty of patients' being an active part of the treatment decision process, some participants felt that doctors take patients' rejection of treatment plans personally. One participant described what she witnessed during a visit to a government doctor. A disabled patient was blamed for not adhering to his medical treatment plan, and the doctor refused to accept the patient's case.

*'You are the one who visited me one year ago when your wife was standing on her legs. I told you she needs an operation and you refused my treatment plan...now, after one year, you have returned to me asking me for help when your wife is disabled now, and the doctor refused to treat her.'* [R3, FGD1, Saudi woman]

The patient also has the right to obtain a second opinion, though in many FGDs across income and education levels, participants felt that the government doctors were unwilling to allow their patients to do this (i.e. to consult another doctor about the diagnosis).

*'They never give us the chance to do so, it is impossible here for the doctor to advise you to seek out another doctor for a second opinion.'* [R4, FGD1, Saudi woman]

Thus, while many patients seek a second opinion, they are reluctant to admit this to their doctors because they fear the doctor will take it personally. This was felt to be a common cultural issue in the Arab world.

*'He always takes it personally as if I'm doubting him and his expertise.'* [R4, FGD1, Saudi woman]

*'We lack this culture as Arab people. We take everything personally.'* [R5, FGD8, non-Saudi/Egyptian man]

*'A lot of people here seek a second opinion. They don't rely on one diagnosis, they go to several doctors. But the patients rarely tell their doctors that they are seeking a second opinion.'* [R4, FGD6, Saudi woman]

Some participants explained, in a different way, why doctors in KSA do not advise patients to seek a second opinion. They felt that in the Arab world, the culture of referring the patient for a second opinion is unpopular because that patient will then be suspicious about the first doctor's ability to make the best decision to resolve his or her health issue.

*‘Sometimes a patient might misunderstand this and he will think that his doctor has referred him to another doctor because he doesn’t know how to treat the patient’s illness.’ [R1, FGD4, non-Saudi/Syrian man]*

#### **8.2.5.5 Concerns about the clinical encounter at the private health sector**

Participants reported having similar experiences in the medical conversation at private and governmental healthcare facilities. In both settings, patients reported having little input into their treatment plans, with doctors assuming an authoritative role in the face of challenges from patients. Some differences did emerge between private sector and public sector, including the impact of payment methods, language barriers, and the distrust of private doctors on participants’ attitudes towards the clinical encounter. These will be discussed in turn.

#### **8.2.5.6 Variations in experience by payment type**

Participants held a range of views about how doctors behave with patients at private hospitals. Their views seemed to vary depending on how they paid for care.

Uninsured Saudi participants generally felt that private doctors make all possible efforts to please and satisfy patients, seeing this as a function of their concern with preserving the hospital’s reputation and their desire to make money.

*‘At private hospitals, doctors take all possible steps to make you happy and satisfied.’ [R4, FGD12, Saudi woman]*

*‘Because private hospitals pay extra attention to their reputation.’ [R2, FGD6, Saudi woman]*

However, other participants, mainly the insured, held a different point of view. They said that doctors at private care facilities lack sensitivity and listening skills.

*‘Doctors lack the skill of listen more than to speak.’ [R5, FGD8, non-Saudi / Egyptian man].*

*‘I visited a doctor [and] I told him that I have a severe pain in my spinal cord. He said to me, ‘How could I fix it? You have stiffness’...the doctor decided not to make the operation and justified his decision because it is like adding screws in a piece of cake.’ [R1, FGD4, non-Saudi/ Syrian man]*

Some participants suggested that doctors believe insured patients demand care they do not really need and cited this as a reason why such patients do not receive proper attention. Those who pay directly for treatment believed they were seen as more credible and treated with greater respect.



*'They always think people who have health insurance demand healthcare services that they do not really need.'* [R2, FGD7, non-Saudi/Sudani man]

One participant shared his experience of using different payment methods at the same private hospital. When he visited the doctor and used an out-of-pocket payment, he had an 'interactive communication' with his doctor. 'I mean he kept talking to me and asking me questions and listening to me' [R2, FGD7, non-Saudi/ Sudani man]. However, when he visited the same doctor using health insurance, the doctor did not offer him the time to talk.

Another participant offered an alternative reason for a doctor's poor communication and lack of willingness to give insured patients the time to talk. The participant cited the large number of patients who must be seen and treated every day. He felt that less overload would allow doctors 'to be more interactive with the patients' [R4, FGD7, non-Saudi/Turkish man]. As with government hospitals, this point of view suggests the existence of a perception that private provision is understaffed, which negatively affects doctors' ability to interact effectively with patients.

Participants stated that hospitals do not apply MOH policies defining maximum working hours (8 hr, 5 days a week) and force doctors to work extra hours, which negatively affects their productivity.

*'The doctors are working more than eight hours, they are not productive doctors. They should not work more than eight hours.'* [R1, FGD10, non-Saudi /Indian man]

*'Exactly, five days a week is a normal thing, whereas in private clinics they are working six days a week and nine hours a day. Some of the clinics work nine hours.'* [R1, FGD10, non-Saudi/Indian man]

Generally, insured patients were dissatisfied with the communication between doctors and patients in private healthcare facilities, which influenced their psychological well-being. By contrast, patients paying out-of-pocket were generally more satisfied with their experiences.

#### **8.2.5.7 Language barriers**

Some non-Saudi participants felt that characteristics of the doctors themselves, such as their native language, could influence doctor-patient communication.

For instance, some non-Saudis, especially non-Arabic speakers, reported that language is a major barrier to accessing healthcare. Non-Saudi men reported that they could not explain their health problems to doctors because of language problems.

*'The language is an issue, maybe the patient gives the wrong details. Sometimes it happens to me when I cannot convey what I mean in a language other than my native language.'* [R1, FGD8, non-Saudi/Egyptian man]

Some participants felt that, in ensuring full understanding between patient and doctor, the speaker's accent also matters. To ensure better communication, one participant (of Egyptian nationality) preferred to see a doctor with the same Arabic accent (Egyptian).

*'If you are an Egyptian, for example, surely you would prefer to see an Egyptian doctor.'* [R4, FGD8, non-Saudi/Egyptian man]

The emotional aspect of language further enhanced communication. Participants in another FGD interpreted patients' preference for doctors of the same nationality as follows: 'They are attached emotionally to a doctor who speaks their own language' [R3, FGD10, non-Saudi/Pakistani man].

However, some non-Arab participants felt that Arab doctors at private hospitals are not 'up to the mark' [R3, FGD10, non-Saudi/Pakistani man] and are unable to speak an international language, such as English. Participants considered this a major issue because not everyone in Saudi Arabia speaks Arabic.

Another participant in the same FGD had the same point of view, stating, 'I would say 70% of the doctors don't speak English' [R1, FGD10, non-Saudi/Indian man]. In addition to not speaking English, doctors also do not understand the participant's native language, Urdu. This resulted in no communication between the patient and doctor. Therefore, the doctor was unable to understand the patient's symptoms.

Participants were also not given the option of having an interpreter present during the medical encounter. Because of this, they said it was difficult to communicate with doctors who spoke a language the patient could not understand.

*'So now we are conveying our issues to a doctor that is not understanding.'* [R4, FGD10, non-Saudi/Indian man]

Because of non-Saudis' reliance on insurance and private hospitals, and their lack of access to governmental care, the language barrier was evident and detrimental in the private sector. This was not a concern in governmental hospitals because, in this sector, patients are Saudis who are typically treated by Saudi health providers. Therefore, a language barrier does not exist.

#### **8.2.5.8 *Distrust of private doctors***

While communication barriers exist at all levels of the doctor-patient interaction, at private hospitals, an additional issue – trust – emerges at the treatment planning stage.

Participants, especially those with health insurance, said that doctors give them inadequate care because the doctors are too focused on the patients' health insurance class. Therefore, the doctors propose only treatment plans that the patient's health insurance will cover.

*'Doctors usually choose medicines with the lowest price, which are covered by the insurance, regardless of how effective they are...they don't care about the complications that the patient could suffer from because the doctor didn't choose the correct treatment plan because he only thinks about the insurance class of the patient.'*  
[R1, FGD7, non-Saudi/Egyptian man]

One participant suggested that private doctors should inform patients about the best treatment plan, regardless of their insurance class, thereby giving patients the option of paying extra money or a co-payment to receive more adequate care.

*'Then we can make a decision about whether we wish to pay co-payments like 15% or 20% of the total medical charges. This is far better than making us suffer through cheap and ineffective treatment.'* [R1, FGD7, non-Saudi/Egyptian man]

An additional problem many participants identified was that doctors delivering private care might be more interested in improving their profits, i.e. they order unnecessary procedures so they can charge as much as possible rather than focusing on the patient's health needs or the doctors' responsibility to Saudi society. This was perceived as being the case by both patients paying out-of-pocket and insured patients.

*'They want to achieve the target...they may even perform a surgery on me without my need to it.'* [R4, FGD9, Saudi man]

One insured participant shared an experience in which he perceived that the doctor's treatment decisions regarding a C-section were motivated by a financial incentive.

*'It happened with me when my wife was delivering our first baby. So when we were consulting the doctor, the doctor, without asking me even, she took her for a caesarean...we didn't need it. Why did she need this? There was no reason. I feel personally there is some kind of incentive for the doctor.'* [R4, FGD10, non-Saudi/Indian man]

Because he did not trust the doctor's decision, instead of going through with the C-section, the husband and his wife left the hospital to seek care at another hospital, where his wife gave birth normally.

An uninsured participant also shared her experience. When her daughter was bleeding from her ear, the mother took her to a private hospital for diagnosis. The mother experienced a scenario similar to that mentioned by the previously cited participant. The private doctor immediately scheduled an operation for her daughter without seeking the mother's consent. When the mother asked about the necessity of this procedure and to get a second opinion, the doctor said that the daughter's case was critical and, thus, the operation should be done on the same day. Because the mother did not trust the decision, she discharged her daughter and took her to another doctor

in a government hospital. No procedure was needed, and her daughter did not have complications afterwards.

*'My daughter had ear bleeding... The private doctor decided to make an operation in her ear... I asked for a second opinion but he refused... He didn't involve me... I left the hospital and I visited a governmental doctor... the bleeding was because of an ear infection, she gave me an ointment and now my daughter's health is absolutely fine.'*  
[R4, FGD1, Saudi woman]

This lack of trust led some participants – those eligible to receive care at government hospitals – to visit such hospitals for reassurance about the treatment plan suggested to them under private care and to ensure that the private hospital was not charging them extra money for unnecessary procedures. The participants would then seek care at the easily accessible private hospitals.

*'Some people take a doctor's opinion at a governmental hospital before being convinced about the treatment plan offered at the private hospital.'* [R2, FGD2, Saudi woman]

*'...to make sure that the private hospital won't charge extra for unnecessary medicine.'*  
[R6, FGD6, non-Saudi Yemeni woman]

#### **8.2.5.9 Concern with under-regulation of private provision**

Participants expressed some contradictory points of view concerning the issue of private hospitals and the possibility of treating people for monetary gain, as explained in the previous section. One insured participant believed the reasons for the performance of unnecessary procedures arose from a lack of experience and qualifications rather than an intention to profit.

*'The experience of doctors might be the reason why they prescribe a lot of medicines that the patient does not actually need.'* [R4, FGD8, non-Saudi/Egyptian man]

As a partial explanation for this lack of experience, participants felt that, unlike in governmental hospitals, private facilities do not maintain proper rules and standards when recruiting foreign doctors.

*'The system lacks regulations about how to recruit doctors from overseas. The system doesn't have proper control among the private hospitals that recruit those doctors.'*  
[R1, FGD7, non-Saudi/ Egyptian man]

Participants felt that private care employers had the freedom to look for 'less costly' doctors without paying proper attention to their qualifications or eligibility to practice medicine. For this reason, the issue of unqualified doctors is more visible in the private sector than it is in the governmental sector.

*'The owner of the private hospital wants to minimise the costs of hiring doctors so they hire less qualified doctors who accept low salaries.'* [R4, FGD8, non-Saudi/Egyptian man]

*'The owners of private hospitals are most interested in lowering the price of the doctor...they choose less-experienced personnel to save a lot of money.'* [R5, FGD8, non-Saudi/Egyptian man]

Participants also said that some doctors at private hospitals are unqualified because only doctors who do not succeed in their home countries agree to come to KSA and work at private hospitals for a lower salary.

*'Foreign doctors here are not very successful in their own countries. They are paid a lower salary and are willing to accept this because they are not successful over there.'* [R2, FGD10, non-Saudi/ Bakistani man]

Another participant showed his concern regarding the validity of the medical certificates held by overseas health practitioners at private health facilities. This led the participant to distrust the private health sector.

*'The distrust might occur because of non-national Saudi doctors, who constitute around 80% of the total doctors...they came from overseas holding fake certificates.'* [R4, FGD8, non-Saudi/Egyptian man]

Distrust of doctors in the private system stood in contrast to participants' high level of trust in governmental doctors. Concerns about private doctors included the use of unnecessary procedures, the overall lower quality of the diagnosis, and the lack of doctors' expertise. For insured patients, participants perceived the prescription of low-quality medicine as being an additional concern.

### **8.3 Discussion**

This study aimed to explore public attitudes towards the health system of KSA and to understand the factors that may influence the formation of these attitudes and opinions. The overall narrative was that participants had concerns about healthcare delivery in both the government and private sectors. However, participants were generally confident about the government health sector's ability to provide the highest possible quality of care. They believed that ease of access is the primary benefit that private care facilities provide, especially for patients who pay out-of-pocket. Each of these issues will now be discussed in relation to previous research. The following section will then discuss this study's strengths and weaknesses. Chapter 12 will discuss the implications of these findings about research and health policy.

### ***8.3.1 Experiential understanding of how life circumstances shape health choices***

As stated earlier, the Dahlgren and Whitehead (1991) social model of health has been useful in providing a framework for the layers that influence public health, including ‘fixed’ factors (sex, age, and genetic factors), ‘individual’ lifestyle factors, and ‘collective’ social and environmental factors. In the current study, participants varied in their opinions regarding the contribution each layer makes to health. The focus was on individual and collective factors. Older participants saw complex interrelationships and believed that collective social factors either promoted or worsened the population’s health. Many stated that a dramatic change in KSA’s standard of living had created circumstances that cause people to have better lifestyles. However, they also believed that these “new” lifestyles cause people to make bad decisions regarding diet, exercise, and sleeping patterns, thereby putting their health at risk. Older participants cited the high consumption of unhealthy food as a health problem causing serious chronic disease. This is evident in a cross-sectional study conducted on adolescent and young adult Saudis that revealed a high prevalence of unhealthy food consumption in KSA, which has emerged as a consequence of the changes in standard of living in KSA (AlFaris et al., 2015). Some participants also cited an overreliance on cars for transportation (stemming from low oil prices and recent changes in the standard of living) and hot weather as reasons why people in KSA are less likely to exercise than people in other countries.

However, other participants, especially younger and non-Saudis, had narrower views of health-related influences in KSA. Their belief focused on the ‘individual’ layer of Dahlgren and Whitehead’s (1991) social model of health, i.e. that an individual chooses whether to lead a healthy lifestyle. In their opinion, people’s failure to accept responsibility for their personal health makes it difficult for doctors to treat patients. For example, one participant described herself as having a lot of sugar and said that she kept consuming it even though she is diabetic.

A striking finding in the current study is some participants’ calls for interventions to improve the population health in KSA. Participants suggested that individual-level interventions – such as teaching people from childhood how to live a healthy lifestyle – be implemented to help people maintain healthy living when they grow up. Others supported calls for environmental-level intervention, such as restricting the opening hours of shops and restaurants to re-set sleeping patterns in KSA, and mandating taxes for sugar-sweetened beverages to reduce the overconsumption of sugar. This indicates that participants are aware of the importance of protecting public health in KSA. A possible interpretation is that people have adapted quickly to KSA’s rapid socio-economic changes and have altered their diets and activity patterns without noticing the consequences surrounding them. However, due to the increase in education levels and awareness that an increasing number of people in KSA have chronic diseases, people are now trying to protect their own health and that of their families. Their demand for public health

interventions supports their achievement of this goal. Data indicates there may be greater tolerance for environmental intervention than in other populations and at a time where disease prevention is as important as care; this may be an important area for further research.

### **8.3.2 Sense of pride in the Ministry of Health (MOH)**

With regard to attitudes towards the MOH, participants held positive attitudes and were proud of government efforts to provide healthcare to Saudi citizens. The particularly praised the vaccination program, which is available free of charge for all, and the availability of medical technology. This can be interpreted through the lens of public awareness that other countries do not provide such free healthcare services without levying taxes on citizens. Participants appreciated the existence of health systems that do not require monetary contributions from the public, regardless of how well those systems perform. Our findings are similar to those of Ward et al. (2015) in South Australia, who found that when speaking about the system broadly, participants were not willing to criticise or challenge their public system because of a lack of alternatives for free healthcare and thus a dependence on the system.

Similarly, an additional source of pride amongst participants in the current study was the implementation of *Saudisation*. Many participants shared their belief in Saudi healthcare providers in the government health sector, stating that they felt ‘confident’ and in ‘safe hands’. Such points of view were not limited to Saudi-national participants, although Saudi participants expressed the greatest pride in this matter. Saudi-national health providers received praise for their sympathy and understanding of patients’ needs, including spiritual needs. One Saudi participant said that she always feels ‘psychologically comfortable’ when treated by Saudi professionals. An example of that is the respect of patients’ modesty and privacy, an important aspect of cultural competency in treating Muslim patients in general (Rassool, 2015) and Saudi patients in particular (AlShahri, 2009).

The FGDs findings also aligns with the systematic review findings (Phase 2), where a qualitative study revealed that cancer patients expressed more comfort with the manner in which Saudi health professionals interacted with them than with the manner in which non-Saudi health professionals interacted with them (Saati, 2013). Another reason given for the high level of satisfaction was the medical education system in KSA, which requires that medical students learn how to provide the best care to patients. One participant used the term ‘evidence-based practice’ to explain her confidence that Saudi doctors recommend the most effective treatment plans.

### **8.3.3 Concerns about access**

With regard to concerns about access to care, participants showed their dissatisfaction with both the governmental and private health sectors. With respect to the governmental sector, participants commented on their interactions with staff at primary health facilities. Participants

complained about unapproachable staff, especially receptionists, whom participants said seemed unwilling to pay proper attention to patients. The study's findings are similar to those of AlGhanim's (2011) cross-sectional study, presented in Chapter 6, which concluded that receptionists were one factor associated with patients choosing to bypass PHC facilities in KSA. This supports findings from the wider literature: two qualitative studies conducted in the UK revealed that participants described the GP receptionists as 'gatekeepers' (Martin et al., 2005, MacKichan et al., 2017), blocking access to care they require and sometimes leading them to seek primary medical care at emergency departments (MacKichan et al., 2017). Participants in the current study said that due to age, lack of education, and training, receptionists may not have the enthusiasm to provide proper care to patients and suggested replacing them with better-educated staff. This supports findings from Alahmadi and Roland's comprehensive review, which revealed that in KSA there is an "isolation" of the staff who work at primary care, which reduces their ability to maintain knowledge and skills (2005, p. 345). While not a focus of this study, the barriers and facilitators of providing care to patients from primary care receptionists' perspectives is worthy for future investigations.

Participants perceived believed *wasta* to be a significant problem, preventing people from accessing government care in a timely manner. People with no *wasta* face disadvantages. Although access was an important theme of this study, the issue has been under-researched in KSA. It is worth noting that the phenomenon of "*wasta*" and its influence on healthcare is notable not only in KSA but also in China, another developing country, where it is called *Guanxi* (Munro, 2013; Wu et al., 2017).

The participants who raised the issue of *wasta* in the context of accessing healthcare were mainly Saudis. This could be for two possible reasons. Firstly, as stated in Chapter 1, *wasta* is an informal network of connections based on old tribal allegiances, integrated into the fabric of the country's culture. Therefore, non-Saudis might be unaware of, or unable to perceive, this feature. Secondly, it is a mechanism used largely to access publicly funded care (i.e. governmental hospitals). Because most non-Saudis in KSA are ineligible for treatment at governmental hospitals, they have minimal interaction with the concept of *wasta*.

In addition, some participants expressed their dissatisfaction with the referral and appointment system in government health facilities. For some Saudi participants, the PHCCs are housed in 'rented buildings' and thus change location frequently. This created confusion amongst some participants about the PHCCs' locations; therefore, such participants were unable to get referrals. Furthermore, an underlying narrative within many of the discussions was that participants could not make appointments when they needed them. They noted that doctors control the granting of appointments, thereby increasing the risk that people will resort to *wasta* and boosting this practice's influence on the prioritisation of care in KSA. Participants alleged that instead of treating people based on the seriousness of their health issues, the system might filter them using a *wasta-or-no-wasta* system. Participants raised additional concerns about the



fact that the appointment booking system is difficult to use as people cannot make appointments over the phone and do not receive a notification if their appointment is cancelled.

When referring to barriers in accessing private-sector healthcare, participants, especially those who described themselves as uninsured, complained about the fluctuating cost of care, which was above individuals' average income. They saw as the reason for this the of MOH control over the pricing system in the private health sector.

Participants with cooperative health insurance (CHI) raised concerns about the 'unfair' classification of insurance classes, including limited health insurance coverage for poor-quality private clinics and high co-payments for people on low incomes. This is a common issue worldwide. For example, a study conducted in the USA revealed that people with limited incomes find it difficult to pay the deductibles for their insurance (Collins et al., 2014). Insured participants in private care also highlighted issues such as the need to complete excessive paperwork for insurance claims, a requirement that delays the delivery of care. This result is similar to a previous study performed in 11 developed countries, which found that the complexity of health insurance could necessitate additional time spent on paperwork, which then becomes a barrier to accessing care when needed (Schoen et al., 2010).

The situation in the Saudi Arabian context is more problematic than in many countries worldwide as participants believed that most patients at governmental hospitals are society's wealthier members, who are more likely to have access to *wasta*. Moreover, because of the wealthier patient's high trust in governmental care provision, they utilise their advantage to access swifter care at governmental hospitals. Thus, people on the waiting list – who are more likely to be poor and to have no *wasta* – have minimal opportunities to access care, especially when one considers the exaggerated pricing in the private healthcare sector. Therefore, poor people in KSA can be classified as 'the losers' in both sectors.

#### ***8.3.4 Concerns about the quality of facilities and medical supplies***

Regarding the facilities, there appeared to be wide variation between the governmental and private sectors. Participants agreed that the highest quality facilities were available in the private sector, while governmental hospitals provided the highest quality medical technology. Participants felt that private clinics focused more on the appearance of high-quality care, while governmental hospitals were concerned more about the actual quality and outcome of care.

Two leading comparative studies produced in the latter half of the 20th century illustrated the differences between public and private health sectors; they suggested a need to rework the settings' infrastructure and to mechanise communication at doctors' clinics (Strong, 1979; Silverman, 1987). Despite the fact that these studies are relatively outdated, they maintain value as seminal examples of research in this field. Therefore, it is relevant to compare their findings with the current study findings here and in the next section.

Participants in this study believed that governmental hospitals focused more on quality of care than they did on appearance, whereas private hospitals focused more on appearance than on quality or outcome of care. This is similar to the results of Strong's (1979) study, which found that private clinics were more concerned about decoration and furnishings, while the NHS setting had standard furnishings. However, unlike Strong's (1979) observation about the NHS clinics, in KSA, the concern was not just about the minimal standard of the furnishings but also about the facilities' cleanliness, which was seen as posing a health risk. The health budget is very large, and maintaining cleanliness costs very little, so it is unclear why basic amenities like toilets are not properly maintained.

A further issue that emerged in the government health sector was the problem of out-of-stock medicine, which participants interpreted as a consequence of the practice of *wasta* in the dispensing of free-of-charge medicine. A few participants suggested that the prescribing of an unnecessary number of tablets per patient was the reason for this low stock of medicine. This aligns with a retrospective study of approximately 2,800 patients, indicating that health facilities in KSA provide irrational prescriptions, especially of antibiotics, that exceed the international standard assigned by the WHO (Alkelya et al., 2013). However, no in-depth data has been identified in this matter. Thus, investigations into attitudes regarding access to medication in government care are recommended for future studies.

### ***8.3.5 Concerns about the clinical encounter***

Previous studies by Strong (1979) and Silverman (1987) found differences between the ways in which doctors allow patients to control the agenda in the medical conversation. Based on the studies of Strong (1979) and Silverman (1987), the 'bureaucratic' approach found in NHS health settings is standardised and impersonal, giving minimal choice to patients, encompassing a doctrine of medical control, and setting up an imbalance of power between the doctor and patients' carers. However, in order to improve health outcomes, this approach is starting to be substituted with the concept of patient-centred care in many countries worldwide, especially developed countries (Elwyn et al., 2013, 2014). From the current study of participants' views, the bureaucratic approach widely exists and is practiced by both government and private doctors in KSA.

The FGDs' findings stated that in both governmental and private hospitals, doctors usually control the conversation during patient encounters. They speak rather than listen and are less than sympathetic when sharing information. This aligns with four existing studies found in the systematic review given in Chapter 6 (Albarakati, 2009; Harakati et al., 2011; AlMomani & Al Korashy, 2012; Al-Abbad, 2015). Participants in these studies reported dissatisfaction with doctor-patient communication in the government sector in KSA due to healthcare providers' unwillingness to understand the patient's health issue (Albarakati, 2009; Harakati et al., 2011;

Al-Abbad, 2015) and the extent to which healthcare providers allowed the patient to express his or her personal feelings (AlMomani & Al Korashy, 2012).

On the other hand, with regard to Saudi literature, when comparing satisfaction with doctor-patient communication in private and public dental clinics in KSA, Al-Mobeerek (2012) found a significant difference between perceptions in the private and public settings. Doctors at governmental hospitals were perceived as being better at communicating, being more courteous, and providing more instructions to patients. This is in alignment with the current study when participants expressed their satisfaction with/and trust in the Saudi healthcare professionals working in government hospitals and their sympathy while dealing with patients. However, when it comes to perceptions of being involved in the medical conversation, participants indicated that doctors maintain complete control over the medical discussion. Participants observed this behaviour in both private and government settings and cited overcrowding and high workloads as possible causes, with doctors unable to give patients enough time to discuss their health-related issues. An exception to this is patients who pay out-of-pocket at private hospitals. One out-of-pocket participant said that private doctors 'take all possible steps' to satisfy their patients. This divergence in points of view might have arisen from private doctors' concern about maintaining their reputations and retaining patients who pay out-of-pocket, whereas insured patients have limited coverage with specific health providers – and, thus, limited chances to choose another health provider.

Participants were also dissatisfied with doctors' control over clinical choices and felt that they, as patients, were not included in the decision-making process. This study makes a significant contribution to the Saudi literature as perceptions of involvement in decision-making have rarely been investigated. This study's findings suggest that doctors, in both private and governmental sectors in KSA, adopt a paternalistic approach towards patients. Doctors' unwillingness to involve patients in the decision-making process in KSA may be explained, in part, by the results of Alahmadi and Roland's (2005) review, which found that doctors in KSA encountered difficulty interacting with patients because of the doctors' belief that some patients had low levels of education and that patients' wishes and expectations were not always aligned with the care doctors wanted to provide (Alahmadi & Roland, 2005). However, in this study, participants from all demographic backgrounds expressed a desire for more involvement and treatment options and to engage in open interactions with their doctors at both the private and government health settings. Therefore, patient involvement in shared decision-making is a factor that could significantly affect their overall satisfaction in this context.

As evidence, two systematic reviews of the literature indicated that patients who have been well-informed about their treatment plan options – and who therefore have made decisions with their doctor's support – are more likely to adhere to a treatment plan, boosting the probability of better health outcomes (Joosten et al., 2008; Stacey et al., 2017).

In addition, unlike in Strong's (1979) research, which found that doctors in the UK did not express emotion about patients' decisions, participants in the current study voiced concerns that doctors would take the situation personally if a patient did not adhere to a treatment plan. Participants believe that this circumstance stems from the Arab culture's respect of expertise. However, this cultural norm may be changing because participants from a range of demographics expected styles and approaches more closely aligned with patient-centred care – a recent export from Western countries – rather than with old, paternalistic approaches. That said, the extent to which this new patient-centred approach is implemented – or, indeed, achieves the outcomes it is meant to achieve – is still questionable worldwide.

In addition, participants highlighted doctors' lack of respect for patients' choices at both sectors, especially if patients wanted a second opinion. This finding contradicts Strong's (1979) observations of the collegial response of NHS doctors, who expect second opinions or who work in teams to provide care. According to the participants, these issues further prevent open dialogue in the treatment decision process in KSA.

A communication concerns seen only in the private sector was the issue of language barriers resulting from the high number of non-Saudi participants visiting private hospitals and the lack of doctors able to speak their patients' languages. This issue has been investigated previously in Saudi literature (AlKhathami et al., 2010; AlFozan, 2013). In addition, the language barriers between patients and health workers were also cited as a significant issue hindering proper delivery of care in a Gulf Cooperative Country (Weber et al., 2011) and in international literature (Ferguson & Candib, 2002; Nápoles-Springer et al., 2005).

## **8.4 Strengths and weaknesses of the study**

As semi-structured FGDs depend on participants' willingness to guide the discussion and describe their views in depth, their answers may vary in their length. In addition, it is important to explore complex issues related to healthcare – such as attitudes towards the health system and its policies – using qualitative methodology. However, this could pose a problem with respect to participants who have poor education or who are unfamiliar with topics related to healthcare delivery. Thus, participants may vary in their understanding of the topics that the researcher introduces. However, this would have been overcome during the FGDs topic guide design stage. As explained in Chapter 7, the supervisory team, an experienced researcher in moderating FGDs at NatCen, researchers in the health services research unit at City, University of London who have prior experience in interviewing lay participants and patients, and two Arabic speaking researcher were asked to review the topic guide and check its clarity for lay participants before FGDs commenced.

As the researcher has lived most of her life in KSA, had prior experience on how the Saudi health system works, and had collected secondary data about attitudes towards healthcare in

KSA from the systematic review conducted in Phase 2, she may have formed preconceptions about what participants would discuss in FGDs. To a certain extent, this could have been mitigated by the researcher maintaining neutrality in her expressions while listening to participants' responses (for example, 'excellent' or 'that is good'), eliminating misleading questions, and giving participants the opportunity to elaborate and guide the discussion rather than intervening to cover the issues that interest her most.

This study included 12 FGDs and a total of 54 participants – numbers that might be considered too small for generalizability to a wider population in KSA. However, researchers have recommended avoiding the recruitment of too many participants in qualitative research if no significant reason exists to do so as employing a large number of participants limits the quality of data gathered and complicates the data analysis stage (Sandelowski, 1995; Carlsen & Glenton, 2011). The sample was, however, diverse in its age (ranging from 23 to 65), nationality, socio-economic status, level of education, and residential area. The sample's gender distribution reflected a ratio found in the Saudi Arabian population. In addition, saturation was achieved with the number available.

One of the FGDs included only three participants due to the high number of recruited participants who did not show up on that date. Although this group was considered too small and would influence the diversity of perceptions (Stewart & Shamdasani, 2014), two of the participants were poor and not well educated. This made their experiences with healthcare services valuable to this study. In addition, these traits would not affect the quality of the participants' answers and their ability to share their experiences. Thus, the researcher decided not to cancel the session.

A particular issue in this study is the broadness of the topic, which covers perceptions of health, healthcare, and system policies. This created a risk that issues related to the topic would not be covered to the appropriate depth. However, classification of the FGDs into semi-homogenous groups helped enrich them and enhance participants' involvement in the discussion (Corfman, 1995; Stewart & Shamdasani, 2014). For example, less well-educated participants and non-nationals, who are likely to have similar concerns, had better opportunity to interact and express their views on and concerns about particular issues in depth with each other. In addition, because of the nature of this FGD study (semi-structured), the researcher was not concerned about covering all the topics that the topic guide mentioned. Rather, she sought to direct the discussion to concerns that the participants raised themselves. The researcher also welcomed issues that may have been considered irrelevant as such issues could produce valuable information that would contribute to the achievement of this study's goals. As a result, the transcriptions varied in the depth of information that a particular topic and group produced. The aim of this study was not to produce a generalizable conclusion for each group as such a goal is not possible for any qualitative study. Therefore, after interpreting the findings of all the FGDs, as presented in the first sections of this chapter, the researcher discussed each topic/issue at a

depth that helped generate the tool's necessary items for the next quantitative phase of this study (Phase 4).

The current study did not enquire into participants' health-seeking behaviour in significant depth, so it is uncertain whether patient attitudes towards and opinions of healthcare delivery directly affected their healthcare decisions. The study's focus was on attitudes rather than actual behaviours. As a result, no definitive conclusions can be made about this matter.

## **8.5 Reflexivity and the research team**

Many qualitative researchers have discussed the importance of acknowledging the researcher's impact on the study. They have emphasised the impact of the researcher's (or researchers') own characteristics, including gender, culture, and background (Berger, 2015; Seidman, 2013).

Berger (2015) identified ways in which the researcher's position could potentially influence the research. For instance, the researcher's role as an outsider or an insider, where insider-researchers are those who chose to study a group to which they belong such as sharing the same culture or setting, while outsider-researchers do not belong to the group under study (Berger, 2015). Being an insider or outsider in relation to the study respondents can affect whether the researcher is welcome to interview or observe the respondents, the amount of information that participants are willing to share with the researcher, and whether the participants are comfortable enough to talk without reservation.

In addition, a researcher's background and experience affect the way in which he or she views and makes sense of the world. This, in turn, informs the way in which the researcher asks questions, the language he or she uses, and his or her approach to data selection and interpretation, which ultimately determines the final results. Therefore, reflexivity is essential to gain awareness of these issues and their potential implications for the research process.

The researcher is Saudi female and took on the role of moderating the FGDs for all the discussions and had a male assistant in the male FGDs. She is therefore an 'insider' to the population. Because KSA is the researcher's home country, she has experience with the Saudi health system – experience which derives mainly from her visits to healthcare facilities, from her internship year, and from her experience training students at these healthcare facilities. The researcher's direct exposure to the Saudi health system shaped her experiences with respect to the health system's strengths and possible weaknesses. This could have affected the lens through which she examined the issues that respondents discussed. On the other hand, the researcher's status as a Saudi may have positively affected the way in which respondents answered questions, as they might have believed that she would understand the issues they encountered. This is because, as an insider, the researcher shares the same Arabic language spoken by many of the current study's respondents. This might have helped simplify the way in which the researcher interpreted the data and posed questions during the discussion. Only one FGD was held in English because all the respondents in that group were non-Arab. In this FGD,

one issue might have arisen: that the respondents may have felt the need to explain or simplify their responses so that the researcher could comprehend their points.

Being a female might have caused some issues with the male groups. This may have been due to the researcher's attempts to remain polite and non-confrontational, which itself could stem from her cultural background of avoiding arguments with males due to the fact that respect for males is important, as is the desire to refrain from being overly challenging so as to avoid appearing rude. It might also be a consequence of the researcher's desire to conduct smooth FGDs in which male respondents were comfortable sharing their ideas without hiding their honest opinions for fear of judgment. However, having a male assistant in the male FGDs might facilitate the interaction with males.

The researcher was concerned about participants' discomfort, especially non-Saudis, in criticising the system or expressing views about particular issues, such as political issues, including participants' perceptions of the allocation of the health budget and how it is used to provide care. This is not surprising in a developing Arab country, where dissenting voices on political issues are not always welcomed. Non-Saudis might have more fears about speaking honestly and might have had some reservations about expressing their thoughts and views to a Saudi national researcher. However, the researcher continually reminded participants that these discussions aimed to explore participants' attitudes towards the health system in KSA, and that everything participants thought about or felt was relevant and a valuable contribution to the study. Furthermore, participants were continually reminded that their views would not be judged in any way or released to any parties outside the research team. As suggested by Seidman (2013), participants were also reassured by the researcher's respect, interest in, and sympathy for what they voiced. For instance, in some FGDs, such as FGD7, FGD8, and FGD10, all the participants were male and non-Saudi. They talked more openly about their struggle to get approvals from their health insurance companies and criticised some of the health insurance laws in KSA. This creates an assumption that the participants shared their thoughts more honestly and, thus, supports the quality of the data they provided.

The researcher holds a postgraduate degree and introduced herself as a lecturer at the University of Dammam and a PhD student at City, University of London. Therefore, the respondents might have felt that she held some power over them or that she could pressure them. In some cases, her professional status would have been considered above those of the respondents, as several of them held lower educational degrees. In light of this, the researcher might have maintained a more powerful position than that of the respondents (Seidman, 2013). However, before implementing the FGD, the researcher attended an intensive two-day training course on moderating focus groups at the National Centre for Social Research (NatCen). There, she learnt techniques for communicating with participants from different backgrounds and educational levels. In addition, she conducted this study with the understanding that qualitative data is rich in detail and felt it inappropriate to use her power, to have full control over the participants

(Seidman, 2013), or interrupt participants during the discussions, even if they sometimes went off topic. This may explain the length of some of the issues presented in the findings section. Similarly, the researcher felt uncomfortable pushing participants to provide greater detail where they clearly had trouble articulating their views about a particular topic or issue. This may explain the short length of some categories in the findings section. However, it would be misleading to claim that participants were entirely ‘in charge’ during the discussions. The researcher retained power over the boundaries of interactions to the extent that while participants occasionally wanted to explore other aspects of their lives, after some time the researcher brought the discussion back to a healthcare focus.

On the other hand, it was advantageous that the researcher was an academic and not part of the healthcare team. She made it clear to participants that she does not have any clinical duties in the selected sites. This assured the participants that their attitudes towards health services would by no means influence the health services they received. Thus, they were able to talk more openly about their experiences with the health services they received, with a person who was not part of the health system or healthcare team.

Two particular issues exist concerning using FGDs as a method for collecting data qualitatively, and the researcher encountered both. The first is the challenge involved in arranging the groups and bringing participants together at the same time. The researcher had no prior experience recruiting participants for qualitative studies and thus, during the recruitment stage, required support from representatives at each health facility. In collaboration with the hospitals’ representatives, she planned FGD slots in advance and made several visits to the selected study sites to recruit participants (see Chapter 7, Section 7.4 for additional details about the recruitment strategy.). The fact that the researcher is a Saudi citizen who is aware of Saudi cultural norms and who works for a well-known university helped her gain participants’ willingness to participate in the study and to identify, via snowball sampling, hard-to-reach participants such as non-current service users. However, many FGDs were cancelled because no one showed up during the scheduled session time. Providing some monetary incentives for the participants would have helped in achieving a better response rate. However, due to the limited resources available for this research study, this option was difficult to implement in this study.

The second issue with FGDs is the probability that a dominant participant will consume most of the session’s time talking about his or her point of view. Although avoiding the “dominant” participant phenomenon is difficult, the researcher made all possible efforts to give every participant the opportunity to share his or her views. The researcher also used eye contact and probed for ideas from less talkative or shy participants. In addition, the researcher thanked the dominant participants for their contribution and suggested that she would like to hear what others have to say on the same topic. On some occasions, when less talkative participants were reserved, the researcher talked to them directly by calling their name and asking them about their opinion. Sometimes, some of them kept resisting to participate, but the researcher kept that



in mind and put a reminder in her note in order to come back to them and ask them once they felt more comfortable sharing their opinion.

In general, many sessions went well, and participants seemed to enjoy sharing their appreciation of/concerns about the health services they received.

## **8.6 Conclusion**

The results of the FGDs reported above represent the first attempt made to qualitatively investigate public attitudes towards the health system in KSA. This study's findings provide information about the relevant issues in terms of attitudes towards the Saudi health system, such as access to care, and explain how these issues might influence public attitudes towards the health system and healthcare provision in KSA.

In Chapter 9, the findings of the FGDs in conjunction with measures of public opinion of the health system as presented in Chapter 4, and those themes identified in the systematic review presented in Chapter 6, will be used to design a new survey tool exploring the public attitudes towards the health system on KSA.

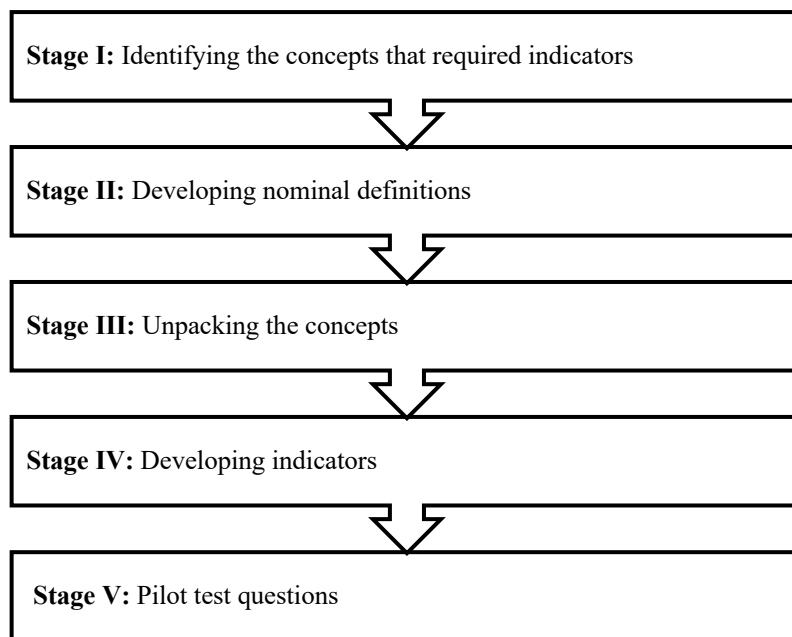
# **Chapter 9 Development of the survey instrument: Methods and application**

## **9.0 Introduction**

This chapter explains the development of a national survey instrument suitable for exploring public attitudes towards the Saudi health system and covers the first part of the construction of the survey instrument of Phase 4 of the study. First, it discusses the procedures used to select survey performance dimensions, themes and/or sub-themes, and items. The chapter then discusses the steps taken to select items considering the results of Phases 1 to 3. As the introductory chapter indicated, Phase 1 is a literature review focusing on existing measures of public attitudes towards and opinions about health systems (presented in Chapter 4), Phase 2 is a systematic review of literature investigating the existing literature relating to public attitudes towards healthcare in KSA (presented in Chapter 6), and Phase 3 is the FGDs exploring public attitudes towards KSA's health system (presented in Chapter 8).

## **9.1 Survey item selection criteria**

The content of the developed survey was informed by tools previously identified from the literature (Phase 1), the results of the systematic review (Phase 2), and the FGD study's findings (Phase 3). However, to control the survey instrument's length, a prioritisation strategy was implemented and informed by findings from Phases 1 to 3. This helped determine which performance dimensions/items merited inclusion in the survey instrument and allowed for the creation of a comprehensive, evidence-based survey designed specifically for use within the context of KSA. The researchers developed the survey tool items using a survey indicators development checklist, as proposed by De Vaus (2002). The checklist includes five stages, given in Figure 9.1. The first four stages concern the item selection process and will be explained in the following sub-sections. The final stage relates to the survey pre-test, including the validity and reliability test. The following chapter will explain it in detail.



**Figure 9.1: Item selection process based on De Vaus’s (2002) survey indicators development checklist**

**Source:** De Vaus (2002)

### ***9.1.1 Stage I: Identifying the concepts that required indicators***

The research literature varies in terms of suggestions for expressing details about a survey’s different elements. Some studies refer to the constructs in surveys as concepts, domains, or dimensions. Others refer to survey questions as indicators or items. For clarity and consistency, the constructs of the constructed questionnaire were called “performance dimensions”; within each performance dimensions, there are some “themes” and/or “sub-themes” derived from Phases 1 to 3. The questions used in the constructed questionnaire were called ‘items’. The options given to the participants to answer such an item were called ‘responses’. Table 9.1 explains the terms used to express the various elements of the constructed survey, including an example for each element.

Survey element	Example
Performance dimension	Access to care
Theme	Financial barriers to accessing private health sector ‘PHS’
Sub-themes	Price and out of pocket payment
Item	<p><i>To what extent do you agree or disagree with the following:</i></p> <ol style="list-style-type: none"> <li>1. I often have to pay for healthcare out of my own pocket (not through health insurance).</li> <li>2. I have serious problems paying my medical bills.</li> </ol>
Response	5-point Likert scale (strongly agree-agree-neutral-disagree-highly disagree)

**Table 9.1: Terms used to explain the elements of the developed survey, with an example of each element**

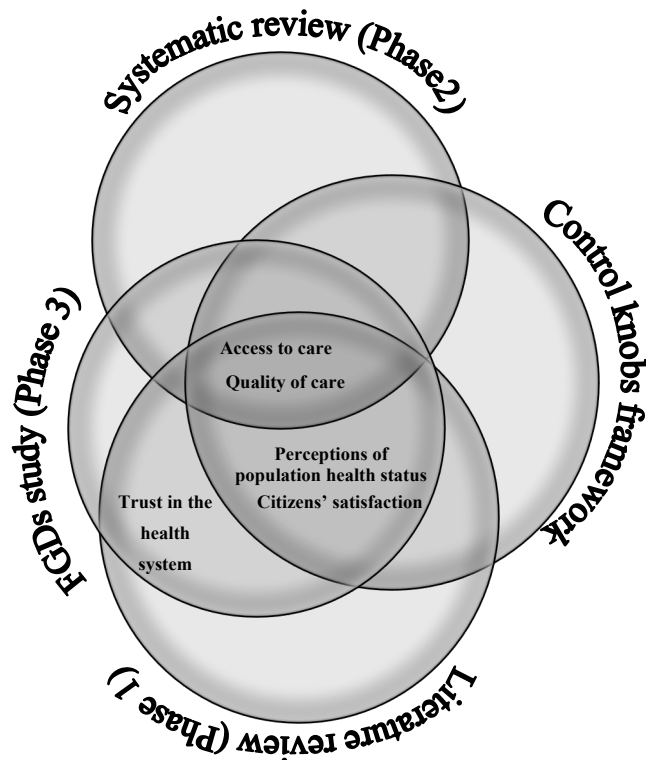
**Source:** Author

The selection of the ‘core’ performance dimensions that arose more than once across any of the four following sources were considered in the questionnaire:

1. Control Knobs framework’s performance dimensions: health status, citizen satisfaction, financial risk protection, quality, access, and efficiency (Roberts et al., 2003).
2. Review of existing measures of public attitudes towards health systems (Phase 1).
3. Systematic review of public attitudes towards healthcare in KSA (Phase 2).
4. FGD study on public attitudes towards the health system in KSA (Phase 3).

Figure 9.2 presents the sources and interrelationship between the performance dimensions considered for inclusion in the questionnaire instrument. In the first step, the themes found in the previous surveys in Phase 1 (see Chapter 4, Sections 4.2, 4.3, and 4.4) were compared to the Control Knobs framework’s six performance dimensions. Although the existing surveys in the literature (Phase 1) were not based on the Control Knobs framework, many of the themes were similar to those covered by the framework. Identified themes that lay in a performance dimension outside the Control Knobs framework were considered for inclusion after the analysis stage of Phases 2 and 3.

In the second step, themes that emerged in Phase 2 were compared to the Control Knobs framework’s performance dimensions. Analysis of Phase 2 revealed no themes outside the Control Knobs framework’s performance dimensions. In the third step, the themes identified in Phase 3 were used in conjunction with Control Knobs performance dimensions and the other performance dimensions found in Phase 1. The researcher mapped the themes to the performance dimensions according to their definition, given in Chapter 5, Section 5.3 and Section 9.1.2 in this chapter.



**Figure 9.2: Terms used to explain the elements of the developed survey, with an example of each element**

As shown in Figure 9.2, access to care and quality of care were seen in all four sources. Perceptions of population health and citizens' satisfaction were seen in three sources: Control Knobs framework, Phase 1, and Phase 3. Trust in the health system was seen in two sources: Phase 1 and Phase 3. Subsequently, the survey construction included the following performance dimensions: perceptions of population health; citizens' satisfaction; access to care; quality of care; and trust in the health system.

The association of each theme generated from the FGDs and the performance dimensions chosen to design the public attitudes towards Saudi health system questionnaire is complex. The questionnaire covers more than one performance dimension, and this is one reason for the complexity. This is a common issue in the field (Gulliford, 2002; Hall et al., 2002; Cabrera-Barona et al., 2017). According to the literature review (Phase 1) in Chapter 4, public opinion surveys are multi-dimensional and reveal more than the public's overall satisfaction with the health system. Each performance dimension has a number of different aspects. Thus we chose a specific definition for each performance dimension to clarify our understanding of each dimension and a step-by-step process of survey development (using De Vaus's [2002] survey development checklist) to clarify the aspects of each performance dimension used to develop the questionnaire. The later stages of this study validated the relationship between performance dimensions and their items. (See Chapters 10 and 11 for more details.)

### ***9.1.2 Stage II: Developing nominal definitions***

According to the methods followed in order to design the questionnaire, it was necessary to initially define the performance dimensions of the public attitudes towards the health system of KSA to explain our understanding and how to conceptualise each performance dimension. This was accomplished by analysis of the literature measuring the public opinion on health systems described in Chapter 4 (Phase 1), the systematic review of the existing evidence exploring the public and patients' attitudes towards the health system of KSA (Phase 2) described in chapter 6, and the analysis of the qualitative FGDs (Phase 3) described in chapter 8. Then, a nominal definition of each of the selected performance dimensions was chosen and proven by related published literature and the Control Knobs framework conceptualization of performance dimensions, as described in Chapter 5, Section, 5.3, when applicable. A summary of the definitions for each performance dimension can be found in Table 9.2.

<b>Performance dimension</b>	<b>Definition</b>
<b>Perceptions of population health</b>	The public views and experiential understanding of how life circumstances shape health choices, and how the health system performs to maintain and improve people's health.
<b>Citizens' satisfaction</b>	'The degree to which citizens are satisfied with the health services provided by the health sector' or health system (Roberts et al., 2008, p. 96).
<b>Quality of care</b>	The extent to which services are delivered in a convenient way with technical competency, good health provider/patient communication, shared decision-making, and culturally sensitive care.
<b>Access to care</b>	The public opportunity to obtain ease access and affordable healthcare services when wanted or needed
<b>Trust in the health system</b>	The public forward looking and believes that the health system will care for their interests. This includes the belief on the health system reliability and integrity to provide high-quality care without financial burden to the citizens.

**Table 9.2: Nominal definitions of performance dimensions of the public attitudes towards the health system**

**Adapted from:** Kindig & Stoddart, 2003; Roberts et al., 2008; Gulliford et al., 2002; Kronenfeld, 2006; Rowe & Calnan, 2006; Hall et al., 2002.

### ***9.1.3 Stage III: Unpacking concepts***

This third stage of de Vaus (2002) concerns unpacking each selected performance dimension by identifying relevant themes and/or sub-themes and justifying their selection based on the results of the sources used to construct the survey – Control Knobs framework, Phases 1 to 3. This is explained in detail in the next sections.

### 9.1.3.1 *Unpacking concepts: The literature review (Phase 1)*

Amongst the studies measuring the public attitudes towards health system reviewed in Chapter 4, the five performance dimensions most frequently used are perceptions of population health, citizens' satisfaction, access to care, quality of care, and trust in the health system. A summary of the themes used to measure each of the five performance dimensions is provided in Figure 9.3 and discussed in Chapter 4.

With regards to 'perceptions of population health', identified studies relied largely on self-rated health assessment measures such as QOL measures. However, the focus here is on assessing the perceptions of population health, and few studies used themes relevant to this performance dimension, including perceptions of public knowledge about health and health risks, perceptions of peoples' level of responsibility of their own health, and perceptions of the health-politician role on improving health status of the population.

In contrast, a large number of studies used a variety of themes to measure the performance dimension 'access to care'. This is not surprising as 'Access to healthcare is central in the performance of healthcare systems around the world' (Levesque et al., 2013, p. 12). During the analysis stage of Phase 1 of this study, researchers focused primarily on respondents' perceptions of the health system, including the ability to obtain care when needed, the waiting time to access to care, working hours, and the cost of care. Similarly, as indicated in Chapter 5 (Section 5.3.5), the Control Knobs framework (Roberts et al., 2003) conceptualises access to care by including physical availability and effective availability as contributors to easy access. Physical availability includes the availability of human and non-human recourses to deliver care in an area. Effective availability focuses on the ease with which citizens can get care and the barriers – such as cost of care – that may prevent people from using physically available facilities.

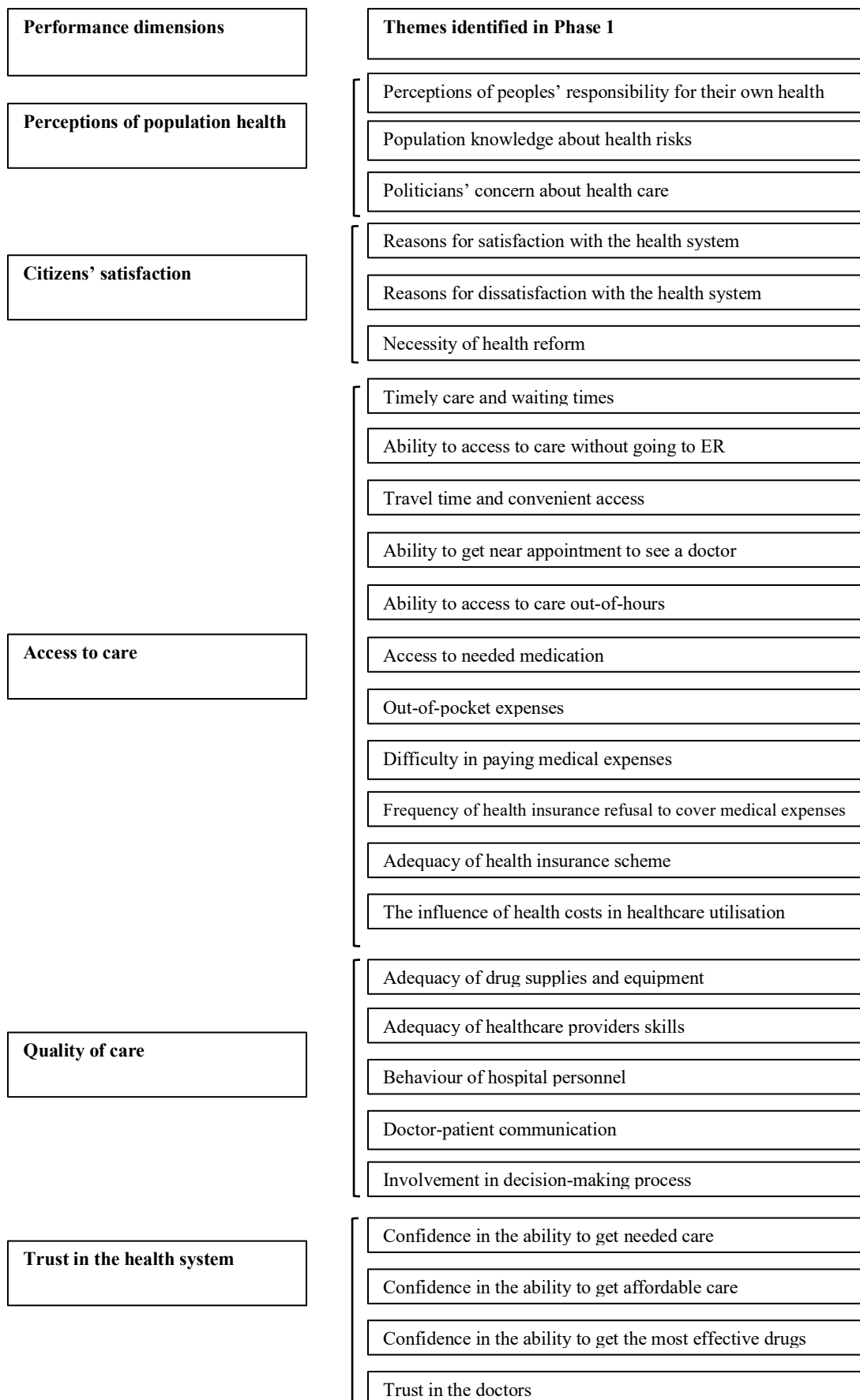
The other performance dimension that was explored in depth in the identified studies in Phase 1 is 'quality of care'. The studies focused on themes related to adequacy of medical supplies as well as adequacy of healthcare professionals' skills, doctor-patient interaction, and involvement in the decision-making process. Similarly, the Control Knobs framework conceptualised the performance dimension quality of care as (i) clinical quality, which relates to the availability of human input (doctors' skills and decision-making) and non-human input (equipment and supplies); and (ii) service quality, which means hotel services and interpersonal relations, i.e. health providers being polite, supporting the patient emotionally, and giving appropriate information and respect to patients (Roberts et al., 2003). The Control Knobs framework's conceptualisation of service quality also includes waiting times and working hours. However, the literature more commonly covers this theme under access to care (Gulliford et al., 2002; Blendon et al., 2006; Levesque et al., 2013). Thus, it was included in the access-to-care performance dimension of the developed questionnaire.

Regarding the 'citizens satisfaction' performance dimension, many of the surveys identified in

Phase 1 focused on satisfaction with the way the health system runs as well as reasons for satisfaction or dissatisfaction with the care received. This is evident in the wider literature, where many scholars, including the developers of the Control Knobs framework, have argued that while measurement of the results perspective (defined as the confirmation or disconfirmation of public expectations about care) is important, it is also crucial to explore the process perspective (which concerns the public level of expectation regarding the service experience and the causes or reasons for this level of satisfaction; John (1991); Blendon & Benson 2001); and to use it as a driver of health reform, as suggested by the Control Knobs framework; Roberts et al., 2008).

With regards to the last performance dimension, ‘trust in the health system’, the studies identified in Phase 1 focused on measuring institutional trust, which refers to the public’s trust in health organisations and the health system in general (Rowe & Calnan, 2006b). This includes public trust in the health system’s ability to provide timely, effective care that is not a financial burden on the public.





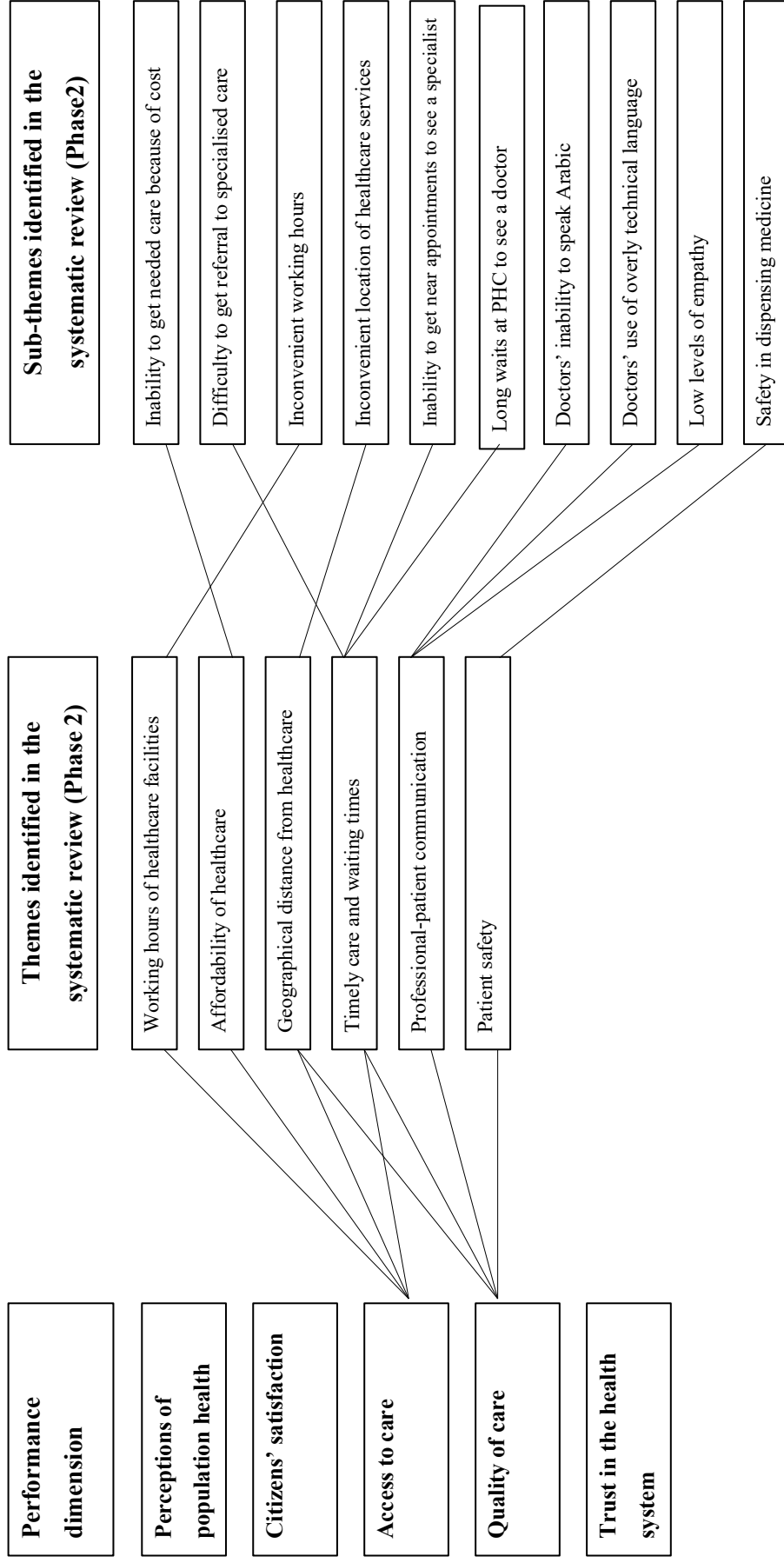
**Figure 9.3: Themes identified in Phase1 and their relationship with performance dimensions**

### 9.1.3.2 *Unpacking concepts: The systematic review (Phase 2)*

As explained in Section 9.1.1, based on the themes identified in the systematic review exploring the existing evidence on public and patients' attitudes towards healthcare in KSA (Phase 2), the focus was mainly on two performance dimensions: access to care and quality of care. Few studies assessed the affordability of care in KSA, an aspect of access to care (Gulliford et al., 2002; Levesque et al., 2013). The remaining performance dimensions were largely unexplored, with no identified papers exploring perceptions of population health or patients' or public trust in healthcare or the health system. A summary of the themes and sub-themes used to measure each of the two performance dimensions is provided in Figure 9.4.

With regards to 'access to care', the themes mapped under this performance dimension were waiting hours of healthcare facilities, affordability of healthcare, geographical distance from healthcare facilities, and timely care and waiting times. Related to this, the sub-themes identified were patients' inability to get needed care because of cost, difficulty getting referral for specialised care, inconvenient working hours, inconvenient location of healthcare services, inability to get need appointments to see a specialist, and long waits at PHC to see a doctor. The cost of care, especially perceptions of health insurance coverage, were rarely explored in the papers included in the systematic review, although it has been identified as a major issue in accessing care in the private health sector in the qualitative arm of the current study (Phase 3).

With regards to the 'quality of care' performance dimension, the themes identified in the systematic review were professional-patient communication and patient safety. The main sub-themes related to professional-patient communication were doctors' low levels of empathy, language barriers (including doctors' inability to speak the official language of KSA, Arabic) and the use of overlay technical language, and safety in dispensing medicine. However, unlike the themes identified in Phase 1, perceptions of involvement in the decision-making process were largely unexplored in the Saudi literature, although it has been considered an important theme measuring the quality-of-care performance dimension (Brook et al., 2000; Kronenfeld, 2006; Roberts et al., 2008). However, items related to this important theme were covered by the measures identified in the literature review in Phase 1 and the qualitative FGDs in Phase 3 and will be explained in the next section.



**Figure 9.4: Themes and sub-themes identified in the systematic review (Phase 2) and their relationship with the selected performance dimensions**

### 9.1.3.3 *Unpacking concepts: The qualitative FGDs (Phase 3)*

As discussed earlier, the themes that arose in the FGDs overlap and can be mapped to more than one of the performance dimensions. However, in order to reduce this overlap, the themes and sub-themes were mapped upon the selected definition of each of the performance dimensions given in Stage 1 of De Vaus's (2002) checklist, section 9.1.2. This is given in figure 9.5.

With regards to the performance dimension 'perceptions of population health', as stated in Chapter 5, Section 5.3.1, scholars, including the developers of the Control Knobs framework, suggested that population health status can be measured using objective measures such as premature, mortality, and morbidity rates (WHO, 2003; Roberts et al., 2008) or subjectively by assessing people's subjective perceptions of population health and illness (Roberts et al., 2008; Benyamini, 2011), or both (Garcia & McCarthy, 2000). The themes arising from the FGD focused on perceptions of the factors influencing the public health in KSA, which have been generated from people's experiential – rather than purely medical – knowledge. The themes classified under this performance dimension were collective social factors, personal choices – i.e. individuals' ability to be accountable for their health behaviours to avoid the occurrence or deterioration of disease – and environmental factors. Within these themes, the sub-themes that arose were related to perceptions of chaotic lifestyle in KSA, weather conditions in KSA, individuals' health choices and behaviour, and individuals' health knowledge (lay peoples' understanding of the causes of diseases and the risky behaviours that affect health status, which has also been used in the literature as a measure of perceptions of health; Figueras et al., 2008; Benyamini, 2011).

With regards to the performance dimension 'citizens' satisfaction', participants had a sense of pride in many aspects of the Saudi health system, including the provision of free-of-charge care and the 'Saudisation' of the health workforce. As stated in Chapter 2, 'Saudisation' is a policy mandating healthcare organisations to hire Saudi-national health personnel. Although the participants had a sense of pride in the availability of medical technology in the government health sector, this theme was more relevant to quality of care and thus was used as a measure of the quality-of-care performance dimension.

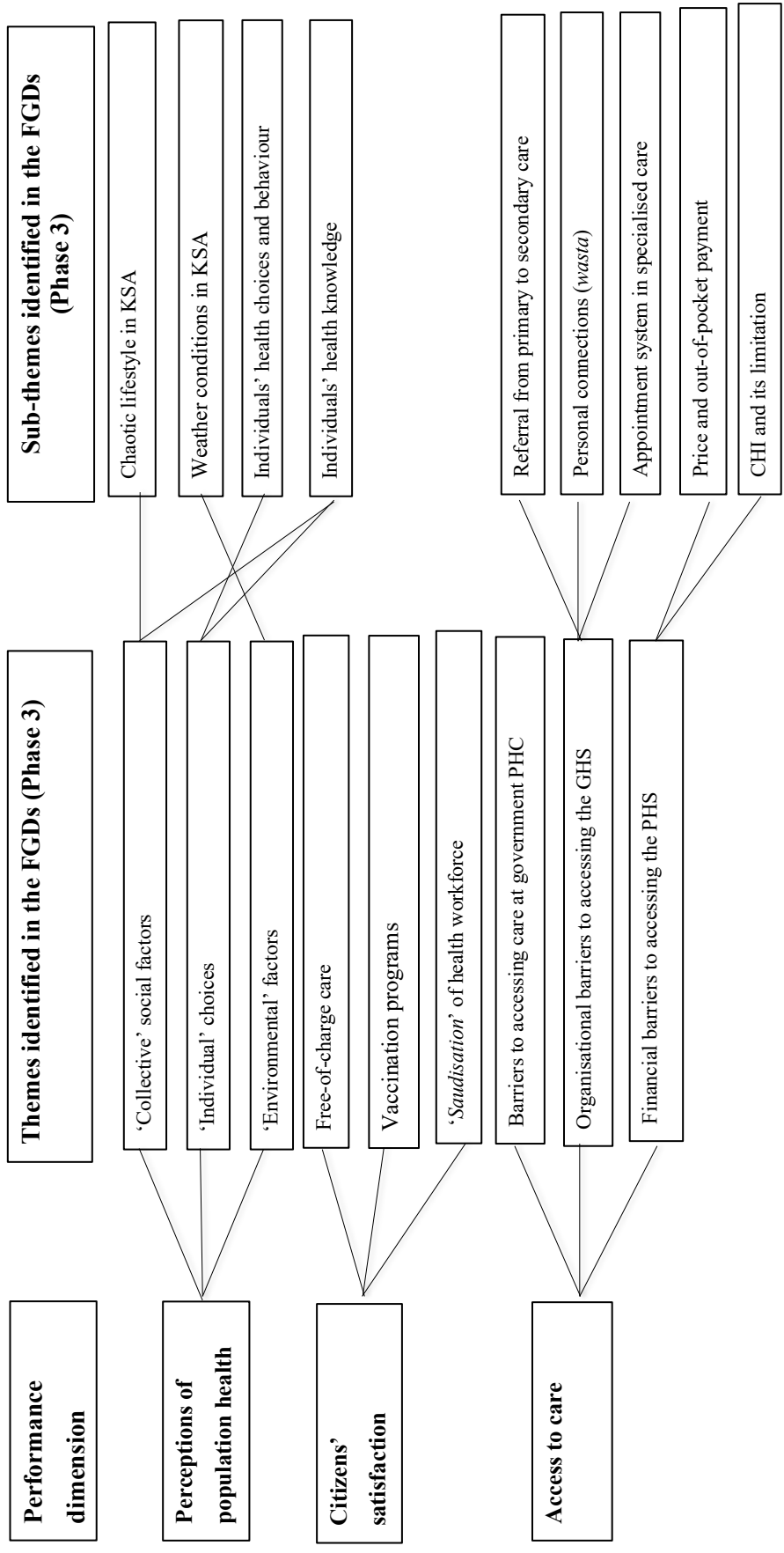
With regards to the performance dimension 'access to care', the themes that arose were mainly related to barriers of access, including organisational barriers to accessing the government health sector as well as financial barriers to accessing the private health sector in KSA. Some of the sub-themes that arose were unique to the challenges people might face when they require access to healthcare facilities in KSA. One of these challenges is *wasta* (or personal connections) and the necessity of an individual having this feature in order to access healthcare facilities in the government health sector. The other unique theme arising is the 'poor' appointment system in specialised care. The other themes that emerged were common access issues identified in Phase 1 and widely discussed in the previous literature (Gulliford et al., 2002; Levesque et al., 2013; Schoen et al., 2013); these include referral from primary to

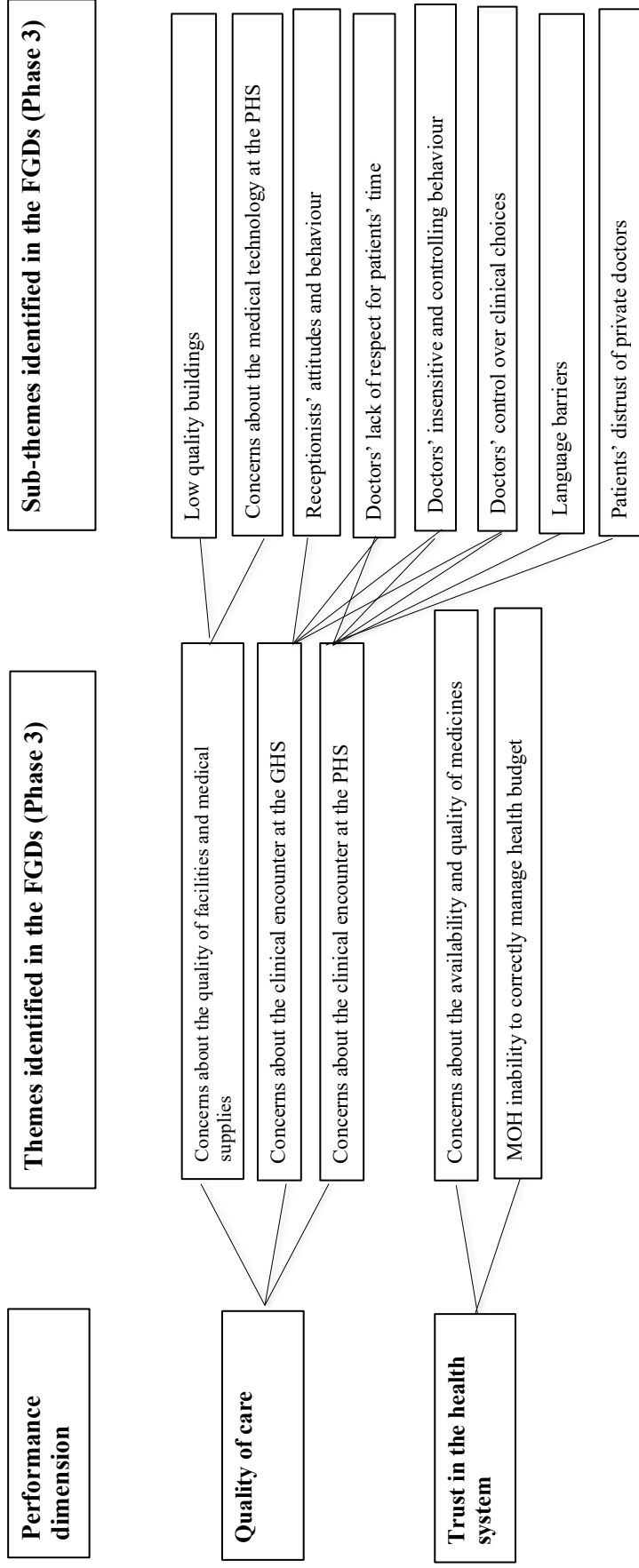
secondary care; price of care and out-of-pocket payments; the CHI and its limitations, including co-payment expenses; delays in responding to claims; and unjustified rejection of medical procedures.

The themes mapped to the quality of care performance dimension were mainly related to participants' perceptions of care once they managed to access healthcare facilities and started to interact with the health system. This includes perceptions of the clinical encounter at the two healthcare sectors, government (GHS) and private (PHS); availability of medical technology; and quality of buildings. The sub-themes identified were largely focused on doctor-patient communication and the participants' concerns regarding the clinical encounter; including doctors' lack of respect of patient time, doctors' insensitive and controlling behaviours, doctors' control over clinical choices, and distrust of private doctors. Similar to Phase 2, the language barrier was identified as a sub-theme concerning perceptions of quality of care. Other sub-themes were concerned with the perceptions of other personnel working in healthcare facilities, such as receptionists' attitudes and behaviours.

The themes mapped into trust in the health system performance dimension and overlapped with the other performance dimensions, access to care and quality of care. Trust is seen as a major issue affecting people's decisions to seek care in KSA. Interpersonal trust, such as that arising from doctor-patient communication, is based more on a patient's actual experiences and the physician's particular characteristics (Hall et al., 2001) and has been covered in the quality of care dimension. Hence, the focus here was on institutional trust. This includes the sub-themes MOH inability to correctly manage health budget and concerns regarding the under-regulation of private health provision.

Mapping of themes and sub-themes arising from the FGDs into the performance dimensions





**Figure 9.5: Mapping of themes and sub-themes arising from the FGDs into the performance dimensions**

### 9.1.4 Stage IV: Developing indicators (items)

In the fourth stage of survey development, we selected the actual questions, ‘items’, and developed new items to fulfil this study’s aim, which is to explore public attitudes towards KSA’s health system. Appendix XII includes a matrix of the survey’s core (attitude) items considered for inclusion.

First, existing items within the chosen performance dimensions, including their definitions, themes, and/or sub-themes appropriate to the context of this study (i.e. the setting/sample of KSA) were selected and used for designing the questionnaire where possible, and the wordings were used as they appear in previous surveys of public opinion about the health system (Phase 1). A total of 36 items were drafted from the analysis of Phase 1.

New items were developed to cover issues that appeared in at least two papers in the systematic review (Phase 2). However, all the issues identified in the systematic review overlap with either the items identified in Phase 1 or the issues identified in FGDs. Thus, no new items were generated specifically from the systematic review. In addition, particular attention was paid to developing new items drawing on FGDs (Phase 3) unique to the Saudi Arabian context. We used participants’ quotations as evidence of the themes and drafted survey items on the FGDs. Table 9.3 contains an example of these quotations and the associated items. A total of 19 new items were generated based on the FGDs’ findings. Appendix XIII provides a full matrix of the quotations taken from the FGDs and drafted survey items.

Performance dimension	Examples	Survey item/statement drafted
Quality of care	<i>‘Doctors also spend a lot of time at the prayer break, and then they simply say that they can’t see the patient because their working hours have finished.’ (7 FGD, R1)</i>	1. My doctor respects my time
Access to care	<i>‘Patients with wasta can get nearer appointments but people who don’t should wait longer to see their doctor.’ [R4, FGD5]</i>	2. It is difficult to get timely access to care unless I have personal connections (wasta)

**Table 9.3: Quotations taken from the FGDs and drafted survey items**



## 9.2 The selection of demographic and personal characteristic items

Items related to demographics and personal information, such as age and socio-economic status, were located at the end of the questionnaire. These included age, gender, marital status, occupation, level of education, residential area (city/village), and SRHS. Given the potential role that ethnicity has in influencing healthcare attitudes (Adamson et al., 2003; Sanchez et al., 2010), it would be interesting to investigate this in KSA; however, because ethnicity categorisation is not used in the official censuses in KSA and thus might be culturally unacceptable, it will not be feasible to examine this issue in the present study.

Instead, more culturally acceptable alternatives such as religion and nationality were considered when constructing the survey instrument for this thesis as indirect reflections of a person's ethnicity.

In addition, many scholars have suggested using self-assessed physical (WHO, 2003; Hardie & Critchley, 2008; Jadoo et al., 2014) and emotional health status (WHO, 2003) as measures of overall health, reflecting a person's perception of his or her own health at a given point in time. A broad picture of a participant's assessment of his or her health status is a useful measure of that person's current health status; the developed questionnaire included it in the personal characteristic section.

## 9.3 Wording of survey items

As explained in Stage IV (Developing Items, Section 9.1.5), items selected based on the strategy provided in the previous section are taken exactly as they appeared in the existing surveys where possible. However, the wording of the items was amended to reflect KSA context. Appendix XIV illustrates the selected items as they appeared in the actual literature review surveys and the modified wording for each item. The procedure undertaken to revise the wording of the items was as follows:

- Yes/no items identified from Phase 1 such as that of Fronstin (2012) were modified so that they could be answered using a Likert scale. This procedure standardised the items' responses throughout the survey and therefore facilitated the data analysis stage. It also makes it easier for the participant to complete the survey if the same/similar response set is used across items – or if changes and switches in response sets are minimised. An example of this process, the item 'Has your doctor explained to you why a test was needed?' (Fronstin, 2012) was changed to 'My doctor usually explains to me why a test was needed.'
- Ambiguous items identified by the researchers from Phase 1 were modified for better understanding. For example, 'How would you rate the way the health services ensured you could talk privately to healthcare providers?' (WHO, 2003) was changed to 'I can

talk privately with healthcare providers (e.g. without others overhearing).’ This facilitates better understanding of items by participants without significant support from the researchers.

- Survey items that were not mutually exclusive (i.e. whose meanings were interpreted by the study researchers as being the same) were excluded or modified. Examples include items such as ‘How would you rate your doctor treating you with respect and dignity?’ (Northcott & Northcott, 2004) and ‘For your last visit, how would you rate your experience of being greeted and talked to respectfully?’ (WHO, 2003). The latter was chosen and modified to ‘My doctor usually greets and talks to me respectfully.’
- Items referring to specific health services/facilities that do not exist in KSA were excluded. For example, the community health service stations referenced in the PETU survey (Munro & Duckett, 2015) do not exist in the Saudi health system. Items related to these services were omitted.
- Country names in the included items were changed to Saudi Arabia or KSA. In addition, country-specific health authorities, such as the NHS, were changed to Ministry of Health (MOH).
- Finally, new items that emerged in the FGD study (Phase 3) were developed and added to fulfil the aim of developing a survey specifically for the context of KSA. Some of the new items that emerged from Phase 3 were reverse-framed to ensure that participants read each item carefully before answering and did not just have a common response on the response scale across all items, which ultimately reduces ‘response set’ bias (Bowling, 2014). For example, the literature surveys did not discuss the necessity of *wasta* in accessing care. Thus, a new item was generated: ‘It is difficult to get timely access to care without using personal connections (*wasta*).’
- The future timeline was problematic. Some surveys indicate 10 years asking for attitudes towards healthcare in the future (Fronstin, 2012; Jadoo et al., 2014) while others indicate a 5-year timeline (Gershlick et al., 2015; Appleby & Robertson, 2016; McGill, 2014). The latter timeline was deemed more sensible for reducing recall bias for younger participants (18 or 20) and therefore was selected for the current study.

## 9.4 Response scale selection

Researchers have suggested several response scales for questionnaires, the most common being Thurstone scales, Guttman scales, Semantic differential scales, and Likert scales (Coaley, 2010; Bowling, 2014). However, compared to other response formats, Likert scales are considered the most robust, increasing the reliability of the questionnaire by minimising response error caused by social desirability while providing more information about a concept (Nelson, 2008). For this reason, they are the preferred format of measurement used in health research questionnaires (Boynton, 2004; Bowling, 2014) and were chosen for the constructed questionnaire.

Likert scales contain a number of items to measure a particular construct or what in the current study is called ‘performance dimension’, and individuals are asked to rate each item on a continuum that often ranges from 1 to 5. Each number has a meaning in terms of agreement or magnitude. The total score (i.e. sum of the score of all the items) of a Likert scale represents the attitude towards the concept being measured (Coaley, 2010; Bowling, 2014). While there is no agreement on the number of response categories in a Likert scale that produces the most reliable results (Coaley, 2010), there is evidence suggesting that using five categories offers a less cognitive burden for respondents than larger categories, while maintaining the reliability of the scale (Preston, 2000). In contrast, scales with less than five categories produce less reliable results (Allen & Seaman, 2007). Another debate associated with designing Likert scales concerns the use of a neutral midpoint. The main argument in avoiding the use of a neutral midpoint is the risk of respondents answering based on what may be socially acceptable or expected (social desirability) (Garland, 1991). Research suggests that if individuals responding to the measure are truly neutral, results will not be accurate (Krosnick & Presser, 2010).

The 5-point scale (strongly disagree, disagree, neutral, agree, strongly agree) is commonly used in attitude measurements to assure that respondents are not forced to use inappropriate categories (Bowling, 2014); for this reason, this category of 5-point Likert scale was selected for this study in response to the core items (unless otherwise stated).

## **9.5 Survey translation**

As most of the target population were Arabic speakers, the English version of the survey was translated into Arabic. To ensure the translation’s accuracy, we used a forward-translation and a back-translation service from a certified translation centre and tested the final survey for validity (see Chapter 10). This is a widely used method amongst researchers; for example, the WHO used it when producing its surveys (WHO, 2015). In addition, semantic equivalence, i.e. retention of the meaning of each item after translation (Bowling, 2014), was verified by an Arabic-speaking panel of experts who were recruited in the content validity test.

## **9.6 Summary**

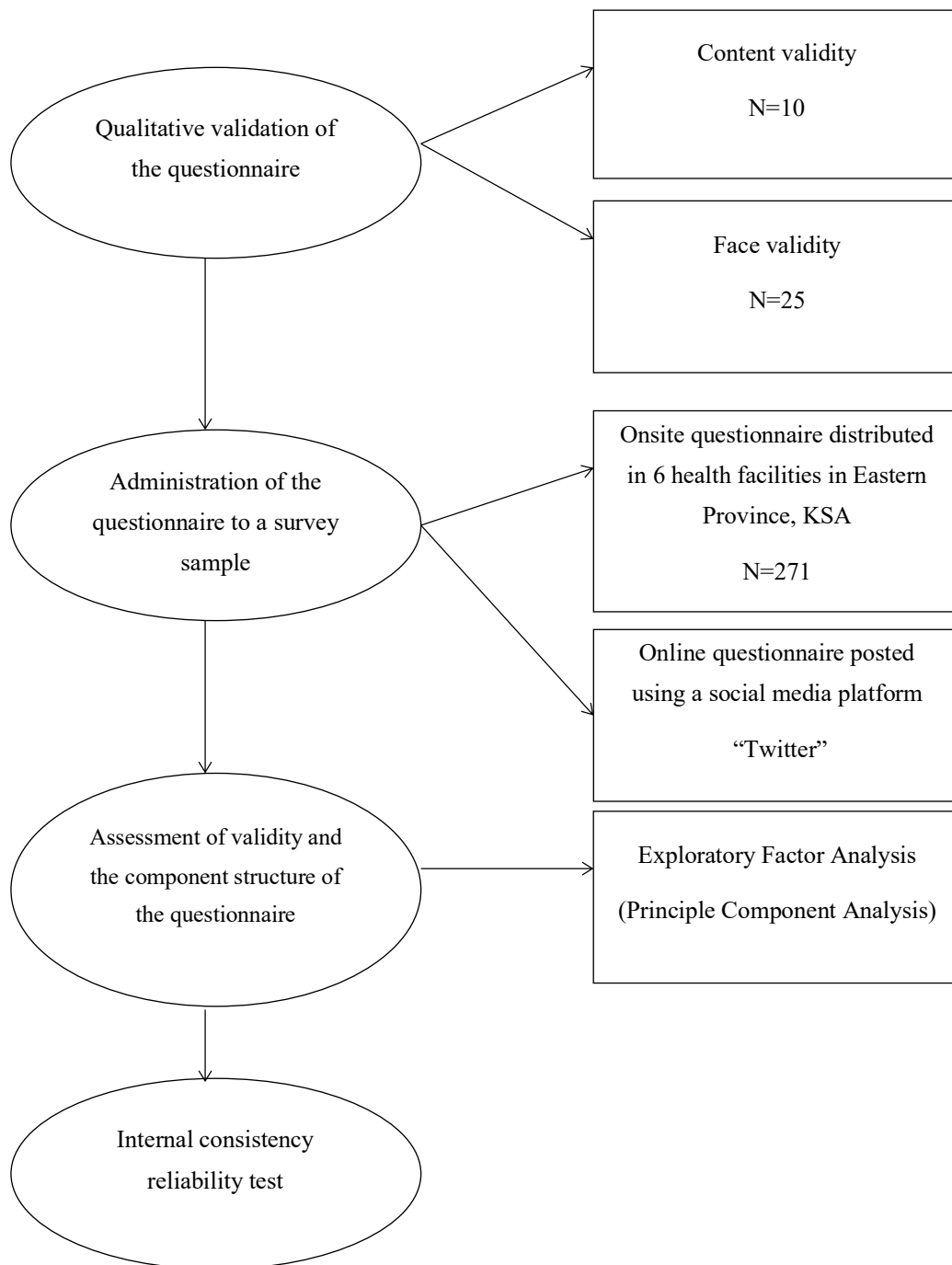
This chapter detailed the development of the cross-sectional survey instrument that this thesis employed. The survey instrument was developed according to the first four stages of De Vaus’s (2002) indicators development checklist. The next chapter will explain the final stage of this checklist: pre-testing of the constructed survey.

## **Chapter 10      Validation of the questionnaire on public attitudes towards the Saudi health system: Methods**

### **10.0 Introduction**

This chapter explains the fifth and final stage of De Vaus's (2002) survey development checklist, 'Pilot test questions', which concerns tests for the validity and reliability of the constructed instrument. It discusses the methods used for qualitative validity tests, including content validity and face validity. It then discusses the administration of the questionnaire to a survey sample. Following this, the quantitative validity tests, including the assessment of the component structure of the questionnaire through exploratory factor analysis, are explained. The chapter concludes with a discussion of the methods of internal-consistency reliability testing of the constructed questionnaire.

Two qualitative validity tests, namely content and face validities, and one quantitative validity, namely construct validity, were undertaken in this study. Then, the reliability test was undertaken. Every validity and reliability test has a specific purpose, so the suggested sample size, sampling technique, and target population vary amongst tests. The steps undertaken to implement the last stage of questionnaire development presented in this chapter are summarised in Figure 10.1. The chapter describes each in more detail.



**Figure 10.1: Stage V of questionnaire development checklist**

## 10.1 Qualitative validation of the questionnaire

This final stage of De Vaus's (2002) survey development checklist suggests assessing the validity of the constructed instrument based on smaller samples before deploying it. Validity refers to the degree to which any measurement approach or instrument succeeds in describing or quantifying what it is designed to measure (Michell, 2009). This helps researchers detect any anomalies or ambiguities in the selected items so that the quality of the instrument can be improved, saving the developers' money and time (which can result from unusable or poor-quality data) before the tool is used with a large sample. It also helps prevent or reduce data

collection issues while implementing the final version of the questionnaire, such as non-response, incomplete, or unreturned questionnaires (Presser et al., 2004).

Two qualitative validity tests were undertaken. The first one is content validity, which concerns the degree to which the questionnaire accurately measures all the aspects needed for the construct it was designed to measure (Heale & Twycross, 2015). The second qualitative validity test is face validity, which measures the extent to which a developed instrument is understandable and relevant to a target population (Fayers & Machin, 2007). The following sections will describe each in more detail.

### ***10.1.1 Content validity***

As stated earlier, content validity deals with how accurately the instrument measures the various aspects of the construct that one intends to measure. The content validity of the instrument used in this study was examined to ensure that the items selected are adequate to cover and measure the attitudes of the public towards the Saudi health system, as selected and operationalised in Chapter 9.

With content validity, experts review the survey items to maximise each item's suitability and appropriateness (DeVellis, 2012). This step can be implemented using a variety of methods. The most common are cognitive interviews, expert panels, and behaviour coding (Davis, 1992; Willis, 2004; Lavrakas, 2008).

Cognitive interviews are usually conducted using the 'think aloud' technique (Willis, 2004), in which the researcher asks the participants to state their opinions about each survey item while they are answering it. This technique is useful because it allows participants to share with the interviewer any problems they may have understanding the questions as they occur and avoids issues recalling answers to these questions with the interviewer at the end of the questionnaire. Probes are usually used in these types of interviews. However, researchers have suggested that cognitive interviewing requires one-to-one interviewing of 15 to 35 respondents for each round (Willis, 2004). This technique also requires more than one round; the early rounds should focus on general concepts of the questionnaire, and the later rounds should emphasise the questionnaire items' wording and format (Willis, 2004). In addition, this technique has been criticised by researchers because 'respondents may report pseudo-problems with a question just to please the interviewer' (Lavrakas, 2008, p. 2).

Secondly, 'expert panel reviews' are a common method employed during the pre-testing step of tool development (Davis, 1992). Typically, an expert panel, which shouldn't exceed 10 experts, is used to evaluate issues with items' relevance to the construct as well as the items' comprehension (Davis, 1992). Panels consist of experts in the study/topic area as well as methodological experts to critique the designed questionnaire (Lavrakas, 2008; Gorves et al., 2009). However, a major drawback of this technique is that it is judged to be 'highly subjective', and thus it is recommended to use this validation method in combination with other

validity methods in order to judge the accurateness of the designed questionnaire (Bolarinwa, 2015, p. 197). In addition, its successfulness depends on selecting the experts with the appropriate levels of knowledge and experience in relevance to the questionnaire area (Davis, 1992).

The third primary method for checking the content validity of a constructed questionnaire is 'behaviour coding' (Presser et al., 2004), whereby the interviewer codes the number of times a participant asks for clarification of an item or the number of times participants have difficulty answering an item. The codes are quantified to determine the number of times respondents experienced a problem answering a particular item. Behaviour coding is useful because the data are collected in a situation that mirrors the data collection of the main study (Lavrakas, 2008). However, researchers suggested at least 50 interviews to conduct this technique thus considered as a relatively expensive pre-testing method (Lavrakas, 2008). Moreover, unlike expert panels and cognitive interviewing, behaviour coding primarily points to problems rather than causes of the problems of a questionnaire (Lavrakas, 2008).

Presser and Blair (1994) examined the effectiveness of various content validity methods and found that expert panels identified more problems with a survey than other methods. In addition, expert panels are a relatively inexpensive and quick alternative to the other question testing methods (Lavrakas, 2008), such as behaviour coding and cognitive interviewing. That is because experts have 'seen it all over the years and can easily point out troublesome aspects of questionnaires' (Lavrakas, 2008, p. 7). For these reasons, it was decided to assess the content validity of the constructed questionnaire using an expert panel.

#### 10.1.1.1 *Methods*

To determine which items failed to measure what they were intended to measure (Field, 2009), content validity was quantitatively calculated according to the content validity index (CVI). This index is one of the most accepted methods of analysing and assessing a developed tool's content validity (Polit & Beck, 2006). It includes two steps, which are as follows:

1. Calculating the experts' ratings of item relevance using the item content validity index (I-CVI) (Yang & Tan, 2015).
2. Judging the content validity of the survey instrument as a whole by calculating the scale content validity index (S-CVI). This was calculated by summing up the proportion of all items that the experts rated as relevant.

The interpretation of I-CVIs was as follows:

- If the I-CVI was higher than .79 percent, the item was deemed appropriate.
- If it was between .70 and .79, the item needed revision.
- If it was less than .70, the item was considered for elimination (Zamanzadah et al., 2015).

In order to help the experts do the task in hand and gather rich information about their assessment of each item included in the questionnaire, an evaluation tool was specifically developed for this thesis based on existing appraisal tools (Davis, 1992; Presser & Blair, 1994, Tourangeau et al., 2000, Olson, 2010). The evaluation form contains the following five questions:

1. Rate the comprehension of each item included in the questionnaire (Olson, 2010), i.e. whether the item can be understood and answered easily by lay participants without any support (yes/no). Provide suggestions for editing or rewording difficult items (Tourangeau et al., 2000).
2. Rate the relevancy of each item included in the survey instrument according to the dimensions given to measure the constructed questionnaire, using a 4-point Likert scale (1 = *not relevant*, 2 = *somewhat relevant*, 3 = *quite relevant*, 4 = *highly relevant*) as Davis (1992) suggested. Explain the reasons for any no-relevance or low-relevance ratings and how to improve them.
3. Comment on whether an item is culturally sensitive (Olson, 2010) in KSA context (yes/no). This was only given for experts recruited from Imam Bin Faisal University, as stated below in this section.
4. Written comments on the construct and problems they thought were likely to occur (Olson, 2010) in relevance to layout, length, and sequence of the items.
5. As this step in the questionnaire validation process was crucial, one more question was added in order to obtain as much rich information as possible from each of the selected experts. This was related to experts' opinion on whether an item was redundant, i.e. two or more items have the same meaning (yes/no). If an item was considered redundant as it asked the same as another item, first both would need to be identified by the experts and then a decision would need to be made on which of the two items should be retained by the current research study team.

It has been suggested that at least five experts should be involved in establishing content validity (Lynn, 1986; Yang & Tan, 2015). However, recruiting too many experts (more than 10) to evaluate the survey's content could reduce content validity because of the likelihood that only low total agreement could be achieved (Polit & Beck, 2006). So a target of recruiting 10 experts was set.

Ideally, recruiting the FGD participants in the current qualitative study to judge the survey items would be very helpful. However, due to the ethical issues involved with re-contacting the FGD participants, the researcher was unable to implement this option. However, researchers suggested including "lay experts", i.e. the potential study participants who can address some issues related to the comprehensives of the questionnaire items and recommend other important or salient items (Davis, 1992; Rubio et al., 2003). This has been implemented in the validation



phase of the current questionnaire using face validity and will be discussed in further details in the following section.

When selecting a panel of experts for content validity, researchers have suggested including “content experts”, i.e. those who have number of publications or work experience in the field (Rubio et al., 2003), such as academics in health services research who have experience in designing healthcare related questionnaires. Thus, through use of a purposive sampling technique, experts were recruited from the Public Health Department at Imam Abdulrahman Bin Faisal University and from the Division of Health Services Research and Management at City, University of London. Inviting experts from Imam Abdulrahman Bin Faisal University was crucial because of their ability to review the Arabic version of the questionnaire and thus verify the semantic equivalence (see Chapter 9 section 9.5) between the Arabic and English versions of the questionnaire, their extensive experience with related literature on healthcare services evaluation in general, and their expertise in KSA’s health system in particular. In addition, the experts conducted several research studies on patients in KSA, giving them considerable knowledge and expertise in understanding the cultural context of the country. The latter helped achieve the *acceptability* criterion mentioned in Chapter 9 by taking into account the values and beliefs of potential participants. Experts recruited from City, University of London specialised mostly in health psychology, health policy, and health services research; therefore, they helped assess the questionnaire more from both psychological and research perspectives.

A total of 15 experts were invited to participate online via email in March and April 2017. After two weeks, a reminder was sent to non-respondents; however, a second reminder was not necessary because the first reminder achieved the target number ( $n = 10$ ).

All the participants who agreed to participate in the content validity stage received an email containing the constructed questionnaire (Arabic and English versions for experts recruited from Imam Abdulrahman Bin Faisal University and an English version only for experts recruited from City, University of London), an explanation of the dimensions used to develop the questionnaire, the evaluation form, and instructions for filling it out. Respondents were also asked to provide basic information, including gender, job title, speciality, and years of experience. To maintain independence of the review, the experts conducted their reviews independently (Olson, 2010). Experts were encouraged to contact the researcher if they required an additional explanation of the validity exercise or of individual item(s).

The modifications undertaken on the questionnaire items after the content validity test is reported in Chapter 11, Section 11.1.2.

### ***10.1.2 Face validity***

Face validity measures the extent to which a developed instrument is understandable and relevant to a target population (Fayers & Machin, 2007). Although face validity was widely criticised in the literature, considering it the weakest validity test, face validity is important for

evaluating the survey's appearance in terms of readability, consistency of style, formatting, and simplicity of language (DeVon et al., 2007; Parsian & Dunning, 2009).

### 10.1.2.1 *Methods*

Face validity is a preliminary test of the drafted survey. Recruiting too many participants for this initial stage of validation testing is not recommended. A sample size of 25 participants is recommended and was used previously in the literature (Parsian & Dunning, 2009). Thus, it was deemed appropriate for this study.

In validation studies, 'the sample should closely mirror a wide range of members from the target population' (Patrick et al., 2011, p. 971). To achieve this, we applied a purposive sampling technique and recruited potential participants from five healthcare centres in the Eastern Province of KSA. Three healthcare centres located in urban areas (three districts in Dammam City) and two healthcare centres located in rural areas (two villages in AlQatif) were visited for face validity recruitments. This increased the probability that we would include people from different areas and of different characteristics and backgrounds and thus increased the suitability of the developed instrument for wide range of people in KSA (see Table 10.1).

<b>Name of healthcare centre</b>	<b>Location</b>	<b>Number of participants</b>	<b>Age</b>	<b>Educational class</b>	<b>Gender</b>
<b>Healthcare centre A</b>	Urban	5	Young (18–29) Middle age (30–49) Old (>50)	Low Middle	Both genders
<b>Healthcare centre B</b>	Urban	5	Young (18–29) Middle age (30–49) Old (>50)	High Middle	Both genders
<b>Healthcare centre C</b>	Urban	5	Young (18–29) Middle age (30–49) Old (>50)	Low High	Both genders
<b>Healthcare centre D</b>	Rural	5	Young (18–29) Middle age (30–49) Old (>50)	Low Middle	Both genders
<b>Healthcare centre E</b>	Rural	5	Young (18–29) Middle age (30–49) Old (>50)	High Middle	Both genders

**Table 10.1: The characteristics of the participants sampled for face validity testing**

With assistance from the administrative staff at the selected PHC centres, potential participants were approached in the waiting areas and were asked if they would be willing to complete the questionnaire and assess it using an evaluation form. Potential participants who accepted to

participate in the study were given the Participant Information Sheet and Informed Consent form (See Appendix XV), and a signed consent form was obtained from each participant prior filling out the survey.

The sample was gathered in two waves:

- The first wave included 12 participants; the sample was recruited based on two easily identifiable predictors: gender and residential area. After this stage, a descriptive statistical analysis was calculated to identify whether the other predictors had been captured within the required percentages.
- The second wave, which included 13 participants, was undertaken, with the purposive sampling of participants for groups that had not achieved the required numbers in the sample.

As suggested by Parsian and Dunning (2009), the evaluation form was developed to help participants assess the constructed survey in terms of the following:

1. Clarity of wording
2. Likelihood the target population would be able to answer the questions
3. Layout and style

Three questions were added to Parsian and Dunning's (2009) face validity evaluation form to assess participants' opinion of the questionnaire length and obtain their estimation of how long the act of completing the questionnaire would take. This helped to put an estimate time on the cover sheet attached with the questionnaire before formally distributing it to the potential participants for construct validity (Section 10.7). In addition, participants were asked whether they objected to answering any of the questions and if so, what their reasons for these objections were. This helped us measure the *acceptability* of the questionnaires items. Finally, participants were asked to comment if there were any major issues related to the questionnaire topics that were not covered.

The completed survey evaluation forms were analysed/compared on the basis of participants' opinion on clarity and simplicity of wording of the questionnaire items, the questionnaire layout and style, cultural insensitivity of items, and the length of the questionnaire. Then, modifications were made to achieve a fuller understanding of the survey items to laypeople before final approval by the researcher team. Great care was taken while incorporating the suggestions so that the modifications did not change the fundamental structure and meaning of the included items in terms of content validity. However, it ensured that the items were clear and comprehensible and that sensitive items were eliminated/modified to ensure the *acceptability* of the questionnaire. The modifications undertaken on the questionnaire items after the face validity test is reported in Chapter 11, Section 11.2.2.

## 10.2 Administration of the questionnaire to a survey sample

After making the changes resulting from the qualitative validity tests (content and face validity), the questionnaire was administered to a sample recruited from the Eastern Province, KSA.

According to the literature, no optimal strategy exists to recruit study participants. However, specific plans must be implemented to achieve the necessary sample. Therefore, mixed mode data collection was chosen for this study: administering the questionnaire using both onsite and online methods.

### *10.2.1 Onsite recruitment strategy*

With regards to the onsite recruitment, as explained earlier, based on the literature review's findings (Phase 1), large-scale sample household surveys have been widely used in the literature exploring the public's attitude towards the health system (see Chapter 4, Table 4.1). However, given the popularity of household surveys in this area, it has not been chosen as a recruitment method in the current study and an alternative recruitment strategy self-administered survey was chosen for two theoretical and two pragmatic reasons. In terms of the theoretical reasons, self-administration was chosen because assisted surveys (such as household surveys, for which interviewers visit homes) are not common survey methods in KSA. The results of Phase 2 revealed that only one KSA-based study (El Bcheraoui et al., 2015) implemented a household survey. The remaining studies used paper-based surveys distributed via health centres, hospitals, and pharmacies. We took this into consideration when selecting the survey instrument's implementation strategy, discussed above. Second, data obtained from self-administered surveys – as compared to assisted instruments, especially those related to sensitive topics – are more likely to elicit honest responses and, therefore, tend to be of a higher quality and to involve less bias than the interviewer-administered ones (Tipping et al., 2010; Tourangeau & Smith, 1996; Mitchell & Jolley, 2012).

In terms of pragmatic reasons, self-administered surveys are economically feasible and convenient, especially in the context of a PhD, in which limited resources are available to collect data. Self-administered surveys are also appropriate for distribution to a large sample, such as this study's target population (Tipping et al., 2006; Mitchell & Jolley, 2012).

Self-administered surveys, however, do have some disadvantages, which were carefully considered during the construction of this instrument. For example, self-administered survey participants cannot ask about an item's meaning if they find it unclear (Mitchell & Jolley, 2012). With this drawback in mind, as stated in this chapter, the survey items were pre-tested for comprehensibility and clarity to maximize the likelihood that respondents understand the items or questions (Fowler, 2009).

Another drawback of the self-administered survey is the low return rate (Mitchell & Jolley, 2012). We attempted to resolve this by using mixed mode recruitment strategies (onsite and online questionnaire distribution) in order to reduce the non-response bias.

Additionally, it was important for the aim of this study to ensure that the sample obtained was from the populace living in the Eastern Province of KSA; we did not want to focus only on current visitors of the selected healthcare facilities. Therefore, an additional recruitment strategy (online survey) was used to reduce the likelihood of omitting those individuals during sampling. This recruitment strategy is explained in the following section.

### ***10.2.2 Online recruitment strategy***

Recently, and due to the increase in Internet literacy, online recruitment methods, particularly social media platforms such as Facebook and Twitter, have been widely used in health-related research (Van Gelder et al., 2010; Topolovec-Vranic & Natarajan, 2016; Gelinas et al., 2017). This is because an online survey can be implemented without the costs associated with postal delivery, printing, etc. It can also provide easier access to populations that would be difficult to access otherwise (Gelinas et al., 2017). Another advantage is that online questionnaires are less likely to produce missing data than other types of questionnaires (such as postal questionnaires) as respondents receive an alert when an answer is missing or incomplete (Van Gelder et al., 2010). Finally, online surveys avoid errors in data entry as a database is generated automatically and can easily be imported for analysis (Van Gelder et al., 2010).

However, the literature has identified the disadvantages of online surveys. One disadvantage is associated with the low response rate expected in online surveys (Couper, 2000; Lozar et al., 2008). Another disadvantage is related to the sampling issues because only people who have Internet access can participate. For this reason, the data collected may not represent the intended population (Fricker & Schonlau, 2002).

Despite the limitations of online questionnaires, this data collection strategy was deemed appropriate for the current study context. As Chapter 1 explained, in KSA, the number of Internet users is quite high; in 2017 around 70% of the population used the Internet on a regular basis (Ministry of Communication and Information Technology, 2016). Although the popularity of Facebook is overwhelming worldwide, Saudi Arabia contains a large number of Twitter users, giving it more popularity than Facebook (AlAsem, 2015 Alwagait et al., 2015). Usage is proliferating; more than half a million new users in KSA joined Twitter in 2013 alone (Arab Social Media Report, 2014; Montagu, 2015). Therefore, Twitter has been used as an online recruitment tool for the current study.

Certain strategies were also implemented in order to address weaknesses/disadvantages related to the low response rate as well as the representativeness of the sample drawn from the online surveys. This will be explained later in this chapter.

## 10.3 Survey sample

Before administering the questionnaire, the required sample size for construct validity was calculated a priori. Because the aim of this phase was to establish the validity test for the Eastern Province of KSA, the whole population of the Eastern Province of KSA was considered. This feature of considering the entire population is not available in G-power; therefore, the sample size was calculated using the Qualtrics sample size calculation technique, available at Qualtrics portal, employing the following values: total population of people living in the Eastern Province of KSA (3,065,883), a confidence level of 90%, and a margin of error of 5%. The required sample size is 271 participants. Relevant literature about the adequate sample size for the quantitative validity (construct validity) was also reviewed. A rule of thumb to achieve sound results when validating a questionnaire quantitatively (via Exploratory Factor Analysis [EFA], which will be explained in details in Section 10.7) is to include at least 10 participants per survey item; however, it was widely agreed in the literature that an adequate sample size for the construct validity of the questionnaire should be 200 to 250 (Gorsuch, 1974; Cattell, 1978; Winter et al., 2009). Therefore, a minimum sample size of 271 was deemed appropriate for each recruitment strategy used in this study, which will be discussed below.

## 10.4 Strategies for administering the questionnaire

### *10.4.1 Onsite recruitment*

Potential participants were approached at the same settings used in the FGDs recruitment in order to achieve the maximum variation of each of the selected site by location (rural/urban), type (government/private), and level of provision (primary/secondary; see Chapter 7, Section 7.3.1). The next step involved selection of a suitable number of individuals to be recruited at each of the selected settings. It was important to consider the need for the sample to be representative of the total population but, at the same time, to allow for the practical and cultural difficulties of sampling a diverse population at each of the study sites.

To explore a diversity of views and demographic groups, we used a stratified sampling technique. It has been suggested that researchers who use this sampling technique should eliminate the overlap between the strata in the stratified sampling (Bethlehem & Keller, 1987).

It was decided to recruit the selected strata of potential participants as they enter the waiting room. It was difficult to conduct a random sampling as this would have required a list of patients from which to sample. These lists do not exist at the PHCs in KSA as patients do not need to have a prior appointment to access PHCs. Even if they had existed, in the interests on patient anonymity it would have proved undesirable to use such an approach. Also in the secondary care facilities, conducting random sampling, based on taking every fourth or fifth patient entering the waiting area, would have created many problems because the out-patient

appointment lists do not include demographic information about the patients. It just includes patients' names and medical record numbers; thus, it is difficult to predict the variation in the characteristics of patients as they enter the waiting area of each site.

It was decided that the questionnaire should approximate the proportion of population living in Eastern Province based on gender and nationality. The recruitment used the stratified random method, which separated the patient elements into non-overlapping groups called strata (e.g. women, men), and then selected a sample from each stratum, which satisfied the numeric proportion calculated via the statistical census of Eastern Province, KSA (MOH, 2016).

A sampling frame (see Table 10.2) was designed based on the two predictors: gender and nationality, as characterised by the Saudi Arabian population (Central Department of Statistics and Information, 2016). The proportion of the sample size each variable required was calculated using the following formula (Sapsford and Jupp, 2006):

$$\text{Sample size of the strata} = \text{size of entire sample} / \text{population size} * \text{required sample size}$$

As the literature suggests, the sample size of each stratum was reviewed to ensure that each had at least 20 to 30 participants, thereby allow the possibility of significance testing in the results (Fink, 2013).

	<b>Saudis (Sample size)</b>	<b>Non-Saudis (Sample size)</b>	<b>Total (Sample size)</b>
<b>Male</b>	<b>1,608,377 (91)</b>	<b>1,262,425 (71)</b>	<b>2,870,802 (162)</b>
<b>Female</b>	<b>1,481,895 (84)</b>	<b>434,678 (25)</b>	<b>1,916,573 (109)</b>
<b>Total</b>	<b>3,090,272 (175)</b>	<b>3,090,272 (67)</b>	<b>4,787,375 (271)</b>

**Table 10.2: Population per stratum based on the characteristics of the Eastern Province's population in KSA presented in the statistical yearbook (MOH, 2016)**

A schedule for hospital visits was arranged with each hospital representative within an average of five full-day visits during regular working hours at each site. Using convenience sampling, potential participants from each quota were approached in the waiting areas in the selected settings. Participants who agreed to participate were given the Patient Information Sheet and the Informed Consent form (see Appendix XV) and were asked to sign a consent form prior filling out the survey.

The recruitments lasted for 8 weeks and started on 26 May 2017 and continued either until the desired sample size of each stratum was achieved or the study reached the data collection deadline (20 July 2017).

### ***10.4.2 Online recruitments***

Using the Twitter account of the researcher (the PhD candidate), who uses her account only to tweet or retweet health-related and/or academic content, a short tweet in Arabic and English was prepared, containing a short link to the online survey. The English version tweet is as follows:

“Please help me and fill out a survey for my PhD study: Exploring the public attitudes towards the Saudi Health System [bit.ly/2pdSFh5](https://bit.ly/2pdSFh5)”

As the current study targets the populace of the Eastern Province, KSA, rather than a specific group (such as individuals with certain diseases or professionals of certain specialities), the use of open surveys rather than password-protected online surveys was deemed more appropriate for the current study.

A call to participate in the study was posted on Twitter. The intent was to publicise the study using the official Twitter account of the Health Affairs at Eastern Province (@moh\_eastern) as well as the websites of the hospitals where the ethical approvals were obtained. However, moderators of the official Twitter account refused to approve the tweet’s use on their official account because their policy is to tweet content provided by the MOH, not by researchers or other organisations. As an alternative, the researcher directly contacted Twitter users whom she felt would be interested in the study, i.e. users regularly interested in tweet content related to healthcare in KSA, community organisations, and voluntary account users interested in hearing the population voice residing in the Eastern Province of KSA.

As explained earlier, to address the issue of low response rate in online questionnaires, the researcher followed certain strategies. To reach a wide range of accounts, an additional search was conducted using Twitter’s ‘who to follow’ feature, which generates automatic suggestions of users with similar interests, as indicated earlier. Tweets were also sent to selected Saudi influencers (i.e. those with more than 100,000 followers) living in the Eastern Province in order to reach a large number of people, which would ultimately increase the probability of getting more responses for the questionnaire. This was achieved using the “@” symbol before their usernames in the tweets. Table 10.3 indicates the charity and community organisations, along with each account’s number of followers.<sup>17</sup>

This activity was carried out each week for the study’s duration, between May and July 2017. In total, 134 retweets were achieved, most of them during the first few weeks after the original tweet was posted. After that point, the retweets slowed down. During the last month of the data collection period, only three retweets were received.

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<sup>17</sup> Influencers’ users’ account names were hidden to protect their privacy and confidentiality.



Twitter account	Type	Number of followers
@Sharqiya_Voice	Community account	670,000
@shrqyaah	Community account	629,000
@i7sawy	Community account	257,000
@sharqia_online	Community account	187,000
@HashEast	Community account	126,000
@aljawharacenter	Charity organisation (AlJawhara Center-committee of social development)	104,000
@Expats_in_KSA	Community account	322
@dammam_tw	Community account	305
@khobar_tw	Community account	218

**Table 10.3: Selected charity and community Twitter accounts with the number of followers of each account**

We used Qualtrics software, a user-friendly electronic survey tool (Qualtrics, Provo, UT), to reproduce the online version of the constructed questionnaire. The front page included basic information about the study, an electronic link of the Patient Information Sheet, and relevant contact details. Participants could access the online survey by ticking a mandatory checkbox to confirm their eligibility to take part (i.e. they were 18 years of age or older) and to confirm that they agreed to participate fully or partially in the study.

In addressing the issue of response bias in online questionnaires, Fricker (2008) suggested using the ‘post-stratifying’ technique to weigh the survey sample so that it matches the population of inference on the target population’s key demographic characteristics. In order to achieve post-stratification, we performed descriptive analysis of the proportions of the sample after the data collection upon age, gender, educational level, socio-economic status, residential area, and nationality, as indicated in the census of the Eastern Province population (MOH, 2016). Low responses from particular demographic characteristics, such as age and nationality, are addressed in Chapter 11 as a limitation of the study. Table 10.4 provides the proportion of each stratum achieved in this study against population statistics.

	Percentage/proportion of the total population (3,065,883)	Proportion of participants required per variable	Actual number of participants required per variable (proportion/100*the required sample size)
<b>Age</b>	Younger population (15–34) = 35% Middle-age population (35–64) = 34% Older population (65 and above) = 5%	Young participants = 40% Middle age = 40% Old participants = 20%	Young = 108 Middle age = 108 Old = 55
<b>Gender</b>	Male population = 57% Female population = 43%	50% male 50% female (equal proportion of each gender)	135 males 134 females
<b>Educational status</b>	High educational level (hold a degree) = 17.3% Middle educational level (diploma or secondary school) = 31.3% Low educational level (lower than secondary school) = 45.5% *Illiterate constitutes only 0.5%	High education level = 30% Middle educational level = 35% Low educational level = 35%	High educational level = 81 Middle educational level = 95 Low educational level = 95
<b>Residential area</b>	Urban = 83% Rural = 17%	Participants living in urban areas = 80% Participants living in rural areas = 20%	Around 54 participants living in rural areas
<b>Nationality</b>	Saudis = 66% Non-Saudis = 33%	Saudi participants = 60% Non-Saudi participants = 40%	Saudi participants = 162 Non-Saudi participants = 109

**Table 10.4: Post-stratification based on the characteristics of the population in KSA (MOH, 2016)**

The responses achieved from the onsite and online sampling as well as the post-stratification of the collected sample are reported in Chapter 11, Section 11.4.

## 10.5 Data cleaning

A data cleaning process was carried out after all the data had been entered and before the data were analysed using the statistical package IBM SPSS for Windows (version 23). We used Pallant's (2013) guidelines for data screening and cleaning, which involved two steps. The first was 'checking for errors' (p. 40) by checking the frequencies of categorical variables to ensure they were within normal limits. Missing data were flagged using the code '99'. The code '6' was used to distinguish 'Not applicable' or 'Don't know' responses from genuine item omissions. For items suitable only for a sub-sample, i.e. the items related to health insurance coverage, the code '88' was used to distinguish between items that had not been answered and items that had not been answered because of ineligibility.

The second step in the data screening process is 'finding and correcting errors in the data file' (Pallant, 2013, p. 40). When necessary, during the screening process, potential errors in the data were corrected, for example, by returning to the raw data.

## 10.6 Missing value analysis (MVA)

Analysis of the missing values was conducted prior to the validation of the questionnaire. Missing data constitute a common problem in health and social science research and represent a limitation in the results analysis (Fox-Wasylyshyn & El Masri, 2005; Duffy, 2006).

Various strategies can overcome these limitations. One procedure involves excluding data associated with the missing values. SPSS has the option of removing the data pairwise (i.e. in cases with the missing value, variables with missing data are not used in the analysis) or listwise (i.e. if the case has any missing value within an analysis, SPSS removes it altogether; Fox-Wasylyshyn & El Masri, 2005; Duffy, 2006; Field, 2009). The exclusion of the missing values pairwise or listwise produce biased results and led to reduction in power due to reduced sample size (Rubin & Schafer, 1990; Allison, 2002; Duffy, 2006; Field, 2009; Pallant, 2013; van Ginkel & Kroonenberg, 2014).

Researchers have suggested many other procedures to eliminate the issue of missing data, i.e. via imputation such as Multiple Imputation and Expectation Maximization (EM) algorithm using the Maximum Likelihood approaches (Rubin, 1987; Allison, 2002; Graham, 2009). Imputation is a method, which systematically fills the missing value with new assigned values. A decision was made to test the data for its suitability for imputation. This was done through analysis of the missing data using Little's Missing Completely at Random (MCAR) test (Pallant, 2013) to check on whether systematic differences existed between the missing and observed values.

The Expectation Maximization (EM) algorithm using the Maximum Likelihood approach was used as a method of imputation in this study. This approach assumes the data are Missing at Random (MAR; Baraldi & Enders, 2010). It uses all of the available data – complete and incomplete – to identify the parameter values that have the highest probability of producing the sample data (Baraldi & Enders, 2010). It is called EM because it consists of two steps: an expectation step (E-step) and a maximisation step (M-step). In general terms, the E-step consists of finding the expected value of the log-likelihood given the current parameter values. (The expectation is taken over the possible values of the missing data.) The M-step consists of maximising the expected log-likelihood to produce new estimates of the parameters. These two steps are repeated until no change exists in the parameter estimates from one iteration to the next (Allison, 2002). However, this imputation technique has limitations, most notably the complication that EM using maximum likelihood approach relates to the calculation of the estimates' standard errors. The implementation of maximum likelihood that resolves this limitation is available on SPSS (Von Hippel, 2004). Evidence from a previous research study has compared the use of the EM using maximum likelihood algorithm on the results of factor analysis as compared with results obtained from the complete data factor analysis, i.e. with no missing values (Bernaards & Sijtsma, 2000). This study revealed that EM methods better recovered the factor loadings structure (i.e. the association between an item and a factor) from the complete data (Bernaards & Sijtsma, 2000); therefore, it was considered a powerful imputation method and appropriate to be used for EFA with missing data (Allison, 2002; Graham, 2009), as per the requirements of the current analyses.

## **10.7 Quantitative “construct” validation of the questionnaire: Exploratory factor analysis (EFA)**

Construct validity refers to ‘the degree to which an instrument measures the trait or theoretical construct that it is intended to measure’ (Bolarinwa, 2015, p. 197). The designed questionnaire used factorial validity, which is a type of construct validity that validates the contents of the construct employing the statistical model called factor analysis (Douglas et al., 2012; Dhillon et al., 2014; Bolarinwa, 2015). It used EFA, which is a statistical method that has been widely used to develop survey instruments and to test the validity of a questionnaire quantitatively (Floyd & Widaman, 1995; Costello & Osborne, 2005; Field, 2013). EFA clusters items into common factors, interpret each factor according to the items that have a high bearing on it, and summarises the items into a small number of factors (Bryman & Cramer, 1999; Parsian & Dunning, 2009). It is useful for investigating the component structure of the variables in a dataset and grouping them into a smaller number of groups of factors while maintaining as many items in a particular scale as possible (Costello & Osborne, 2005; Field, 2013). This is important in the context of this research and the questionnaire development. We are looking to see if the constructs that we have hypothesised can be statistically validated.

Loading refers to the measure of association between an item and a factor (Bryman & Cramer, 2005). A factor is a list of items that correlate well with each other. Related items define the parts of the construct that can be grouped together. Unrelated items (i.e. those that do not belong together) do not define the construct and should not be included in the measurement of that construct (Munro, 2005).

The debate in the literature over which technique is best for conducting EFA or which technique should be used remains unresolved (Costello & Osborne, 2005; Suhr, 2005), and its investigation is beyond the scope of this thesis. However, the study design, data properties, and questions to be answered all affect the procedures that will yield the maximum benefit (Costello & Osborne, 2005; Suhr, 2005). There are six steps to be undertaken in an EFA; the following sections will explain these steps in the factor analysis and the decisions taken at each step.

### ***10.7.1 Methods of extraction: principle component analysis***

Principle Component Analysis (PCA) has been recommended as an appropriate method of extraction in factor analysis when variables are highly correlated with a large sample size (Suhr, 2005). The use of PCA is also recommended when the aim is to reduce the number of variables while retaining as much of the original variance as possible (Conway & Huffcutt, 2003). As it was hypothesised that the questionnaire items are highly correlated (as stated in Chapter 9, Section 9.1), and also because a large sample was available (see Chapter 11, section 11.3), PCA was deemed the best option for testing the data.

### ***10.7.2 Initial analysis of the component matrix***

Using SPSS version 23, an initial PCA was conducted with all items of the scale ( $n = 61$ ), except items concerning perceptions of health insurance coverage ( $n = 7$ ). This is because not all people in KSA have cooperative health insurance (CHI); thus, not all participants were eligible for answering these items. This would affect the sample size used to assess the questionnaire's validity and also limit the PCA to sample with health insurance if these items were included, which would ultimately lead to sample bias. Thus, a separate PCA was performed to assess the items related to health insurance coverage ( $n = 7$ ; see Chapter 11, Section 11.5.3). The component matrix was generated and examined in order to make decisions on the sample adequacy and the factor retention. This is explained in the following sections.

### ***10.7.3 Measures of sample adequacy***

Prior to generating the pattern matrix, data were checked for suitability for PCA. In order to measure the sample adequacy to conduct PCA, three common measures to check the adequacy of the items for factor analysis – (i) the Kaiser-Mayer-Olkin measure of sample adequacy (KMO), (ii) the Measure of Sampling Adequacy within the Anti-Image Correlation Matrix, and (iii) Bartlett's Test of Sphericity – were used (Field, 2009).

The KMO test produces a score that varies between 0 and 1. A low value (close to 0) indicates that factor analysis will produce inaccurate results while a high value (close to 1) indicates that the correlation between items is adequate and that factor analysis will produce reliable factors (i.e. factors reflecting the construct of interest). For a sample to be acceptable, the KMO score should be greater than 0.5. Values between 0.5 and 0.7 are mediocre, values between 0.7 and 0.8 are good, values between 0.8 and 0.9 are great, and values above 0.9 are superb (Field, 2009).

Bartlett's test of sphericity is a test of significance that is also used to test the sample's adequacy. This test assesses whether the variables are unrelated and, therefore, not suitable for component structure detection. P-values lower than 0.05 indicate that the variables are correlated; therefore, exploratory factor analysis is meaningful (Field, 2009). A measure of sampling adequacy can also be checked for individual variables (items) in the Anti-Image Correlation Matrix. For each value, values should be over 0.5; otherwise, the item should be excluded from the analysis as it is not suitable for inclusion in this PCA (Field, 2009). The removal of items from the PCA will alter the KMO and Bartlett's test of sphericity statistics for the set of items (as the set has changed); therefore, this should be checked after the MSA of individual items results in the removal of items. Items are removed from the PCA one at a time (based on inadequate values of MSA) until all items reach the required 0.500 level and the KMO and Bartlett's test of sphericity are suitable.

#### ***10.7.4 Factor extraction and retention***

After eliminating items based on the results of Anti-Image Correlation Matrix, a new PCA was conducted in order to determine how many factors to retain. Different methods exist of identifying the number of factors to extract from factor analysis. The most widely accepted methods are the Kaiser criterion for factor retention and analysis of the scree plot (Field, 2009); a third method is parallel analysis (O'Connor, 2000). According to Kaiser's criterion, all factors with eigenvalues over one should be retained (Kaiser & Rice, 1974). Despite its wide acceptance, this technique has a limitation as the high eigenvalues tend to overestimate the number of factors. Hence, Kaiser's criterion may result in the retention of too many factors that might not be meaningful.

During analysis of the scree plot, a single line segment plot that shows the importance of factors in PCA, all factors above the graphic's point of inflexion should be retained (Field, 2009). But this technique also has a limitation as its interpretation can be ambiguous when looking at the point of inflexion, resulting in over- or under-retention of meaningful factors (Field, 2009). So it was required to explore one factor above and below the indicated values on these criteria.

To address these limitations, parallel analysis was undertaken, which is a far more robust technique to extract meaningful factors (Field, 2009). In this technique, the dataset is paralleled with a random dataset, revealing the number of factors that account for more variance than the

ones from the random data. In other words, factors are meaningful when the eigenvalues from the actual dataset are bigger than those from the random dataset (O'Connor, 2000). Parallel analysis was conducted using the SPSS syntax script suggested by O'Connor (2000).

The number of factors to be extracted from the questionnaire data was decided after the use of the three methods together.

### ***10.7.5 Method of rotation***

Rotation is a statistical method that helps researchers clarify and simplify the factors' structure (Costello & Osborne, 2005). There are two types of factor rotation: orthogonal and oblique. Orthogonal rotation is used when it is hypothesised that the factors are not related to one another (Field, 2009). However, in the social sciences, this is highly unlikely to occur as constructs are generally correlated (Costello & Osborne, 2005).

Therefore, the use of orthogonal rotation results would lead to a loss of valuable information if the factors were correlated, and oblique rotation should theoretically render a more accurate and perhaps more reproducible solution (Costello & Osborne, 2005). Hence, this study uses oblique (direct oblimin) rotation because it allows the factors to be correlated. Using SPSS version 23, PCA with oblique rotation (oblimin procedure) was conducted.

### ***10.7.6 Item loadings***

Following identification of the number of factors for retention, an additional PCA produced via oblique (direct oblimin) rotation to generate the factors and the items loading for each factor and to identify items for exclusion using the pattern matrix. Some researchers suggested that items with loadings below 0.4 should be removed (Field, 2009). Others suggested that researchers could choose a lower cut-off to retain as many items in the questionnaire as possible (Yong & Pearce, 2013), and 0.32 was cited as a rule of thumb for the minimum loading of an item (Kline, 1994; Tabachnick & Fidell, 2001; Costello & Osborne, 2005). The literature has also recommended removing items with low loading with each factor/component (Costello & Osborne, 2005) as this strengthens the developed instrument's construct validity (Matsunaga, 2010). Therefore, items with low loadings (<.32) were eliminated from the subsequent analysis.

Next, the pattern matrix (produced via oblimin rotation) was reviewed to identify cross-loaded items (i.e. items that loaded at 0.32 or higher onto more than one factor; Costello & Osborne, 2005). A decision was needed on whether to discard the cross-loaded items or keep them in the subsequent analysis. Ideally, items that load clearly and strongly into one factor should be retained (Matsunaga, 2010). However, given the nature of factor analysis, researchers recommend reviewing cross-loaded items and checking the factor loading for whether 'it makes theoretical sense to retain each item' before discarding them (Costello & Osborne, 2005; Matsunaga, 2010, p. 101). Items that loaded onto two factors or more were retained in the factor that made greater conceptual sense.

Additionally, as a general guide, rotated factors with two or fewer variables should be interpreted with caution. A factor with two variables is considered reliable only when the variables are highly correlated with each other ( $r > .70$ ) but fairly uncorrelated with other variables (Yong & Pearce, 2013).

After identifying the factors and the items to be retained for each factor, a second-order PCA was conducted within each factor extracted in order to check their uni-dimensionality. After this step, the scores of each factor were calculated using the total mean scores of the items belonging to it. All the factors identified are discussed in Chapter 11, Section 11.5.3 and Section 11.6.1.

## **10.8 Internal consistency reliability of the questionnaire**

In measuring public attitudes towards KSA's health system, all survey items included in the scale must relate to the concept, i.e. how well the survey items work together in measuring the same construct (homogeneity).

A questionnaire may be uni-dimensional, i.e. consist of a single construct/dimension, or multidimensional, i.e. represent many dimensions (or sub-scales), where each dimension includes a subset of items that measure this particular dimension. Many methodological studies indicate that the dimensionality (i.e. the inclusion of more than one dimension in the survey) affects the alpha value, i.e. the reliability of a questionnaire and/or its sub-scales (Cortina, 1993). Thus, scholars have argued that it is not appropriate to undertake the internal consistency test and eliminate items that did not strongly correlate with the assessed construct if 'the target construct was conceptualized as multidimensional and, therefore, subscales were desired' (p. 23). To that end, the exploratory factor analysis method is recommended and widely used before the decision is made regarding which items to eliminate (Clark & Watson, 1995).

When only one factor is identified and retained, the scale is uni-dimensional. If more than one factor is identified, each factor represents a uni-dimensional scale that, combined together, forms a multidimensional questionnaire that conceptualises the construct of interest (Field, 2009). Once these scales have been identified and the appropriate survey items retained, the internal consistency is determined for each individual scale to further identify and exclude survey items that have low correlations within each of the components (factors) identified.

Three internal consistent reliability tests were carried out and described below: Cronbach's alpha, item-total correlations, and alpha if the item was deleted (Devellus, 2006; Field, 2009).

Cronbach's alpha provides information about how well the survey items perform together to measure different aspects of the same scale (DeVellis, 2003, 2006). Authors vary in their recommendation of acceptable values for Cronbach's alpha. Ideally, scores should be  $>0.7$  (Bland & Altman, 1997; DeVellis, 2003). However, some of scholars suggest that values of alpha  $>0.5$  are acceptable (Jenkinson et al., 1994). Thus, a score of at least  $>0.5$  is considered acceptable in this study.



Item-total correlations, which reflects how well each survey item correlates with the scale of survey items minus the survey item itself, was also calculated ( DeVellis, 2003, 2006); assuming that highly correlated survey items are measuring the same scale, items with low item-scale correlations may be considered for deletion. Items with very low scale correlations were also identified using the ‘alpha if item deleted’ statistic to determine whether the removal of an item would substantially increase alpha (Field, 2009).

A decision on retaining and losing items per scale was made based on the information across the different reliability measures based on the impact it would have across the battery of tests for that scale/sub-scale.

The results of internal consistency reliability test are given in Chapter 11, Section 11.5.4.

## 10.9 Summary

This chapter presented the methods used to validate the constructed survey instrument in this study. Content and face validation are the first and minimum forms of validation required for a questionnaire (Streiner & Norman, 2008).

These stages provided a qualitative indication of each survey item’s appropriateness with respect to the measurement of attitudes towards KSA’s health system (Streiner & Norman, 2008) based on what experts in the field – as well as the public in KSA – felt was important and relevant to their context. However, they do not provide a measure of accuracy (Litwin & Fink, 1995; Streiner & Norman, 2008). Given their subjectivity, they are prone to errors that can be identified, further investigated, and corrected only through quantitative forms of validation (i.e. construct validity).

Nevertheless, without the two stages of validation that this chapter presented, subsequent stages of quantitative validation might have resulted in a questionnaire that was highly reliable (i.e. those survey items worked well together) but not valid (i.e. even though they worked well together, these survey items might not have measured attitudes towards Saudi health system; Oppenheim (1992); DeVellis (2003); Streiner and Norman (2008); Coaley (2010), or vice versa. The construct validity test was carried out to determine whether the selected survey items provided robust information about the appropriateness of the questionnaire as a measure of public attitudes towards the Saudi health system. The following chapter reports the results of the validation and reliability tests.

# Chapter 11 Validation of the questionnaire about public attitudes towards the Saudi health system: Results

## 11.0 Introduction

Chapter 10 presented the methods used to achieve qualitative and quantitative validity (and reliability) in constructing a questionnaire exploring public attitudes towards the Saudi health system, and this chapter presents the results of these tests. It provides a detailed description of the modifications made to the questionnaire following each validity test and then presents preliminary findings from an analysis of the questionnaire. These include descriptive statistics about the respondents as well as comparisons with the latest population statistics census for the Eastern Province, KSA, when possible. These comparisons are useful for determining the representativeness of the questionnaire's respondents. Finally, the chapter provides a univariate analysis to present the preliminary findings obtained from the questionnaire's data.

## 11.1 Content validity findings

This section briefly presents the sample demographic information of the experts recruited for the content validity test, followed by results of the item content validity index (I-CVI) and the scale content validity index (S-CVI). It then presents the rewording of the questionnaire items as well as the expert opinion and suggestions that justified the rewording. Next, it provides a brief description of the experts' comments on the items' sequence. This is followed by a summary of the content validity test.

### 11.1.1 Sample demographics

Table 11.1 describes the demographic data of the experts who participated in the content validity test.

Of the 15 emails sent, six responses were received from experts at Imam Abdulrahman Bin Faisal University. The remaining experts ( $n = 4$ ) were from City, University of London.

Demographic data	Number of experts ( $n = 10$ )
<b>Gender</b>	
Male	2
Female	8
<b>Specialty</b>	
Health psychology	3
Epidemiology and demography	2

Demographic data	Number of experts (n= 10)
Health policy, management	3
Health informatics	2
Years of academic experience	
5–9	4
10–15	2
16–20	1
20+	2
Not specified	1

**Table 11.1: Demographic data of experts who participated in the content validity test**

As the above table reveals, participants were predominantly female (80%) and had a wide range of specialties, with 60% of them having 10 or more years of experience. One participant did not report his or her years of experience.

### ***11.1.2 Results***

This version of the questionnaire exploring public attitudes towards the health system of KSA contains 68 attitude items. In presenting the content validity findings, we intended to present the full version of the questionnaire after the validation step in this chapter. However, because of the questionnaire’s length, the focus here will be on the items that were scored as irrelevant by the experts and/or had clarity or cultural sensitivity issues. See Appendix XVI for the full version of the final questionnaire after the qualitative validation.

The average of S-CVI was calculated to be 0.92, indicating that the scale is appropriate. The I-CVI for all but four items was higher than 0.79. Low-relevance items, with the reasons for their low relevancy, were as follows:

- The item ‘I am satisfied with the way in which Ministry of Health dental care is operated.’ Experts suggested that dental care is not as important as other healthcare aspects: inpatient care, outpatient care, and emergency care. In addition, experts stressed the fact that no other questions in the survey were related to dental care, meaning that it could be a separate study by itself. Therefore, this item was removed from the questionnaire and replaced with questions related to inpatient, outpatient, and emergency care as the experts suggested.
- The item ‘I am confident that I will be free to choose the healthcare provider I prefer’ was also rated irrelevant. Based on the experts’ opinion, this item did not measure the healthcare system; rather, it measured personal preferences. Therefore, it did not match any of the dimensions given to the experts to measure the constructed questionnaire. Thus, it was eliminated.

- The item ‘Which ONE of the following types of hospitals do you trust the most in Saudi Arabia? [Ministry of Health general hospitals, Ministry of Health specialist hospitals, Quasi-governmental hospitals (such as national guard hospitals, military hospitals, and university hospitals), Private hospitals]’ was scored as irrelevant. The rationale given was that not all people in KSA could access all types of hospitals. For instance, only military personnel can access military hospitals, which are quasi-governmental hospitals. Thus, it was suggested that the questionnaire should focus on private and government health sectors and that the previous item be replaced with ‘I trust the private health sector’ in the private health sector section and ‘I trust the government health sector’ in the government health sector section.
- The item ‘Why do you trust this particular type of hospital?’ was scored as irrelevant and beyond the scope of the study. The experts suggested including this item in future studies exploring the underlying factors affecting attitudes towards a particular type of hospital and based on respondents’ eligibility to access these hospitals. Therefore, this item was removed from the questionnaire.

With regards to the personal/demographic section, three experts recruited from Imam Abdulrahman Bin Faisal University scored the item ‘What is your religion?’ as culturally sensitive. Three commented that religion was culturally inappropriate and suggested that this item be removed. The other item was ‘In general, how do you describe your emotional/mental wellbeing?’ Two experts recruited from Imam Abdulrahman Bin Faisal University commented that this item was culturally sensitive and suggested its removal. Another psychologist recruited from City, University of London stated that this item was not specific enough to a particular aspect of well-being. Thus, this item was removed as well.

Two experts commented on ‘What is your monthly income in Saudi riyal?’ They believed that this item was culturally sensitive and that not all participants would want to answer it. This is a global issue in survey questionnaires (Tourangeau & Yan, 2007) and not specific to the unique Saudi culture. However, as stated in Chapter 9, this item included a ‘Prefer not to say’ option, which gave respondents the ability to refrain from reporting their monthly income if they preferred to do so.

The researcher of this study and her supervisors reviewed and discussed the experts’ suggestions for rewording items or implementing amendments to improve clarity. Based on the experts’ opinions, the following items were found to be irrelevant to the government health sector (which provides most health services free of charge): ‘I have serious problems paying my medical bills’, ‘I have skipped a medical test, treatment, or follow up that was recommended by my doctor because of cost’, and ‘I often have to pay for healthcare out of my own pocket (not through health insurance).’ It was suggested that the items be split based on the health sector and that the items be categorised related to cost of care in a different section, ‘private health sector’.

It was also suggested that some of the questionnaire items be reworded. Appendix XVII shows the items considered for rewording, the suggested changes, and the justification for the rewording.

The following ranking questions were seen by experts as confusing and difficult for potential participants to answer: ‘Which three of the following are you currently most satisfied within the Saudi health system?’ and ‘Which three of the following are you currently most dissatisfied within the Saudi health system?’ Experts commented that the process of ranking items takes too much time to accomplish. In addition, some of the response options overlapped with items asking about satisfaction with aspects of the system. Also, ranking might have dissuaded people from answering other questions because these two items would likely require a considerable amount of participants’ time. The experts suggested rewording the ranking questions and using the same Likert scale response options for the non-redundant items. This would ensure a better understanding of the task at hand (i.e. facilitating the answering of more questions by participants) and would reduce the number of items in the questionnaire (i.e. the same item would not appear twice). Appendix XVII, Table-b shows the changes in wording between the two ranking questions.

With regards to the experts’ assessment of item redundancy, two items were seen as redundant:

- The items ‘It is easy to get access to the healthcare I need’ and ‘I can quickly get an appointment to see a doctor at Ministry of Health hospitals’ were deemed too similar to each other. Thus, the latter item was removed from the questionnaire.
- The items ‘I am confident that the Saudi health system will be able to provide adequate care for me in the future’ and ‘I am confident that I will receive high-quality care’ were judged to be overlapping. Thus, the study’s researchers decided to eliminate the latter item.
- The item ‘I have skipped a medical test, treatment, or follow up that was recommended by my doctor because of cost’ was seen as double-barrelled. Thus, this item was split in two: ‘I have skipped check-ups and tests that were recommended by my doctor because of the cost’ and ‘I have skipped a medical treatment that was recommended by my doctor because of the cost.’

From a psychological perspective, to ensure flow and the existence of a logical sequence of items, as well as to eliminate confusion amongst participants, the suggestion was made to move ‘overall’ items to the end of their relevant sections or, when applicable, to the end of the questionnaire. For instance, the item ‘Which ONE of the following statements comes closest to expressing your overall view of the health system in the Kingdom of Saudi Arabia?’ was moved to the end of the closed-ended questions section.

The suggestion was also made to move the item ‘What type of healthcare facility have you visited the most in the past year?’ so that it would appear earlier, before the items related to quality of care, and to replace it with two questions: ‘How often do you visit the private hospitals?’ and ‘How often do you visit the government hospitals?’ This would determine whether the individual received most of his or her care in public or private. It would also maintain the study’s focus and eliminate confusion as participants answered questions related to quality of care.

Finally, for the last question in the content validity evaluation form (‘Please provide your comments on the questionnaire overall’), eight of the 10 participants who completed the content validity assessment provided positive comments. One of the respondents stated negatively that the questionnaire was lengthy, and one did not answer the question.

### ***11.1.3 Summary***

This second version of the questionnaire (containing 68 attitude items) benefitted from modifications recommended by participants with significant experience in the area. The researchers discussed all the changes that the experts had suggested and agreed that those changes would improve the questionnaire. The changes narrowed and focused the items’ wording so that participants would not interpret the items in multiple ways, thus reducing ambiguity. Because the questionnaire included items related to the private and government health sectors, revisions sharpened the focus of the questionnaire, clarifying the sector that each item assessed. This step showcased the importance of involving experts knowledgeable and experienced in health services research as well as health psychologists who can envisage how items will be understood. The experts suggested changes that would improve the questionnaire’s wording in general and make the meaning of each item clearer and easier to understand.

In some cases, a second round of expert reviews was considered desirable. However, the I-CVI results for the remaining items and the S-CVI were deemed appropriate and relevant (Zamanzadah et al., 2015). Also, confirmation of the appropriateness of the wording and item sequence had already been obtained in detail from the experts in the first round. The researchers of the current study held several meetings to refine the questionnaire’s second version by considering the suggested modifications and applying them to the questionnaire. Therefore, the decision was made that a second round of experts’ review would not be necessary. However, the next stage of validation – face validity – was necessary to assess the target population’s comprehension of the questionnaire items. The following section explains the findings with respect to face validity.

## 11.2 Face validity findings

The first part of this section presents general demographic characteristics of the sample used for the face validity test. The second part includes the results of the face validity test. Finally, this section summarises the face validity test.

### 11.2.1 Sample demographics

As Table 11.2 shows, in the face validity study, 15 (60%) of the respondents were female and eight (32%) were male; two did not specify their gender. Most of the respondents were young; only two (8%) were above 50 years old, while five did not specify their age. Most of the participants held a bachelor's degree and lived in urban areas (72% and 64%, respectively).

Demographics	Number of participants
Gender	
Male	8
Female	15
Not specified	2
Age	
20–30	6
31–40	8
41–50	4
51–60	2
Not specified	5
Education	
No degree	8
Bachelor's degree	15
Postgraduate degree	2
Residential area	
Rural	7
Urban	16
Not specified	2

**Table 11.2: Demographic data of participants in the face validity test**

### ***11.2.2 Results***

Twenty-five participants completed the questionnaire and answered the face validity form; 10 completed the English version, and 15 completed the Arabic version. Most of the participants who took part in this study (76%) reported that the questionnaire items were clear. About 88% of the participants agreed that the questionnaire's instructions were clear, and the remaining participants did not respond to this question. Thus, following the face validity test, none of the attitude items was changed or reworded.

However, in the demographic/personal section, nine of the participants (36%) reported that they would not answer some questions in the questionnaire. When they were asked to elaborate, four participants said they would not provide their date of birth; they suggested replacing this question with 'What is your age?' and including categorical responses. Thus, the item related to date of birth was changed to 'What is your age?', for which categorical responses were provided.

All the participants reported that no additional questions were needed to measure the relevant topic. All the participants reported that the questionnaire's layout was clear and attractive (two participants did not respond to this question). Most of the participants (76%) reported that the questionnaire's length was acceptable; the average estimation of the time required to complete the questionnaire was between 10 and 15 minutes.

### ***11.2.3 Summary***

This section first briefly discussed the face validity method and findings. Over 70% of the participants agreed that the questionnaire items were clear. As this percentage is relatively high, no changes were required in this validity test apart from the fact that the demographic item 'What is your date of birth?' was replaced with the question 'What is your age?'.

In this study, high face validity stems from the fact that the process of developing, adjusting, and preparing the questionnaire items was a long journey involving three in-depth phases of research to develop the items and ending with an in-depth content validity assessment with qualified experts.

Given the difficulty involved in defining the performance dimensions related to the exploration of attitudes towards a health system, it is not surprising that participants could not identify additional issues for the questionnaire to investigate. Because face validity cannot be assessed through a statistical test, it is a somewhat subjective judgement, and in this context, it has been taken as such (DeVon et al., 2007). Therefore, a more rigorous quantitative validity test – 'construct validity' – was also undertaken. The next section discusses this further.



### 11.3 Questionnaire administration and response rate

In order to test the questionnaire construct validity, a PCA was carried out. Questionnaires were administered in person and circulated as an online survey via social media. Among the 271 questionnaires distributed in healthcare facilities, 124 were completed, representing an overall response rate of 24.5%. The online recruitment of participants living in Eastern Province achieved unexpectedly high responses ( $n = 689$ ). Due to the fact that it is not possible to estimate the population that the social media recruitment reached, for this figure we could not calculate a response rate. Of the total sample, 16% were from healthcare facilities and 84% from online recruitment.

The participants' characteristics are reported and compared against the Eastern Province, KSA, population census in the following section.

### 11.4 Characteristics of the respondents

A small majority of respondents to the public attitudes towards the health system of KSA questionnaire were female (51%), suggesting an over-representation of female participants compared to the latest Saudi population census in Eastern Province, KSA, where females constitute 43% of the population. However, being this close to 50/50 is good for analyses comparing males and females. Furthermore, evidence published after the latest census suggests a recent increase in the female population in KSA (48%). This justifies the slight over-representation of female participants in this study (General Authority of Statistics, 2017).

The most-represented age segment amongst questionnaire respondents was 30 to 39 years (31%), followed by 18 to 29 years (29%). This indicated that most respondents were from the younger population. Questionnaire respondents aged 50 and above were slightly under-represented as compared to proportion in the General Authority of Statistics in KSA census (2016).

Most respondents were Saudis (83%). Comparisons with the latest census suggest an under-representation of non-Saudis, who constitute about 33% of the total population living in the Eastern Province, KSA (General Authority of Statistics in KSA, 2016).

Most respondents were married (67%), and many had a monthly income below 5,000 SR (27%). Most of them had a bachelor's degree (58%). Comparisons with the latest census suggest an under-representation of participants with lower education, who constitute around 49% of the total population (General Authority of Statistics in KSA, 2016).

The largest proportion of respondents lived in urban areas (86%). Comparisons with the latest census suggest a slight under-representation of participants living in rural areas, who constitute 17% of the total population. Table 11.3 indicates respondents' gender, age group, marital status, education level, and nationality.

Characteristics	N (%)
<b><u>Gender (n = 647)</u></b>	
Male	307 (47.45)
Female	327 (50.54)
Prefer not to say	13 (2.01)
<b><u>Age (n = 640)</u></b>	
18–29	183 (28.59)
30–39	198 (30.94)
40–49	94 (14.69)
50 and above	160 (25)
Prefer not to say	5 (0.78)
<b><u>Nationality (n = 645)</u></b>	
Saudi	535 (82.94)
Non-Saudi	110 (17.06)
<b><u>Education (n = 642)</u></b>	
No degree	166 (25.85)
Bachelor's degree	370 (57.63)
Postgraduate degree	106 (16.52)
<b><u>Occupation (n = 513)</u></b>	
Professional and business owners	93 (18.13)
Manual and routine	278 (54.19)
Retired	44 (8.58)
Not employed	98 (19.1)
<b><u>Income (n = 643)</u></b>	
0–less than 5,000	172 (26.75)
5,000–9,999	142 (22.08)
10,000–14,999	141 (21.94)
15,000–19,999	64 (9.95)
20,000 and above	57 (8.85)
Prefer not to say	67 (10.43)
<b><u>Marital status (n = 645)</u></b>	
Single	165 (25.58)
Married	434 (67.29)
Divorced, separated, or widowed	35 (5.43)
Prefer not to say	11 (1.7)
<b><u>Place of residence (n = 599)</u></b>	
City (urban)	516 (86.14)
Village (rural)	83 (13.86)

Characteristics	N (%)
<b><u>Self-assessed HS (n = 601)</u></b>	
Excellent and very good	423 (70.38)
Good	156 (25.96)
Poor and very poor	15 (2.5)
Prefer not to say	7 (1.16)

**Table 11.3: Socio-demographic characteristics of study subjects (n = 813)**

It is important, however, to address the fact that some of the participants in this sample differ from the remaining sample in terms of health insurance status – that is, some of the questionnaire participants have health insurance coverage. A descriptive statistical breakdown of this sub-sample is therefore provided in Table 11.4.

Characteristics	N (%)
<b><u>Gender (n = 276)</u></b>	
Male	165 (59.8)
Female	108 (39.1)
Prefer not to say	3 (1.1)
<b><u>Age (n = 272)</u></b>	
18–29	79 (29.04)
30–39	89 (32.72)
40–49	32 (11.8)
50 and above	70(25.7)
Prefer not to say	2(0.74)
<b><u>Nationality (n = 274)</u></b>	
Saudi	179 (65.3)
Non-Saudi	95 (34.7)
<b><u>Education (n = 274)</u></b>	
No degree	87(31.8)
Bachelor’s degree	147(53.6)
Postgraduate degree	40(14.6)
<b><u>Occupation (n = 228)</u></b>	
Professional and business owners	52 (22.8)

<b>Characteristics</b>	<b>N (%)</b>
Manual and routine	126 (55.3)
Retired	13 (5.7)
Not employed	37 (16.2)
<b><u>Income (n = 273)</u></b>	
0-less than 5000	77 (28.2)
5,000-9,999	66 (24.2)
10,000-14,999	48 (17.6)
15,000-19,999	23 (8.4)
20,000 and above	24 (8.8)
Prefer not to say	35 (12.8)
<b><u>Marital status (n = 271)</u></b>	
Single	67 (24.4)
Married	187 (68)
Divorced, separated, or widowed	17 (6.1)
Prefer not to say	4 (1.5)
<b><u>Place of residence (n = 258)</u></b>	
City (urban)	203 (78.7)
Village (rural)	55 (21.3)
<b><u>Self-assessed HS (n = 257)</u></b>	
Excellent and very good	184 (71.6)
Good	66 (25.7)
Poor and very poor	5 (1.9)
Prefer not to say	2 (0.8)

**Table 11.4: Socio-demographic characteristics of health insured sub-sample (n = 342)**

It is worthy to note that there is no difference in the demographic characteristics between the questionnaire's whole sample and the health-insured sub-sample except in gender and nationality, where around 60% the health-insured sub-sample were males, and around 35% were non-Saudis. As stated in Chapter 3, because of mandatory cooperative health insurance (CHI), non-Saudis living in KSA should be covered by health insurance, making the rise in the percentage of non-Saudis in this sub-sample is unsurprising.

## **11.5 Principal component analysis (PCA) of public attitudes towards the health system of KSA questionnaire: Results of construct validity test**

This section provides the results of the first PCA followed by the second-order PCA of each factor. As stated in Chapter 10, section 10.7.2, the PCA was conducted on 61 attitude items; a separate PCA was conducted on the seven remaining items concerning attitudes towards health insurance coverage.

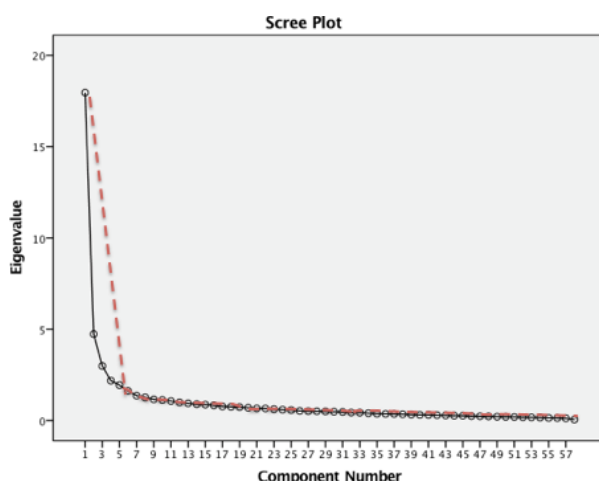
### ***11.5.1 Suitability of items for PCA***

The Kaiser-Meyer-Olkin (KMO) measure of sample adequacy for the 61 items was 0.931, exceeding the recommended value of 0.6 (Pallant, 2007). Bartlett's test of sphericity was statistically significant ( $p < 0.001$ ). The anti-image correlation matrix revealed individual item measures of sampling adequacy (MSA) were above 0.600 for all but two items: 'It is difficult to get timely access to a specialist unless I have personal connections (*wasta*)' and 'It is difficult to get the medicines I need from hospital pharmacy unless I have (*wasta*).' Low MSAs were reported in these two items, with values of 0.490 and 0.534, respectively. Thus, these two items were discarded from the subsequent PCA. Removing either item did not raise the others' MSA to a sufficient level). Thus, 59 items were suitable for subjecting to the initial PCA.

### ***11.5.2 Number of factors to extract***

Analysis of the eigenvalues revealed that 13 factors had eigenvalues over 1, whereas the analysis of the scree plot given in Figure 11.1 shows a break between the fifth and sixth factors, revealing five possibly meaningful factors to extract. Parallel analysis was then conducted; the results also revealed five meaningful factors (i.e. factors with eigenvalues from the actual data higher than those from the random data; see Table 11.5; O'Connor, 2000). For this reason, five factors were retained.

As a result, a five-factor solution was sought from the first PCA.



**Figure 11.1: Scree plot of the questionnaire items (n = 61)**

Factors	Raw data eigenvalues	Random data eigenvalues
1	<b>18.234900</b>	<b>2.000638</b>
2	<b>4.868649</b>	<b>1.893043</b>
3	<b>2.957545</b>	<b>1.819971</b>
4	<b>2.096852</b>	<b>1.757521</b>
5	<b>1.928597</b>	<b>1.707587</b>
6	1.604479	1.662325
(.....)		

**Table 11.5: Factors retained after parallel analysis for the first PCA.**

To aid in the interpretation of these factors, an oblimin rotation was performed. This showed that all items loaded strongly onto five distinct factors. The final five-factor solution obtained explains 50.95% of the common variance, with each factor corresponding to a sub-scale (i.e. dimension) of public attitudes towards the health system of KSA questionnaire. Table 11.6 illustrates the pattern matrix of the questionnaire following the PCA with oblimin rotation. Factors were given a label based on their items, such as ‘Satisfaction with population health status and the organisation of health services in the government health sector in KSA’, ‘Perceptions of quality of healthcare services’, ‘Perceptions of affordability of care in KSA’, ‘Satisfaction with the organisation of healthcare delivery in the private health sector in KSA’, and ‘Trust in the Saudi health system’. These dimensions are discussed next.

No.	Items	Pattern structure				
		1	2	3	4	5
1.	The population is becoming better informed about health risks and healthy behaviours.	<b>0.481</b>	-0.185	0.096	0.075	0.030
2.	Overall, the health of the population of KSA has improved.	<b>0.543</b>	-0.032	-0.064	0.003	-0.069
3.	Overall, people are taking more responsibility for their health choices.	<b>0.354</b>	-0.071	-0.014	0.022	-0.182
4.	I believe the governmental health sector receives enough funding.	<b>0.700</b>	-0.059	-0.100	0.137	0.045
5.	I am satisfied with the way governmental health sector's health budget is spent.	<b>0.669</b>	0.131	0.016	-0.073	-0.094
6.	I am satisfied with the services that are available for me free of charge.	<b>0.649</b>	-0.028	-0.109	0.005	-0.032
7.	I am satisfied with the level of 'Saudisation' in health workforce (i.e. number of Saudi doctors, nurses, and other health professionals).	0.200	-0.075	0.071	-0.171	-0.077
8.	I am satisfied with the way Ministry of Health monitors government health sector.	<b>0.517</b>	0.009	0.069	-0.238	-0.119
9.	I am satisfied with the way primary healthcare centres are operated.	<b>0.493</b>	0.059	0.078	-0.365	-0.043
10.	I am satisfied with the way inpatient care is operated.	<b>0.446</b>	0.085	0.048	-0.426	-0.076
11.	I am satisfied with the way outpatient care is operated.	<b>0.426</b>	-0.102	0.043	-0.450	0.022
12.	I am satisfied with the way emergency care is operated.	<b>0.411</b>	-0.065	0.092	-0.460	-0.051
13.	Overall, I am satisfied with the governmental health sector.	<b>0.635</b>	0.070	0.002	-0.309	-0.034
14.	I trust the governmental health sector.	<b>0.650</b>	0.018	0.078	-0.106	-0.099
15.	I am satisfied with the way Ministry of Health monitors private health sector.	0.142	-0.114	0.009	-0.592	-0.034
16.	I am satisfied with the way Ministry of Health controls prices at private healthcare facilities.	0.184	-0.026	-0.054	-0.506	-0.009
17.	I am satisfied with the way primary healthcare centres are operated.	0.181	-0.053	0.086	-0.649	-0.004
18.	I am satisfied with the way inpatient care is operated.	0.180	-0.096	0.097	-0.662	0.002
19.	I am satisfied with the way outpatient care is operated.	0.139	-0.053	0.034	-0.728	0.025
20.	I am satisfied with the way emergency care is operated.	0.105	-0.065	0.053	-0.715	-0.078

No.	Items	Pattern structure				
		1	2	3	4	5
21.	Overall, I am satisfied with the private health sector.	-0.109	0.003	-0.035	-0.831	-0.077
22.	I trust the private health sector.	-0.144	-0.019	-0.126	-0.742	0.020
23.	It is easy to get access to the healthcare I need.	<b>0.556</b>	-0.027	-0.124	-0.094	-0.061
24.	I can get basic healthcare service at primary healthcare centres rather than going to general hospitals.	<b>0.466</b>	-0.175	-0.076	-0.101	-0.026
25.	It is easy to get out-of-hours care (such as evenings, weekends, or holidays) without going to the emergency department.	<b>0.321</b>	-0.048	-0.067	-0.154	-0.131
26.	The referral system is functioning well.	<b>0.407</b>	-0.096	-0.055	-0.233	-0.056
27.	It is easy to get access to the healthcare I need.	0.180	-0.085	-0.109	-0.470	-0.012
28.	I have skipped check-ups and tests that were recommended by my doctor because of the cost.	-0.009	0.017	<b>0.820</b>	-0.040	-0.058
29.	I have skipped a medical treatment that was recommended by my doctor because of the cost.	-0.036	0.014	<b>0.811</b>	-0.055	0.025
30.	I have serious problems paying my medical bills.	0.041	0.045	<b>0.843</b>	0.048	-0.061
31.	I often have to pay for healthcare out of my own pocket (not through health insurance).	-0.137	-0.057	<b>0.655</b>	-0.088	-0.011
32.	Private hospitals usually focus on making money rather than providing quality healthcare.	0.048	-0.068	<b>0.516</b>	0.323	0.114
33.	Receptionists at primary care centres are friendly and courteous.	0.047	-0.504	0.135	-0.103	-0.055
34.	The doctor has all equipment needed to provide the care I require.	-0.065	-0.480	-0.025	-0.145	-0.194
35.	The doctor uses the latest up-to-date technology to diagnose my health issues.	-0.136	-0.508	-0.007	-0.189	-0.254
36.	I am happy with the amount of time I spend waiting before I see the doctor.	-0.002	-0.338	-0.036	-0.114	-0.302
37.	The doctor usually greets and talks to me respectfully.	-0.068	-0.690	0.061	-0.005	-0.068
38.	The doctor usually explains things in a language that is easy for me to understand (e.g. he or she avoids difficult medical terms).	-0.016	-0.791	0.054	-0.063	0.108



No.	Items	Pattern structure				
		1	2	3	4	5
39.	My doctor is able to talk with me in my native language.	0.028	-0.748	-0.050	0.030	0.218
40.	The doctor spends enough time with me to address all my health-related issues related to my current health condition.	0.084	-0.855	-0.080	0.004	0.189
41.	The doctor helps me make decisions about my health.	0.151	-0.746	0.052	0.081	0.017
42.	The doctor understands and respects my healthcare choices.	0.063	-0.797	0.014	0.095	-0.008
43.	I can get a second opinion about my health issues when needed.	0.094	-0.618	-0.034	0.190	-0.152
44.	The doctor usually explains to me why a test (e.g. blood test, X-ray) was needed.	0.008	-0.681	0.041	0.046	-0.030
45.	The doctor or pharmacist usually explains the potential side effects of any medications that have been prescribed.	0.113	-0.368	0.038	0.028	-0.306
46.	I always trust my doctor.	0.028	-0.619	-0.016	-0.086	-0.159
47.	I can talk privately with healthcare professionals (i.e. without others overhearing).	0.096	-0.587	-0.099	0.023	-0.110
48.	Nurses have the required skills and experience to deal with my health-related issues.	-0.013	-0.472	-0.075	-0.114	-0.250
49.	Health professionals respect my cultural and spiritual needs (such as Islamic beliefs).	-0.007	-0.524	0.013	-0.146	-0.027
50.	Care is usually provided in my best interest.	0.062	-0.591	-0.042	-0.051	-0.252
51.	I have enough information about the location of services I need.	0.036	-0.493	-0.090	-0.088	-0.067
52.	The location of the healthcare facility I usually visit is convenient for me.	-0.152	-0.435	0.017	-0.227	-0.233
53.	The rooms inside healthcare facilities (including toilets) are clean.	-0.098	-0.438	-0.090	-0.207	-0.120
54.	I am confident that I will be able to get the treatment I require on time when I need it.	0.101	-0.285	-0.193	-0.054	-0.469
55.	I am confident that I will receive the most effective drugs for my condition(s).	0.040	-0.295	-0.150	-0.015	-0.538
56.	I am confident that I will receive the healthcare I need without financial hardship.	0.079	-0.175	-0.182	0.008	-0.597
57.	I am confident that the Ministry of Health will be able to manage its health	0.113	0.008	0.008	-0.006	-0.823

No.	Items	Pattern structure				
		1	2	3	4	5
	budget efficiently (i.e. without wasting money).					
58.	I am confident that the Saudi health system will be able to provide adequate care for me in the future.	0.083	0.059	0.088	0.055	-0.923
59.	I am confident that the Saudi health system will be able to provide adequate care for my family in the future.	0.088	0.045	0.063	0.001	-0.872

**Table 11.6: Pattern matrix of the questionnaire following the PCA with oblimin rotation**

All but one item loaded strongly in the pattern matrix (i.e.  $r > .32$ ). This item was 'I am satisfied with the level of "Saudisation" in the health workforce (i.e. the number of Saudi doctors, nurses, and other health professionals).' This loaded weakly onto 'Satisfaction with population health status and the organisation of health services at the government health sector in KSA', with  $r = .20$ . Thus, this item was not included in the subsequent analysis.

Most of the items loaded strongly onto only one factor, but 'I am satisfied with the way primary healthcare centres are operated', 'I am satisfied with the way inpatient care is operated', 'I am satisfied with the way outpatient care is operated', and 'I am satisfied with the way emergency care is operated' loaded onto two: 'Satisfaction with population health status and the organisation of health services in the government health sector in KSA' ( $r = .493$ ,  $r = .446$ ,  $r = .426$ , and  $r = .411$ , respectively) and 'Satisfaction with the organisation of healthcare delivery in the private health sector in KSA' ( $r = .365$ ,  $r = .426$ ,  $r = .45$ , and  $r = .46$ , respectively). After a discussion with the research supervisors, the researcher agreed that these four items should be included in Satisfaction with population health status and the organisation of health services in the government health sector in KSA dimensions, as this made more conceptual sense.

The 58 items included in public attitude towards the health system of KSA contained five dimensions: (A) 'Satisfaction with population health status and the organisation of health services in the government health sector in KSA' consisted of 17 items; (B) 'Perceptions of the quality of healthcare services' contained 21 items; (C) 'Perceptions of the affordability of care in KSA' contained five items; (D) 'Satisfaction with the organisation of healthcare delivery in the private health sector in KSA' contained nine items; and (E) 'Trust in the Saudi health system' contained six items.

### ***11.5.3 Second-order PCA for the five factors***

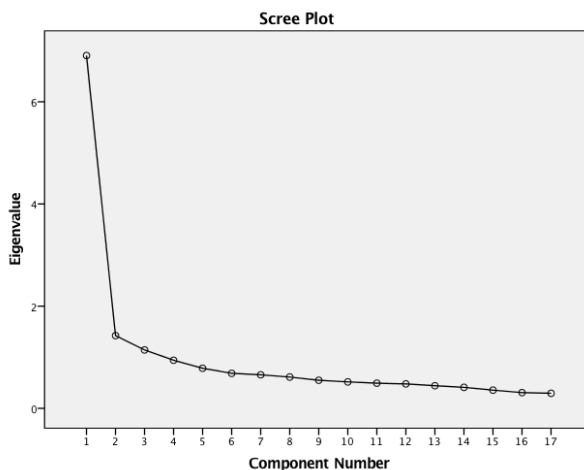
As Chapter 10, section 10.7.6 explained, a second-order PCA was carried out for each of the five factors extracted to examine its uni-dimensionality. The following sections explain this further.

#### ***11.5.3.1 Satisfaction with health status and the organisation of services in the government health sector***

To check the scale's uni-dimensionality, a PCA analysis of the 17 items was carried out. Correlation among these 17 items showed a statistically significant correlation. The data showed that the KMO measure of 0.934 and Bartlett's tests of sphericity were significant ( $p < .001$ ). The anti-image correlation matrix revealed alphas that were all above 0.6.

Analysis of the eigenvalues revealed that there are three factors with eigenvalues over than one. The cumulative variance of the three factors showed 55.72%, in which the first factor accounted for 40.62% of the variance, the second factor accounted for 8.37% of the variance, and the third factor accounted for 6.72% of the variance. The analysis of the scree plot given in Figure 11.2

revealed two possibly meaningful factors to extract. Parallel analysis was then conducted. The results of this parallel analysis revealed three meaningful factors (i.e. factors with eigenvalues from the actual data higher than those from the random data; O'Connor, 2000); see Table 11.7. For this reason, pattern matrices of two factors and three factors were produced and compared. After a discussion with the research supervisor, it was agreed to retain three factors for better



interpretation.

**Figure 11.2: Scree plot generated from Factor A (n = 17)**

Factors	Raw data eigenvalues	Random data eigenvalues
1	<b>6.905018</b>	<b>1.409954</b>
2	<b>1.423605</b>	<b>1.320052</b>
3	<b>1.433026</b>	<b>1.261803</b>
4	.941356	1.212406
(.....)		

**Table 11.7: Factors retained after parallel analysis for Factor A**

The loadings of the 17 items on the three factors extracted are given in Table 11.8. The higher the absolute value of the loading, the more the factor contributed to the variable. No cross-loaded items were identified. Factors received labels based on their items: (A<sub>1</sub>) ‘Access and organisation of health services in the government health sector’, which contained 10 items; (A<sub>2</sub>) ‘Perceptions of public health status in KSA’, which contained three items; and (A<sub>3</sub>) ‘MOH financing for government health sector’, which contained four items.

Dimension A<sub>1</sub> refers to the way in which healthcare services in the government health sector are organised. This includes the organisation of outpatients, inpatients, and emergency care. It also covers aspects related to the ease of access to healthcare services at government healthcare facilities and the functionality of the referral system at the government health sector.

Dimension A<sub>2</sub> refers to the Saudi population’s health status, the population’s awareness of health risks and healthy behaviour, and the level of responsibility the population in KSA hold about its health.

Dimension A<sub>3</sub> refers to the appropriateness of the health budget allocated to the government health sector and whether the health budget is spent wisely. It also covers satisfaction with the number of services that are free of charge.

Item	Loading		
	1	2	3
The population is becoming better informed about health risks and healthy behaviours.	0.128	<b>0.713</b>	0.054
Overall, the health of the population of KSA has improved.	-0.048	<b>0.689</b>	-0.323
Overall, people are taking more responsibility for their health choices.	-0.011	<b>0.790</b>	-0.012
I believe the governmental health sector receives enough funding.	-0.067	0.112	<b>-0.740</b>
I am satisfied with the way the governmental health sector's health budget is spent.	0.247	0.002	<b>-0.594</b>
I am satisfied with the amount of services that are available for me free of charge.	0.044	0.125	<b>-0.712</b>
I trust the governmental health sector.	0.341	0.068	<b>-0.487</b>
I am satisfied with the way the Ministry of Health monitors the government health sector.	<b>0.589</b>	-0.021	-0.236
I am satisfied with the way primary healthcare centres are operated.	<b>0.724</b>	-0.050	-0.106
I am satisfied with the way inpatient care is operated.	<b>0.713</b>	-0.111	-0.166
I am satisfied with the way outpatient care is operated.	<b>0.760</b>	-0.084	-0.123
I am satisfied with the way emergency care is operated.	<b>0.630</b>	0.013	-0.207
Overall, I am satisfied with the governmental health sector.	<b>0.524</b>	-0.062	-0.491
It is easy to get access to the healthcare I need.	<b>0.602</b>	0.109	-0.067
I can get basic healthcare service at primary healthcare centres rather than going to general hospitals.	<b>0.673</b>	0.121	0.144
It is easy to get out-of-hours care (such as evenings, weekends, or holidays) without going to the emergency department.	<b>0.678</b>	0.097	0.194
The referral system is functioning well.	<b>0.707</b>	0.056	0.090

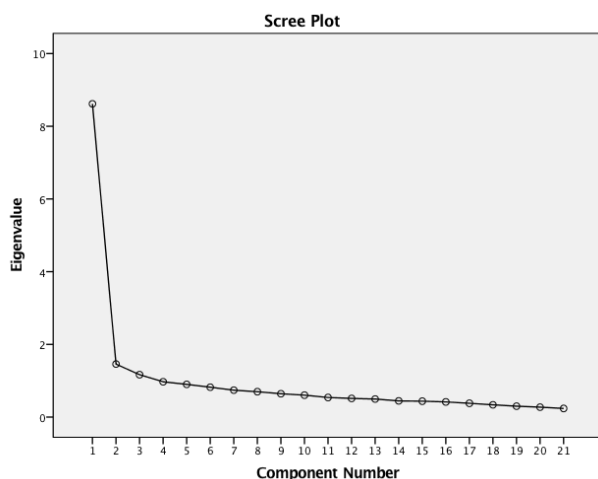
**Table 11.8: PCA with oblique rotation (oblimin): Item loadings for Factor A (n = 17)**

### 11.5.3.2 *Perceptions of quality of care*

PCA analysis of the 21 items related to Factor B, 'Perceptions of the quality of care', was carried out. The 21 items showed a statistically significant correlation. The data showed that the KMO measure of 0.938 and Bartlett's tests of sphericity were significant ( $p < .001$ ). The anti-image correlation matrix revealed alphas that were all above 0.6.

Analysis of the eigenvalues revealed that there are three factors with eigenvalues over than one. The cumulative variance of the three factors showed 55.72%, of which the first factor accounted for 41.03% of the variance, the second factor accounted for 8.37% of the variance, and the third factor accounted for 6.725% of the variance. The analysis of the scree plot in Figure 11.3 revealed two possibly meaningful factors to extract. Parallel analysis was then conducted. The

results of this parallel analysis also revealed two meaningful factors; see Table 11.9. For this reason, two factors were retained.



**Figure 11.3: Scree plot generated from Factor B (n = 21)**

Factors	Raw data eigenvalues	Random data eigenvalues
1	<b>8.617254</b>	<b>1.327289</b>
2	<b>1.458666</b>	<b>1.310025</b>
3	1.166261	1.261415
(.....)		

**Table 11.9: Factors retained after parallel analysis for Factor B**

The loadings of the 21 items on the two factors extracted are given in Table 11.10. No cross-loaded items were identified. The two factors were labelled according to their items as B<sub>1</sub>, ‘Doctor-patient communication’, which contained 12 items, and B<sub>2</sub>, ‘Infrastructure and location of healthcare services’, which contained nine items.

Dimension B<sub>1</sub> refers to a doctor’s style and interaction (e.g. participants being able to get respectful care, enough information when needed during the clinical encounter, and/or being listened to), a patient’s autonomy to make decisions about his or her own health, and the flexibility to get second opinion when needed.

Dimension B<sub>2</sub> refers to the infrastructure and location of the healthcare facilities, including the adequacy of human resources, such as the nurses’ skills and experience, and non-human resources, such as the availability of up-to-date medical technology and the cleanness of health facilities.

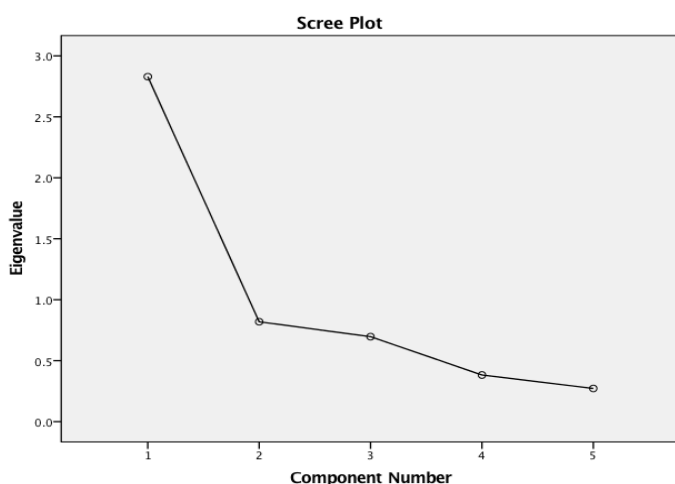
Item	Loading	
	1	2
Receptionists at primary care centres are friendly and courteous.	0.060	<b>0.584</b>
The doctor has all equipment needed to provide the care I require.	0.046	<b>0.664</b>
The doctor uses the latest up-to-date technology to diagnose my health issues.	0.070	<b>0.683</b>
I am happy with the amount of time I spend waiting before I see the doctor.	-0.076	<b>0.625</b>
I always trust my doctor.	0.368	<b>0.454</b>
I can talk privately with healthcare professionals (i.e. without others overhearing).	0.348	<b>0.446</b>
Nurses have the required skills and experience to deal with my health-related issues.	0.270	<b>0.462</b>
Health professionals respect my cultural and spiritual needs (such as Islamic beliefs).	0.163	<b>0.443</b>
Care is usually provided in my best interest.	0.393	<b>0.451</b>
I have enough information about the location of services I need.	-0.046	<b>0.696</b>
The location of the healthcare facility I usually visit is convenient for me.	-0.028	<b>0.694</b>
The rooms inside healthcare facilities (including toilets) are clean.	-0.102	<b>0.687</b>
The doctor usually greets and talks to me respectfully.	<b>0.469</b>	0.290
The doctor usually explains things in a language that is easy for me to understand (e.g. he or she avoids difficult medical terms).	<b>0.678</b>	0.078
My doctor is able to talk with me in my native language.	<b>0.573</b>	0.049
The doctor spends enough time with me to address all my health-related issues related to my current health condition.	<b>0.816</b>	-0.008
The doctor helps me make decisions about my health.	<b>0.860</b>	-0.086
The doctor understands and respects my healthcare choices.	<b>0.874</b>	-0.064
I can get a second opinion about my health issues when needed.	<b>0.756</b>	-0.078
The doctor usually explains to me why a test (e.g. blood test, X-ray) was needed.	<b>0.648</b>	0.032
The doctor or pharmacist usually explains the potential side effects of any medications that have been prescribed.	<b>0.469</b>	0.135

**Table 11.10: PCA with oblique rotation (oblimin): Item loadings for Factor B (n = 21)**

### 11.5.3.3 *Affordability of care in KSA*

A PCA analysis of the five items of this factor was carried out. Correlation amongst the five items showed a statistically significant correlation. The data showed that the KMO measure of 0.777 and Bartlett's tests of sphericity were significant ( $p < .001$ ). The anti-image correlation matrix revealed alphas that were all above 0.6. Analysis of the eigenvalues revealed that there is one factor with eigenvalues over than one, the cumulative variance this factor shows 56.59% of the variance. The analysis of the scree plot given in Figure 11.4 also revealed one possibly meaningful factor to extract. Parallel analysis was then conducted. The results of this parallel

analysis also revealed one meaningful factor (see Table 11.11), indicating that the scale was uni-dimensional.



**Figure 11.4: Scree plot generated from Factor C (n = 5)**

Factors	Raw data eigenvalues	Random data eigenvalues
1	2.829558	1.63960
2	0.818998	1.083579
(.....)		

**Table 11.11: Factors retained after parallel analysis for factor C**

The loadings of the five items on one factor were extracted and are shown in Table 11.12. The name of this factor can still be labelled C, ‘affordability of care in KSA’. Dimension C refers to the ability to pay the costs of check-ups, tests, and medical treatments. It also covers the frequency of using out-of-pocket to pay medical bills and the commerciality of the private health sector in KSA (i.e. whether private health sector focuses on making money over providing quality care).

Item	Loading
I have skipped check-ups and tests that were recommended by my doctor because of the cost.	0.830
I have skipped a medical treatment that was recommended by my doctor because of the cost.	0.829
I have serious problems paying my medical bills.	0.841
I often have to pay for healthcare out of my own pocket (not through health insurance).	0.667
Private hospitals usually focus on making money rather than providing quality healthcare.	0.549

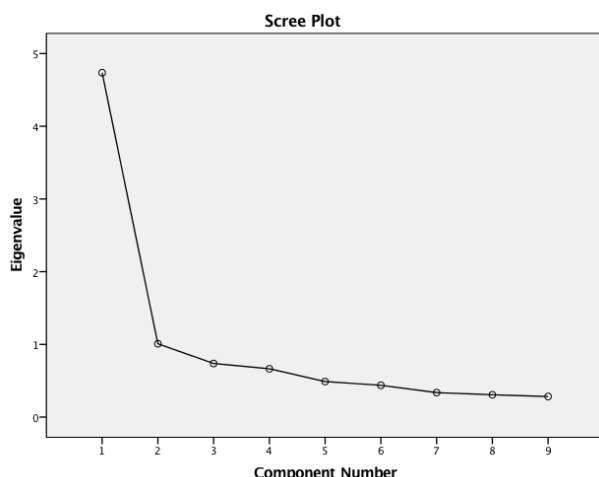
**Table 11.12: PCA with oblique rotation (oblimin): Item loadings for Factor C (n = 5)**

#### 11.5.3.4 *Satisfaction with the organisation of healthcare delivery in the private health sector in KSA*

A PCA analysis of the nine items of this scale was carried out. Correlation among these nine items showed a statistically significant correlation. The anti-image correlation matrix revealed alphas that were all above 0.6. The data showed that the KMO measure of 0.900 and Bartlett’s tests of sphericity were significant ( $p < .001$ ). Analysis of the eigenvalues revealed that there are



two factors with eigenvalues over than one; the variance of the first factor accounted for 52.63% of the variance, and the second factor accounted for 11.20% of the variance. The analysis of the scree plot given in Figure 11.5 also revealed two possibly meaningful factors to extract. Parallel analysis was then conducted. The results of this parallel analysis revealed one meaningful factor (see Table 11.13). After discussion with the research supervisor, the researcher decided to extract two factors for better interpretation.



**Figure 11.5: Scree plot generated from Factor D (n = 9)**

Factors	Raw data eigenvalues	Random data eigenvalues
1	4.736749	1.242553
2	1.008502	1.168087
(.....)		

**Table 11.13: Factors retained after parallel analysis for Factor D**

The loadings of the nine items on two factors were extracted and are given in Table 11.14. The two sub-factors were labelled D<sub>1</sub>, 'Access and organisation of health services in the private health sector', which contained four items, and D<sub>2</sub>, 'MOH monitoring of the private health sector', which contained five items.

Dimension D<sub>1</sub> refers to aspects related to the way in which healthcare services are organised in the private health sector in KSA. This includes primary care, inpatient, outpatient, and emergency care services. It also covers aspects related to the ease of access to the private health sector.

Dimension D<sub>2</sub> refers to the way in which MOH monitors healthcare practice in the private health sector as well as the way in which MOH monitors prices in the private health sector.

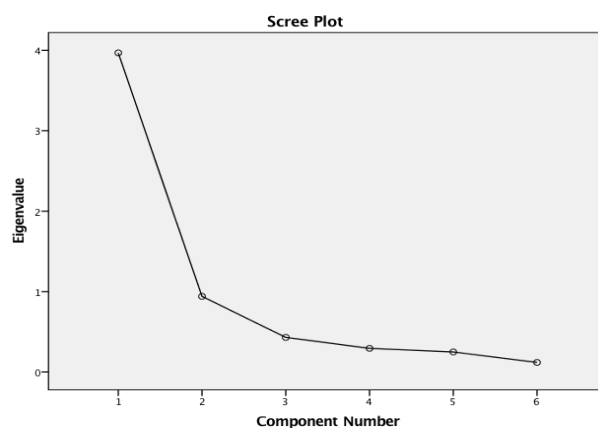
Item	Loading	
	1	2
I am satisfied with the way the Ministry of Health monitors the private health sector.	0.224	<b>0.619</b>
I am satisfied with the way the Ministry of Health controls prices at private healthcare facilities.	-0.060	<b>0.785</b>
Overall, I am satisfied with the private health sector.	0.316	<b>0.600</b>
I trust the private health sector.	-0.068	<b>0.85</b>
I am satisfied with the way primary healthcare centres are operated.	<b>0.660</b>	0.182
I am satisfied with the way inpatient care is operated.	<b>0.832</b>	0.023
I am satisfied with the way outpatient care is operated.	<b>0.864</b>	0.009
I am satisfied with the way emergency care is operated.	<b>0.763</b>	0.139
It is easy to get access to the healthcare I need.	<b>0.755</b>	-0.126

**Table 11.14: PCA with oblique rotation (oblimin): Item loadings for Factor D (n = 9)**

### 11.5.3.5 *Trust in the Saudi health system*

The PCA analysis of the six items of this sub-scale was further carried out. Correlation amongst the six items showed a statistically significant correlation. The data showed that the KMO measure of 0.832 and Bartlett's tests of sphericity were significant ( $p < .001$ ). The anti-image correlation matrix revealed alphas that were all above 0.6.

Analysis of the eigenvalues revealed that there is only factor with eigenvalues over than one; the variance of this factor accounted for 66.15% of the variance. The analysis of the scree plot in Figure 11.6 revealed one possibly meaningful factor to extract. Parallel analysis was also conducted; the results of this parallel analysis revealed one meaningful factor (i.e. factors with eigenvalues from the actual data higher than those from the random data); see Table 11.15 (O'Connor, 2000). For this reason, the decision was made that this factor was uni-dimensional and that no additional factors had to be extracted.



**Figure 11.6: Scree plot generated from Factor E (n = 6)**

Factors	Raw data eigenvalues	Random data eigenvalues
1	3.969105	1.178733
2	0.940293	1.101462
(.....)		

**Table 11.15: Factors retained after parallel analysis for Factor E**

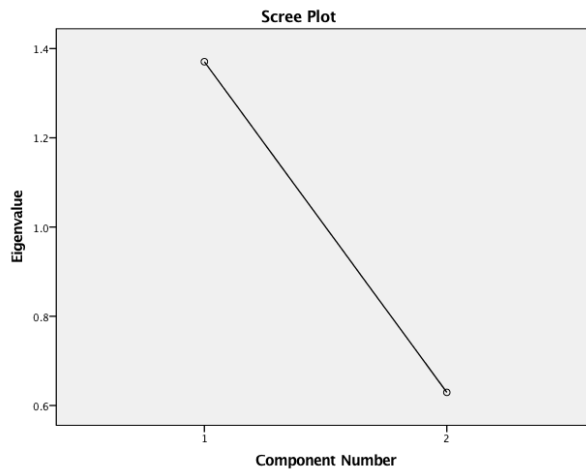
The loadings of the six items on one factor were extracted and are given in Table 11.16. This factor could still be labelled E, ‘Trust in the Saudi health system’. Dimension E refers to confidence in the Saudi health system’s ability to provide timely and effective care in the future without financial burdens. It also covers an aspect related to the confidence on the MOH’s ability to manage the healthcare budget wisely in the future.

Item	Loading
I am confident that I will be able to get the treatment I require in time when I need it.	0.769
I am confident that I will receive the most effective drugs for my condition(s).	0.804
I am confident that I will receive the healthcare I need without financial hardship.	0.762
I am confident that the Ministry of Health will be able to manage its health budget efficiently (e.g. without wasting money).	0.84
I am confident that the Saudi health system will be able to provide adequate care for me in the future.	0.86
I am confident that the Saudi health system will be able to provide adequate care for my family in the future.	0.84

**Table 11.16: PCA with oblique rotation (oblimin): Item loadings for Factor E (n = 6)**

### 11.5.3.6 *Perceptions of necessity of *wasta* to access care*

As explained in section 11.5.1, low MSA was reported in the two items related to *wasta* (‘It is difficult to get timely access to a specialist unless I have personal connections [*wasta*]’ and ‘It is difficult to get the medicines I need from hospital pharmacy unless I have [*wasta*]’) and thus were discarded in the first PCA. However, it was important to test these two items separately from the other items of the questionnaire due to the hypothesis we built from the FGD findings. These findings revealed that the participants in the qualitative arm of the study had real concerns on the role of *wasta* in accessing government healthcare facilities in KSA; see Chapter 8, section 8.2.3.2 for more details on this theme. A separate PCA for the two items was conducted. The data showed that the KMO measure of 0.500 and Bartlett’s tests of sphericity were significant ( $p < .001$ ). Analysis of the eigenvalues revealed that there is only factor with eigenvalues over than one; the variance of this factor accounted for 68.53% of the variance. The analysis of the scree plot in Figure 11.7 revealed one possibly meaningful factor to extract.



**Figure 11.7: Scree plot generated from the perceptions of the necessity to have *wasta* to access care factor (n = 2)**

The two items loaded highly with each other ( $r = 0.828$ ), indicating this as a suitable uni-dimensional scale to be used in the subsequent analysis of the study. This dimension refers to the necessity of having *wasta* to access specialised care and to get the required medication at the government health sector.

#### 11.5.3.7 *Perceptions of health insurance coverage in KSA*

As explained previously, items related to health insurance were treated separately because not all participants in this study had health insurance coverage. Thus, a further PCA analysis was carried out for the health insured sub-sample to specifically check the items related to perceptions of health insurance coverage. For this scale, which consists of seven items, the correlation amongst these seven items showed a statistically significant correlation. The KMO measured the sampling adequacy. The data showed that the KMO measure of 0.741 and Bartlett's tests of sphericity were significant ( $p < .001$ ). The anti-image correlation matrix revealed alphas that were all above 0.6.

Analysis of the eigenvalues revealed that there is only factor with eigenvalues over than one; the variance of this factor accounted for 49.85%. The analysis of the scree plot given in Figure 11.8 revealed one meaningful factor to extract. Parallel analysis was also conducted; the results of this parallel analysis revealed one meaningful factor (see Table 11.17). For this reason, the decision was made that this factor was uni-dimensional and that no additional factors had to be extracted (see Table 11.18). This factor was labelled according to its items as 'Perceptions of health insurance coverage in KSA'.

This dimension refers to the adequacy of co-payments for visits to specialists and to get the prescribed medicines and to the frequency of getting approvals for medical claims and how quickly. It also covers aspects related to the adequacy of health insurance policy to meet the participants' and their family's health needs.



**Figure 11.8: Scree plot generated from perceptions of health insurance coverage in KSA (n = 7)**

Factors	Raw data eigenvalues	Random data eigenvalues
1	3.433057	1.306909
2	1.140866	1.186229
(.....)		

**Table 11.17: Factors retained after parallel analysis for perceptions of health insurance coverage in KSA dimension.**

Item	Loading
I find it hard to afford co-payments for visits to specialists.*	0.616
I find it hard to afford co-payments for prescribed medicines.*	0.640
My health insurance company usually approves my medical claims.	0.722
My health insurance company usually approves my medical claims in a short period.	0.788
I am confident that my doctor will provide the treatment covered by my insurance, rather than more expensive alternatives.	0.548
Overall, my health insurance policy meets my health needs.	0.792
Overall, my health insurance policy meets my family's health needs.	0.758

*\*Items' scores have been transformed to aid interpretation.*

**Table 11.18: PCA: Item loadings for perceptions of health insurance coverage in KSA factor (n = 7).**

#### ***11.5.4 Reliability and item-total correlations for each dimension***

Once the second-order PCAs were conducted and the relevant factors and their respective items identified, the next step of the analysis involved the internal consistency reliability test of the subscales (i.e., dimensions) (Field, 2009).

The Cronbach's alpha for the public attitudes towards the health system of KSA scale was well above the criteria (i.e. more than 0.7; Streiner & Norman, 2008) with a value of 0.951. This indicated that the scale had a high level of internal consistency with the sample used. Analysis of the Cronbach's alpha and item-total correlations was conducted individually for each subscale. Figure 11.9 summarises the first- and second-order PCAs, the number of items within each dimension, and the Cronbach's alpha of each dimension. All but two of the dimensions showed high levels of internal consistency, with alpha values ranging from 0.719 to 0.889 (Streiner & Norman, 2008; Bland & Altman; 1997; DeVellis, 2003). An exception to this was the perceptions of population health status dimension, with an alpha of 0.647, and the perceptions of the necessity of *wasta* to access care, with an alpha of 0.540, which can still be considered acceptable (Gliem & Gliem, 2003; Jenkinson et al., 1994). The low alpha value would stem from the low number of items in these two factors, with  $n = 3$  and  $n = 2$ , respectively (Gliem & Gliem, 2003).

Item-total correlations for each dimension also showed that all the items were within the established criteria (i.e.  $r > 0.3$  and  $r < 0.9$ ), meaning that they met the homogeneity criteria (i.e.  $r < 0.3$ ). Thus, they were associated with the same dimension, and no items were identified as redundant (i.e.  $r > 0.9$ ; Tavakol & Dennick, 2011). Analysis of the Cronbach's alpha if an item is deleted tests revealed that the value of the alpha would not significantly increase if any of the items were removed but that it would decrease if some of them were removed. For this reason, all the items identified during the PCA were retained. Appendix XVIII (Tables a to k) contains the item-total correlations for each dimension of the questionnaire.

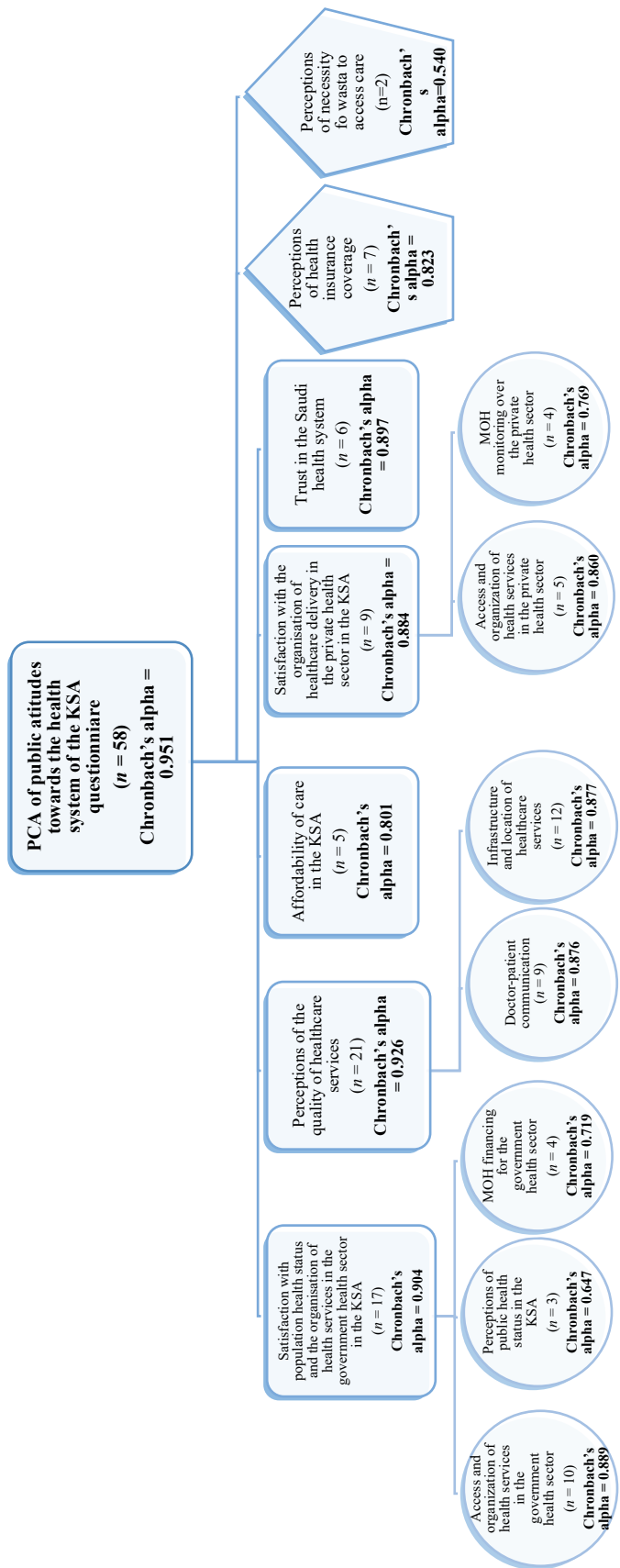


Figure 11.9: Summary of the first- and second-order PCA, the number of items within each dimension, and the Cronbach's alpha of each dimension

## 11.6 Findings from public attitudes towards the health system of KSA questionnaire

With the questionnaire using quantitative methods having been validated and thereby accomplishing the main aim of this study, this presents the preliminary analysis of the participants' responses, with the goal of investigating differences in attitudes towards the Saudi health system's performance.

### *11.6.1 Description of total scores for the questionnaire dimensions*

After the second-order PCA was conducted, a description of the total scores of all the factors was carried out using descriptive statistics (mean, median, standard deviation), 95% confidence intervals, and skewness along with normality tests (the Kolmogorov-Smirnov Test, histogram, and box plot) values, as given in Table 11.19. The means and standard deviations for each item belonging to each dimension (sub-scale) are given in Appendix XIX (Tables a–k).

Mean scores of 1 to less than 3 indicated that participants had negative attitudes towards the dimension/item, scores greater than or equal to 3 to less than 4 indicated that participants were neutral, and scores of 4 or above indicated that participants had positive attitudes towards the dimension/item.

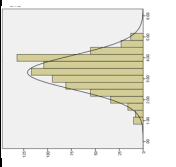
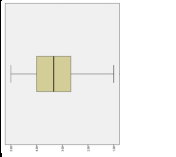
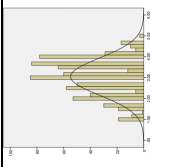
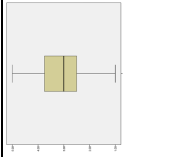
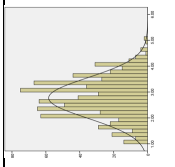
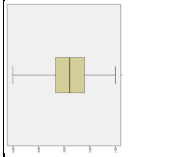
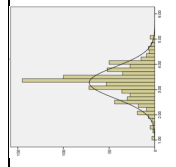
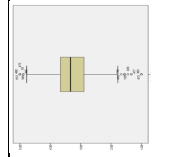
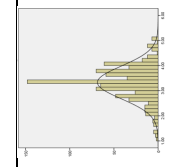
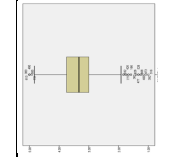
Meanwhile, the highest mean score was identified in doctor-patient communication dimension ( $M = 3.33$ ), indicating that participants held neutral attitudes with positive direction towards this dimension. The lowest mean score was identified in the 'Perceptions of MOH monitoring of the private health sector' dimension ( $M = 2.66$ ), followed by the affordability of care dimension ( $M = 2.67$ ), indicating that participants held slightly negative attitudes towards these two dimensions.

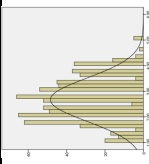
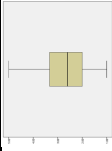
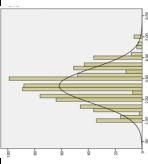
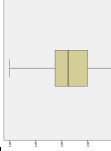
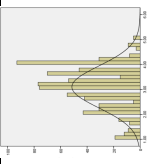
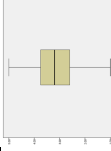
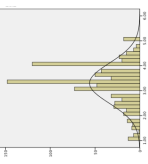
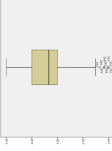
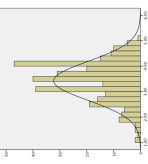
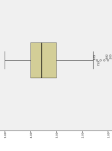
Amongst the health-insured sub-sample, the 'Perceptions of health insurance coverage' dimension had the highest mean score ( $M = 3.42$ ) compared to other dimensions, indicating that the insured participants held neutral attitudes with positive direction towards this dimension.

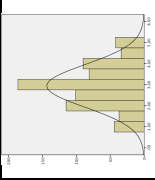
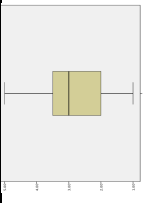
Overall, only 18% of the participants appeared to have positive attitudes towards the performance of the Saudi health system, while around 57% reported that fundamental changes were necessary to make the system work better, and 18% reported that the Saudi health system needs a complete rebuilt.

The Kolmogorov-Smirnov Test  $p$ -values for the factors were  $>0.05$ , which indicated that the total scores of all the factors followed a normal distribution and did not deviate from the normal distribution. The histogram diagram and box plot for the total scores of the factors also indicated that the scores followed the normal distribution



Factor	Mean (SE)	Median	(SD)	Confidence Interval		Skewness (SE)	Normality		
				Lower bound	Upper bound		Kolmogorov-Smirnov <sup>a</sup>	Histogram	Box plot
Public health status in KSA	3.30 (0.03)	3.33	(0.81)	3.24	3.36	-0.43 (0.09)	0.112		
MOH's financing of the government health sector	3.04 (0.03)	3.00	(0.89)	2.98	3.11	-0.300 (0.90)	0.091		
Access and organisation of the government health sector	2.77 (0.03)	2.78	(0.78)	2.72	2.83	-0.010 (0.09)	0.043		
Infrastructure and location of healthcare services	3.27 (0.02)	3.25	(0.62)	3.23	3.31	-0.29 (0.09)	0.101		
Doctor-patient communication	3.33 (0.02)	3.33	(0.65)	3.28	3.37	-0.42 (0.09)	0.092		

Factor	Mean (SE)	Median	(SD)	Confidence Interval		Skewness (SE)	Normality		
				Lower bound	Upper bound		Kolmogorov-Smirnov <sup>a</sup>	Histogram	Box plot
Affordability of care	2.67 (0.03)	2.60	(0.85)	2.61	2.73	0.153 (0.09)	0.084		
MOH monitoring of the private health sector	2.66 (0.03)	2.75	(0.83)	2.60	2.72	0.07 (0.09)	0.065		
Access and organisation of the private health sector	3.10 (0.03)	3.20	(0.84)	3.04	3.13	-0.49 (0.09)	0.095		
Trust in the Saudi health system	3.30 (0.03)	3.33	(0.81)	3.24	3.35	-0.58 (0.09)	0.121		
Health insurance coverage	3.42 (0.04)	3.60	(0.76)	3.34	3.50	0.48 (0.14)	0.085		

Factor	Mean (SE)	Median	(SD)	Confidence Interval		Skewness (SE)	Normality		
				Lower bound	Upper bound		Kolmogorov-Smirnov <sup>a</sup>	Histogram	Box plot
Perceptions of the necessity of <i>wasta</i> to access care	2.94 (0.04)	3.00	(1.01)	2.87	3.01	0.106 (0.09)	0.138		

**Table 11.19: Description of the total scores of the questionnaire dimensions**

### ***11.6.2 Correlation amongst the total scores of the questionnaire dimensions***

The dimensions extracted using PCA in the measurement of public attitudes towards the Saudi health system showed a statistically significant positive correlation amongst the total sub-scales scores (i.e. the scores of items under each factor) in most of the factor pairs. As shown in Table 11.20, the highest positive correlation was 0.794 between the total scores of ‘Infrastructure and location of healthcare services’ and ‘Doctor-patient communication’, followed by 0.647 between the total scores of ‘Access and organisation of the government health sector’ and ‘MOH’s monitoring and financing of the government health sector’, 0.640 between the total scores of ‘Access and organisation of the private health sector’ and ‘MOH monitoring of the private health sector’, and 0.624 between the total scores of ‘Access and organisation of the private health sector’ and ‘Access and organisation of the government health sector’. High positive correlation was seen between Trust in the Saudi health system dimension and all the other dimensions, which range from 0.210 to 0.570. Other correlation values between the other pairs of factors were between 0.002 and 0.570. This correlation analysis clearly showed that the factors and their items correlated significantly, as might be expected for the factors from second-order PCA, which were originally in the same factor analysis component

<b>Dimensions (Subscales)</b>	Public health status in KSA	MOH's financing of the government health sector	Access and organisation of the government health sector	Infrastructure and location of healthcare services	Doctor-patient communication	Affordability of care	MOH monitoring of the private health sector	Access and organisation of the private health sector	Trust in the Saudi health system	Perceptions of necessity of <i>wasta</i> to access care
Public health status in KSA	1	0.164	0.147	.290**	.283**	0.004	0.077	0.113	0.095	0.000
MOH's financing of the government health sector	.405**	1	0.419	.378**	.333**	0.026	0.151	0.249	0.235	0.006
Access and organisation of the government health sector	.384**	.647**	1	.462**	.371**	0.023	0.274	0.389	0.250	0.013
Infrastructure and location of healthcare services	0.084	0.143	0.213	1	0.630	0.035	0.162	0.217	0.325	0.000
Doctor-patient communication	0.080	0.111	0.138	.794**	1	0.017	0.119	0.151	0.262	0.000
Affordability of care	.063	.161**	.150**	.187**	.132**	1	0.030	0.019	0.044	0.032
MOH monitoring of the private health sector	.278**	.388**	.523**	.402**	.345**	.172**	1	0.410	0.160	0.000
Access and organisation of the private health sector	.336**	.499**	.624**	.466**	.389**	.138**	.640**	1	0.228	0.002
Trust in the Saudi health system	.309**	.485**	.500**	.570**	.512**	.210**	.400**	.477**	1	0.014
Perceptions of necessity of <i>wasta</i> to access care	.010	.079*	.116**	.018	-.002	.178**	.006	.041	.117**	1

\* Values in the matrix above the diagonal are effect sizes of the correlations between factors, which are represented in the matrix below the diagonal

**Table 11.20: Correlation amongst the questionnaire dimensions**

### 11.6.3 Public attitudes towards the health system of KSA: Sub-group differences

The following sections present a univariate analysis of the dimensions (sub-scales) of the questionnaire, investigating possible differences within the sample by gender, age, nationality, education level, occupation, income, marital status, and place of residence (rural vs. urban). In addition to these demographic characteristics, two additional independent variables – self-rated health status (SRHS) and health insurance status – were compared with the questionnaire results.

#### 11.6.3.1 Public attitudes towards the health system of KSA and gender

Independent-samples *t*-tests were conducted for each dimension (sub-scale) to determine whether male and female participants differed in any of the sub-scales. Means and standard deviations of gender categories for each dimension and their significance appear in Table 11.21.

Statistically significant differences were found in ‘Doctor-patient communication’ ( $t(608) = -2.400, p = 0.017$ ). Females held more positive attitudes than did males, but the actual difference in the mean scores between groups was small ( $d = 0.18$ ) based on Cohen’s (1988) conventions for interpreting effect size.

Statistically significant differences were also found in affordability of care ( $t(560) = 2.081, p = 0.038$ ). Females held more negative attitudes towards their ability to afford healthcare services compared to males, but again the effect size between the two groups was small ( $d = 0.18$ ; Cohen, 1988).

Finally, statistically significant differences were found in ‘Access and organisation of private health sector’ ( $t(588) = -2.403, p = 0.017$ ), with females holding neutral-positive attitudes and males neutral-negative, but the effect size between the mean scores is also considered small ( $d = 0.20$ ; Cohen, 1988).

Dimension (sub-scale)	<i>n</i>	Mean	<i>SD</i>	<i>t</i> -test
<b>Perceptions of public health status in KSA</b>				
Male	277	3.29	0.84	$t(579) = -0.911, p = 0.363$
Female	304	3.35	0.80	
<b>MOH’s financing of the government health sector</b>				
Male	272	3.05	0.88	$t(563) = -0.843, p = 0.399$
Female	293	3.12	0.87	
<b>Access and organisation of the government health sector</b>				
Male	303	2.76	0.79	$t(622) = -0.477, p = 0.655$
Female	321	2.79	0.77	
<b>Infrastructure and location of health care services</b>				
Male	302	3.25	0.67	$t(609) = -1.06, p = 0.289$

Dimension (sub-scale)	<i>n</i>	Mean	<i>SD</i>	<i>t</i> -test
Female	309	3.30	0.67	
<b>Doctor-patient communication</b>				
Male	301	3.26	0.68	<i>t</i> (608) = -2.400, <i>p</i> = 0.017*
Female	309	3.40	0.72	
<b>Affordability of care</b>				
Male	280	2.78	0.88	<i>t</i> (560) = 2.081, <i>p</i> = 0.038*
Female	282	2.63	0.81	
<b>MOH monitoring of the private health sector</b>				
Male	294	2.67	0.87	<i>t</i> (595) = 0.523, <i>p</i> = 0.601
Female	303	2.70	0.77	
<b>Access and organisation of the private health sector</b>				
Male	298	3.03	0.83	<i>t</i> (588) = -2.403, <i>p</i> = 0.017*
Female	292	3.19	0.81	
<b>Trust in the Saudi health system</b>				
Male	301	3.26	0.87	<i>t</i> (617) = -0.929, <i>p</i> = 0.353
Female	318	3.33	0.87	
<b>Perceptions of necessity of wasta to access care</b>				
Male	268	2.88	1.07	<i>t</i> (565) = -1.274, <i>p</i> = 0.203
Female	299	2.99	1.01	

\* Statistically significant ( $p < 0.05$ )

**Table 11.21: Differences between gender categories for the dimensions (sub-scales) of the questionnaire**

### 11.6.3.2 Public attitudes towards the health system of KSA and age groups

One-way ANOVAs were conducted to investigate possible differences amongst the different age groups. An analysis of variance using Levene's test for homogeneity revealed homogeneity of the variances between the different categories (Field, 2009). Means and standard deviations of age groups categories for each dimension and their significance appear in Table 11.22.

Statistically significant differences were found between age groups in MOH monitoring of the private health sector ( $F(3, 595) = 4.137, p = 0.006$ ). To investigate these differences, the ANOVA Bonferroni post hoc test was used because, as said earlier, an analysis of variance revealed the homogeneity of the variances between the different categories (Field, 2009). Analysis of the post hoc test revealed statistically significant differences between participants aged between 18 and 29 and participants aged 50 and above ( $p = 0.006$ ); see Appendix XX, Table-a. Analysis of means shows that younger participants seemed to have more neutral attitudes towards the positive direction on MOH monitoring of the private health sector compared to participants aged 50 and above. However, the effect size of this difference was small ( $\eta^2 = .02$ ; Richardson, 2011).

Statistically significant differences were found between age groups in ‘Access and organisation of the private health sector’ ( $F(3, 588) = 4.024, p = 0.008$ ). To investigate these differences, the ANOVA Bonferroni post hoc test was used. Analysis revealed statistically significant differences between participants aged between 18 and 29 and participants aged 50 and above ( $p = 0.010$ ); see Appendix XX, Table-b. Analysis of means shows that younger participants seemed to have a more positive perception of the way in which the private health sector is organized and their ability to access private care compared to participants aged 50 and above. The effect size of this difference was also small ( $\eta^2 = 0.02$ ; Richardson, 2011).

Dimension (sub-scale)	<i>n</i>	Mean	<i>SD</i>	One-way ANOVA
<b>Perceptions of public health status in KSA</b>				
18–29	165	3.34	0.74	$F(3, 578) = 0.144, p = 0.934$
30–39	184	3.35	0.79	
40–49	90	3.31	0.89	
50 and above	143	3.30	0.89	
<b>MOH’s financing of the government health sector</b>				
18–29	158	3.06	0.83	$F(3, 562) = 1.661, p = 0.174$
30–39	181	3.08	0.88	
40–49	87	2.94	0.94	
50 and above	140	3.20	0.85	
<b>Access and organisation of the government health sector</b>				
18–29	178	2.82	0.78	$F(3, 621) = 0.739, p = 0.529$
30–39	196	2.74	0.77	
40–49	92	2.72	0.85	
50 and above	159	2.83	0.75	
<b>Infrastructure and location of health care services</b>				
18–29	175	3.33	0.67	$F(3, 611) = 0.962, p = 0.41$
30–39	194	3.22	0.66	
40–49	93	3.30	0.68	
50 and above	153	3.25	0.66	
<b>Doctor-patient communication</b>				
18–29	174	3.43	0.75	$F(3, 611) = 2.279, p = 0.078$
30–39	193	3.30	0.69	
40–49	93	3.36	0.64	
50 and above	154	3.24	0.65	
<b>Affordability of care</b>				
18–29	153	2.72	0.86	$F(3,560) = 2.527, p = 0.057$
30–39	184	2.63	0.82	
40–49	92	2.57	0.85	
50 and above	135	2.85	0.85	
<b>MOH monitoring of the private health sector</b>				



Dimension (sub-scale)	<i>n</i>	Mean	<i>SD</i>	One-way ANOVA
18–29	175	3.33	0.67	<i>F</i> (3, 595) = 4.137, <i>p</i> = 0.006*
30–39	194	3.22	0.66	
40–49	93	3.30	0.68	
50 and above	153	3.21	0.65	
<b>Access and organisation of the private health sector</b>				
18–29	164	3.26	0.79	<i>F</i> (3, 588) = 4.024, <i>p</i> = 0.008*
30–39	188	3.15	0.81	
40–49	91	3.00	0.90	
50 and above	149	2.97	0.79	
<b>Trust in the Saudi health system</b>				
18–29	179	3.35	0.84	<i>F</i> (3, 617) = 0.755, <i>p</i> = 0.52
30–39	195	3.28	0.87	
40–49	92	3.19	0.96	
50 and above	155	3.32	0.85	
<b>Perceptions of necessity of wasta to access care</b>				
18–29	155	3.09	1.06	<i>F</i> (3, 564) = 1.760, <i>p</i> = 0.154
30–39	188	3.06	1.10	
40–49	89	2.86	0.93	
50 and above	136	3.14	1.08	

\* Statistically significant ( $p < 0.05$ )

**Table 11.22: Differences between age categories for the dimensions (sub-scales) of the questionnaire**

### 11.6.3.3 Public attitudes towards the health system of KSA and nationality

Independent samples *t*-tests were conducted for each dimension (sub-scale) to determine whether participants' nationalities differed in any of the sub-scales. Means and standard deviations of nationality categories for each dimension and their significance appear in Table 11.23. The results revealed statistically significant differences between these two groups in six dimensions.

Statistically significant differences were found between Saudis and non-Saudis in MOH's financing of the government health sector ( $t(571) = -4.876, p < 0.001$ ), where non-Saudis held a more neutral-positive attitude, with moderate effect size between the two mean scores ( $d = 0.66$ ; Cohen, 1988).

Statistically significant differences were also found between Saudis and non-Saudis in 'Access and organisation of the government health sector' ( $t(631) = -6.941, p < 0.001$ ). Again, analysis of the mean differences reveals that non-Saudis held a more neutral-positive attitude, and the effect size of this difference was high ( $d = 0.80$ ) (Cohen, 1988).

Statistically significant differences were found between Saudis and non-Saudis in ‘Affordability of care’ ( $t(570) = -3.032, p = 0.003$ ). Saudis held more negative attitudes in this dimension compared to non-Saudis, but despite this significant difference, the actual difference in the mean scores was small, with an effect size of  $d = 0.34$  (Cohen, 1988), indicating that both groups held slightly negative attitudes towards their ability to afford care in KSA.

Statistically significant differences were also found between the two groups in ‘MOH monitoring of the private health sector’ ( $t(603) = -5.870, p < 0.001$ ). Non-Saudis held more positive attitudes towards this dimension compared to Saudis. The effect size of this difference was moderate ( $d = 0.65$ ; Cohen, 1988).

Statistically significant differences were also found between the two groups in ‘Access and organisation of the private health sector’ ( $t(597) = -3.677, p < 0.001$ ). Saudis held more negative attitudes towards this dimension compared to non-Saudis, but the effect size of this difference was small ( $d = 0.46$ ; Cohen, 1988).

Statistically significant differences were found between the two groups in ‘Trust in the Saudi health system’ ( $t(627) = -3.318, p = 0.001$ ). The results revealed that non-Saudis had more neutral-positive attitudes compared to Saudi participants, but the effect size of this difference was quite small ( $d = 0.38$ ; Cohen, 1988).

Dimension (sub-scale)	<i>n</i>	Mean	<i>SD</i>	Independent samples <i>t</i> -test
<b>Perceptions of public health status in KSA</b>				
Saudi	513	3.33	0.70	$t(587) = 1.359, p = 0.175$
Non-Saudi	107	3.31	0.68	
<b>MOH’s financing of the government health sector</b>				
Saudi	495	3.02	0.88	$t(571) = -4.876, p < 0.001^*$
Non-Saudi	78	3.52	0.62	
<b>Access and organisation of the government health sector</b>				
Saudi	528	2.69	0.77	$t(631) = -6.941, p < 0.001^*$
Non-Saudi	105	3.25	0.65	
<b>Infrastructure and location of health care services</b>				
Saudi	<b>514</b>	<b>3.25</b>	<b>0.67</b>	$t(619) = -1.747, p = 0.081$
Non-Saudi	107	3.37	0.68	
<b>Doctor-patient communication</b>				
Saudi	513	3.33	0.70	$t(618) = 0.298, p = 0.766$
Non-Saudi	107	3.31	0.86	
<b>Affordability of care</b>				
Saudi	475	2.65	0.83	$t(570) = -3.032, p = 0.003^*$ ,
Non-Saudi	97	2.94	0.89	
<b>MOH monitoring of the private health sector</b>				
Saudi	508	2.60	0.80	$t(603) = -5.870, p < 0.001^*$

Non-Saudi	97	3.12	0.80	
<b>Access and organisation of the private health sector</b>				
Saudi	497	3.06	0.85	<i>t</i> (597) = -3.677, <i>p</i> < 0.001*
Non-Saudi	101	3.39	0.60	
<b>Trust in the Saudi health system</b>				
Saudi	526	3.24	0.89	<i>t</i> (627) = -3.318, <i>p</i> = 0.001*
Non-Saudi	103	3.55	0.72	
<b>Perceptions of necessity of <i>wasta</i> to access care</b>				
Saudi	492	2.92	1.04	<i>t</i> (574) = -0.855, <i>p</i> = 0.393
Non-Saudi	84	3.02	1.00	

\* Statistically significant ( $p < 0.05$ )

**Table 11.23: Differences between nationality for the dimensions (sub-scales) of the questionnaire**

#### 11.6.3.4 *Public attitudes towards the health system of KSA and education level*

One-way ANOVAs were conducted to investigate possible differences between groups with different education levels in each of the dimensions. Analysis of variance using Levene's test for homogeneity revealed homogeneity of the variances between the different categories in all the dimensions (Field, 2009).

Means and standard deviations of level of education categories for each dimension and their significance appear in Table 11.24. The results revealed statistically significant differences for all the dimensions apart from 'Perceptions of public health status', 'Affordability of care', and 'Perceptions of the necessity of *wasta* to access care'.

For MOH financing of the government health sector dimension, statistically significant differences were found between participants with different educational level ( $F(2, 569) = 7.06$ ,  $p = 0.001$ ). To investigate these differences, an ANOVA Bonferroni post hoc test was used. Analysis of the post hoc test revealed statistically significant differences between participants with no degree and participants with postgraduate degrees ( $p = 0.001$ ); see Appendix XX, Table-c. Analysis of means shows that participants with no degree seemed to have a more positive perception of the way in which the MOH finance government health sector and the free-of-charge services available to them than participants with high educational levels (postgraduate degree). However, the effect size of this difference was small ( $\eta^2 = .024$ ; Ritcharson, 2011).

For 'Access and organisation of the government health sector dimension', statistically significant differences were found between participants with different educational levels ( $F(2, 629) = 8.582$ ,  $p < 0.001$ ). To investigate these differences, an ANOVA Bonferroni post hoc test was used. Analysis revealed statistically significant differences between participants with no degree and participants with bachelor's degrees ( $p = 0.002$ ) and between participants with no

degree and participants with postgraduate degrees ( $p = 0.001$ ); see Appendix XX, Table d. Analysis of means shows that participants with postgraduate degrees have a more negative perception of the way in which the government health sector is organised and their ability to access government care compared with participants with lower educational levels, but the effect size of this difference was small ( $\eta^2 = .027$ ; Ritchardson, 2011).

For 'Infrastructure and location of healthcare services dimension', statistically significant differences were found between participants with different educational level ( $F(2, 617) = 3.131$ ,  $p = 0.044$ ). To investigate these differences, an ANOVA Bonferroni post hoc test was used. Analysis revealed statistically significant differences between participants with no degree and participants with postgraduate degrees ( $p = 0.038$ ); see Appendix XX, Table-e. Analysis of means shows that participants with no degree have more neutral-positive attitudes than participants with postgraduate degrees. However, the effect size of this difference was small ( $\eta^2 = .010$ ; Ritchardson, 2011).

For 'Doctor-patient communication dimension', statistically significant differences were found between participants with different educational levels ( $F(2, 616) = 3.239$ ,  $p = 0.04$ ). To investigate these differences, an ANOVA Bonferroni post hoc test was used. Analysis revealed statistically significant differences between participants with no degree and participants with postgraduate degrees ( $p = 0.043$ ); see Appendix XX, Table-f. Analysis of means shows again that participants with no degree have more neutral-positive attitudes than participants with postgraduate degrees. However, the effect size of this difference was small ( $\eta^2 = .010$ ; Ritchardson, 2011).

For 'MOH monitoring of the private health sector', statistically significant differences were found between participants with different educational levels ( $F(2, 601) = 7.792$ ,  $p < 0.001$ ). To investigate these differences, an ANOVA Bonferroni post hoc test was used. Analysis revealed statistically significant differences between participants with no degree and participants with bachelor's degrees ( $p = 0.002$ ) and between participants with no degree and participants with postgraduate degrees ( $p = 0.002$ ); see Appendix XX, Table-g. Analysis of means shows that participants with no degree have more neutral-positive attitudes than participants with higher educational levels. The effect size of this difference was small ( $\eta^2 = .025$ ; Ritchardson, 2011).

For 'Access and organisation of private health sector dimension', statistically significant differences were found between participants with different educational levels ( $F(2, 594) = 8.269$ ,  $p < 0.001$ ). To investigate these differences, an ANOVA Bonferroni post hoc test was used. Analysis revealed statistically significant differences between participants with no degree and participants with bachelor's degrees ( $p = 0.009$ ) and between participants with no degree and participants with postgraduate degrees ( $p < 0.001$ ); see Appendix XX, Table-h. Analysis of means shows that participants with postgraduate degrees have a more negative perception compared with participants with lower educational levels. The effect size of this difference was

small ( $\eta^2 = .027$ ; Ritchardson, 2011).

For ‘Trust in the Saudi health system dimension’, statistically significant differences were found between participants with different educational levels ( $F(2, 625) = 10.758, p < 0.001$ ). To investigate these differences, an ANOVA Bonferroni post hoc test was used. Analysis revealed statistically significant differences between participants with no degree and participants with bachelor’s degrees ( $p = 0.021$ ) and between participants with no degree and participants with postgraduate degrees ( $p < 0.001$ ); see Appendix XX, Table-i. Analysis of means shows that participants with no degree have a more neutral-positive than participants with higher educational levels. However, the effect size of this difference was small ( $\eta^2 = .033$ ; Ritchardson, 2011).

Dimension (sub-scale)	<i>n</i>	Mean	<i>SD</i>	One-way ANOVA
<b>Perceptions of public health status in KSA</b>				
No degree	164	3.43	0.69	$F(2, 585) = 0.018, p = 0.982$
Bachelor’s degree	354	3.31	0.71	
Postgraduate degree	101	3.22	0.65	
<b>MOH’s financing of the government health sector</b>				
No degree	142	3.27	0.81	$F(2, 569) = 7.06, p = 0.001^*$
Bachelor’s degree	332	3.07	0.87	
Post graduate degree	98	2.85	0.90	
<b>Access and organisation of the government health sector</b>				
No degree	164	2.98	0.75	$F(2, 629) = 8.582, p < 0.001^*$
Bachelor’s degree	362	2.73	0.80	
Postgraduate degree	106	2.62	0.71	
<b>Infrastructure and location of healthcare services</b>				
<b>No degree</b>	<b>164</b>	<b>3.35</b>	<b>0.69</b>	$F(2, 617) = 3.131, p = 0.044^*$
Bachelor’s degree	354	3.27	0.67	
Postgraduate degree	102	3.14	0.63	
<b>Doctor-patient communication</b>				
No degree	164	3.43	0.69	$F(2, 616) = 3.239, p = 0.04^*$
Bachelor’s degree	354	3.31	0.71	
Postgraduate degree	101	3.22	0.65	
<b>Affordability of care</b>				
No degree	149	2.73	0.87	$F(2, 567) = 0.185, p = 0.831$
Bachelor’s degree	332	2.70	0.85	
Post graduate degree	89	2.66	0.81	
<b>MOH monitoring of the private health sector</b>				
No degree	155	2.90	0.80	$F(2, 601) = 7.792, p < 0.001^*$
Bachelor’s degree	351	2.63	0.80	
Postgraduate degree	98	2.54	0.85	

Dimension (sub-scale)	<i>n</i>	Mean	<i>SD</i>	One-way ANOVA
<b>Access and organisation of the private health sector</b>				
No degree	155	3.32	0.75	<i>F</i> (2, 594) = 8.269, <i>p</i> < .001*
Bachelor's degree	345	3.08	0.84	
Postgraduate degree	97	2.91	0.82	
<b>Trust in the Saudi health system</b>				
No degree	160	3.51	0.85	<i>F</i> (2, 625) = 10.758, <i>p</i> < 0.001*
Bachelor's degree	364	3.28	0.84	
Postgraduate degree	104	3.01	0.94	
<b>Perceptions of necessity of wasta to access care</b>				
No degree	142	3.05	1.01	<i>F</i> (2, 572) = 2.753, <i>p</i> = 0.065
Bachelor's degree	332	3.93	1.04	
Postgraduate degree	101	2.93	1.13	

\* Statistically significant ( $p < 0.05$ )

**Table 11.24: Differences between levels of education categories for the dimensions (sub-scales) of the questionnaire**

#### 11.6.3.5 Public attitudes towards the health system of KSA and income

One-way ANOVAs were conducted to investigate possible differences amongst groups with different monthly incomes in each of the dimensions. Analysis of variance using Levene's test for homogeneity revealed homogeneity of the variances between the different categories in all the dimensions (Field, 2009).

Means and standard deviations of income categories for each dimension and their significance appear in Table 11.25. The results revealed statistically significant differences for four of the dimensions.

For 'Access and organisation of the government health sector dimension, statistically significant differences were found between participants with different monthly incomes ( $F(4, 562) = 4.139$ ,  $p = 0.003$ ). To investigate these differences, an ANOVA Bonferroni post hoc test was used. Analysis revealed statistically significant differences between participants who earn a monthly income less than 5,000 SR and participants who earn a monthly income of 20,000 and above ( $p = 0.007$ ) and between participants who earn a monthly income less than 5,000 to 9,000 SR and participants who earn a monthly income of 20,000 and above ( $p = 0.015$ ); see Appendix XX, Table-j. Analysis of means shows that participants with high economic class have a more negative perception than participants of low and low-upper economic class. The effect size of this difference was small ( $\eta^2 = .029$ ; Ritchardson, 2011).

For 'MOH monitoring of the private health sector', statistically significant differences were found between participants of different economic classes ( $F(4, 539) = 9.458$ ,  $p < 0.001$ ). To investigate these differences, an ANOVA Bonferroni post hoc test was used. Analysis revealed

statistically significant differences between participants with less than 5,000 SR monthly income and participants with 10,000 to 14,900 SR monthly income ( $p < 0.001$ ) and between participants with less than 5,000 SR monthly income and participants with 15,000 to 19,000 SR monthly income ( $p < 0.001$ ) and between participants with less than 5,000 SR monthly income and participants with monthly income of 20,000 SR and above ( $p < 0.001$ ); see Appendix XX, Table-k. Analysis of means shows that the more income participants earn on a monthly basis, the more negative the attitude they had on this dimension. The effect size of this difference was moderate ( $\eta^2 = 0.066$ ; Ritchardson, 2011).

For ‘Access and organisation of private health sector dimension’, statistically significant differences were found between participants with different educational levels ( $F(4, 535) = 7.066, p < 0.001$ ). To investigate these differences, an ANOVA Bonferroni post hoc test was used. Analysis revealed statistically significant differences between participants with less than 5000 SR monthly income and participants with 10,000 to 14,900 SR monthly income ( $p = 0.046$ ), between participants with less than 5,000 SR monthly income and participants with 15,000 to 19000 SR monthly income ( $p = 0.003$ ), and between participants with less than 5,000 SR monthly income and participants with a monthly income of 20,000 SR and above ( $p < 0.001$ ); see Appendix XX, Table-l. Analysis of means shows that participants of low economic class had a more neutral-positive perception than participants of a higher economic class. The effect size of this difference was moderate ( $\eta^2 = .050$ ; Ritchardson, 2011).

For ‘Trust in the Saudi health system’ dimension, statistically significant differences were found between participants of different educational levels ( $F(4, 561) = 3.805, p = 0.005$ ). To investigate these differences, an ANOVA Bonferroni post hoc test was used. Analysis revealed statistically significant differences between participants with less than 5,000 SR monthly income and participants with 10,000 to 14,900 SR monthly income ( $p = 0.046$ ), and between participants with less than 5,000 SR monthly income and participants with 15,000 to 19,000 SR monthly income ( $p = 0.006$ ); see Appendix XX, Table-m. Analysis of means shows that participants with less than 5,000 SR monthly income had a more neutral-positive perception than participants with monthly incomes of 10,000 to 14,900 or 15,000 to 19,000 SR. However, the effect size of this difference was small ( $\eta^2 = .026$ ; Ritchardson, 2011), indicating that participants of different income categories held neutral trust on the Saudi health system.

Dimension (sub-scale)	<i>n</i>	Mean	<i>SD</i>	One-way ANOVA
<b>Perceptions of public health status in KSA</b>				
0–less than 5,000	148	3.34	0.77	$F(4, 524) = 1.634, p = 0.164$
5,000–9,999	134	3.44	0.81	
10,000–14,999	131	3.26	0.81	
15,000–19,999	61	3.15	0.79	
20,000 and above	55	3.38	0.84	

Dimension (sub-scale)	<i>n</i>	Mean	<i>SD</i>	One-way ANOVA
<b>MOH's financing of the government health sector</b>				
0-less than 5,000	145	3.12	0.82	$F(4, 514) = 1.598, p = 0.173$
5,000-9,999	126	3.15	0.88	
10,000-14,999	131	3.04	0.89	
15,000-19,999	60	2.97	0.92	
20,000 and above	57	2.84	0.90	
<b>Access and organisation of the government health sector</b>				
0-less than 5,000	167	2.87	0.80	$F(4, 562) = 4.139, p = 0.003^*$
5,000-9,999	139	2.86	0.78	
10,000-14,999	140	2.72	0.75	
15,000-19,999	64	2.61	0.75	
20,000 and above	57	2.47	0.76	
<b>Infrastructure and location of healthcare services</b>				
0-less than 5,000	166	3.32	0.67	$F(4, 553) = 1.360, p = 0.247$
5,000-9,999	139	3.30	0.69	
10,000-14,999	136	3.20	0.65	
15,000-19,999	61	3.16	0.66	
20,000 and above	56	3.17	0.66	
<b>Doctor-patient communication</b>				
0-less than 5,000	165	3.40	0.73	$F(4, 553) = 1.437, p = 0.22$
5000-9,999	139	3.36	0.74	
10,000-14,999	137	3.28	0.66	
15,000-19,999	61	3.21	0.66	
20,000 and above	56	3.21	0.65	
<b>Affordability of care</b>				
0-less than 5000	149	2.67	0.83	$F(4, 510) = 1.563, p = 0.16$
5000-9,999	132	2.57	0.82	
10,000-14,999	128	2.66	0.89	
15,000-19,999	56	2.74	0.76	
20,000 and above	50	2.92	0.83	
<b>MOH monitoring of the private health sector</b>				
0-less than 5000	158	2.97	0.83	$F(4, 539) = 9.458, p < 0.001^*$
5,000-9,999	137	2.71	0.77	
10,000-14,999	131	2.55	0.81	
15,000-19,999	62	2.41	0.75	
20,000 and above	56	2.38	0.79	
<b>Access and organisation of the private health sector</b>				
0-less than 5,000	155	3.32	0.75	$F(4, 535) = 7.066, p < 0.001^*$
5,000-9,999	134	3.16	0.77	
10,000-14,999	134	3.06	0.87	



Dimension (sub-scale)	<i>n</i>	Mean	<i>SD</i>	One-way ANOVA
15,000–19,999	61	2.88	0.76	
20,000 and above	56	2.75	0.89	
<b>Trust in the Saudi health system</b>				
0–less than 5,000	166	3.47	0.87	<i>F</i> (4, 561) = 3.805, <i>p</i> = 0.005*
5,000–9,999	139	3.25	0.89	
10,000–14,999	140	3.19	0.85	
15,000–19,999	64	3.03	0.85	
20,000 and above	57	3.22	0.95	
<b>Perceptions of necessity of wasta to access care</b>				
0–less than 5,000	148	3.02	0.99	<i>F</i> (4, 516) = 1.938, <i>p</i> = 0.103
5,000–9,999	130	2.98	1.07	
10,000–14,999	132	2.95	1.04	
15,000–19,999	57	2.61	1.10	
20,000 and above	54	2.78	0.98	

\* Statistically significant ( $p < 0.05$ )

**Table 11.25: Differences between income categories for the dimensions (sub-scales) of the questionnaire**

#### 11.6.3.6 Public attitudes towards the health system of KSA and occupation

One-way ANOVAs were conducted to investigate possible differences between groups with different occupations (another predictor of participants' socio-economic class) and each of the dimensions. Analysis of variance using Levene's test for homogeneity revealed homogeneity of the variances between the different categories in all the dimensions (Field, 2009).

Means and standard deviations of occupation categories for each dimension and their significance appear in Table 11.26. The results revealed statistically significant differences for five of the dimensions

For the 'Doctor-patient communication' dimension, statistically significant differences were found between participants with different occupation categories ( $F(3, 492) = 3.578, p = 0.014$ ). To investigate these differences, an ANOVA Bonferroni post hoc test was used. Analysis revealed statistically significant differences between unemployed participants and participants with professional occupations or who described themselves as business owners ( $p = 0.029$ ) and between employed participants and participants with routine and manual occupations ( $p = 0.017$ ); see Appendix XX, Table-n. Analysis of means shows that participants with no job had a more neutral-positive perception than participants with professional occupations and/or business owners and participants with routine and manual occupation. However, the effect size of this difference was small ( $\eta^2 = .021$ ; Ritchardson, 2011).

For MOH affordability of care dimension, statistically significant differences were found

between participants with different occupation categories ( $F(3, 452) = 4.292, p = 0.005$ ). To investigate these differences, an ANOVA Bonferroni post hoc test was used. Analysis revealed statistically significant differences between participants with professional occupations and/or business owners and participants with routine and manual occupations ( $p = 0.005$ ), see Appendix XX; Table-o. Analysis of means shows that participants with routine and manual occupations held more negative attitudes towards affordability of healthcare services than participants with professional occupations and/or business owners, with the latter holding nearly to neutral attitudes. However, the effect size of this difference was small ( $\eta^2 = .028$ ; Ritchardson, 2011).

For ‘MOH monitoring of the private health sector’, statistically significant differences were found between participants in different occupation categories ( $F(3, 483) = 4.542, p = 0.004$ ). To investigate these differences, an ANOVA Bonferroni post hoc test was used. Analysis revealed statistically significant differences between retired participants and participants with routine and manual occupations ( $p = 0.018$ ) and between retired participants and participants with no job ( $p = 0.002$ ); see Appendix XX, Table-p. Analysis of means shows retired participants held more negative attitudes towards the that MOH monitors the private health sector than participants with routine and manual occupations and participants with no job. However, the effect size of this difference was small ( $\eta^2 = .027$ ; Ritchardson, 2011), indicating that participants in different occupation categories held a negative attitude towards this dimension.

For the ‘Access and organisation of private health sector dimension’, statistically significant differences were found between participants in different occupation categories ( $F(3, 473) = 4.248, p = 0.006$ ). To investigate these differences, an ANOVA Bonferroni post hoc test was used. Analysis revealed statistically significant differences between unemployed participants and participants with routine and manual occupations ( $p = 0.039$ ) and between retired participants and unemployed participants ( $p = 0.006$ ); see Appendix XX, Table-q. Analysis of means shows retired participants held more negative attitudes than participants with routine and manual occupations and participants with no job. However, the effect size of this difference was small ( $\eta^2 = 0.026$ ; Ritchardson, 2011).

For the ‘Trust in the Saudi health system’ dimension, statistically significant differences were found between participants with different occupation categories ( $F(2, 625) = 10.758, p < 0.001$ ). To investigate these differences, an ANOVA Bonferroni post hoc test was used. Analysis revealed statistically significant differences between unemployed participants and participants with routine and manual occupation ( $p = 0.021$ ); see Appendix XX, Table-r. Analysis of means shows participants with no job held a more neutral-positive than participants with routine and manual occupations. However, the effect size of this difference was small ( $\eta^2 = .017$ ; Ritchardson, 2011).

Dimension (subscale)	<i>n</i>	Mean	<i>SD</i>	One-way ANOVA
<b>Perceptions of public health status in KSA</b>				
Professional and business owners	86	3.33	0.82	$F(3, 466) = 0.737, p = 0.53$
Manual and routine	250	3.29	0.83	
Retired	44	3.25	0.89	
Not employed	90	3.42	0.70	
<b>MOH's financing of the government health sector</b>				
Professional and business owners	78	3.00	0.90	$F(3,450) = 1.272, p = 0.283$
Manual and routine	245	3.10	0.88	
Retired	44	3.00	0.91	
Not employed	87	3.24	0.83	
<b>Access and organisation of the government health sector</b>				
Professional and business owners	91	2.71	0.74	$F(3, 502) = 1.409, p = 0.239$
Manual and routine	275	2.80	0.81	
Retired	44	2.61	0.74	
Not employed	96	2.87	0.77	
<b>Infrastructure and location of healthcare services</b>				
Professional and business owners	91	3.21	0.67	$F(3, 492) = 2.011, p = 0.111$
Manual and routine	269	3.25	0.67	
Retired	42	3.35	0.53	
Not employed	94	3.41	0.61	
<b>Doctor-patient communication</b>				
Professional and business owners	91	3.27	0.67	$F(3, 492) = 3.578, p = 0.014^*$
Manual and routine	269	3.31	0.70	
Retired	43	3.31	0.56	
Not employed	93	3.55	0.66	
<b>Affordability of care</b>				
Professional and business owners	80	2.99	0.94	$F(3, 452) = 4.292, p = 0.005^*$
Manual and routine	252	2.62	0.82	
Retired	41	2.60	0.79	
Not employed	83	2.80	0.84	
<b>MOH monitoring of the private health sector</b>				
Professional and business owners	88	2.65	0.76	$F(3, 483) = 4.542, p = 0.004^*$
Manual and routine	264	2.70	0.84	
Retired	41	2.29	0.76	
Not employed	94	2.85	0.83	
<b>Access and organisation of the private health sector</b>				
Professional and business owners	87	3.15	0.81	$F(3, 473) = 4.248, p = 0.006^*$
Manual and routine	260	3.07	0.83	
Retired	42	2.83	0.89	
Not employed	88	3.34	0.76	

Dimension (subscale)	<i>n</i>	Mean	<i>SD</i>	One-way ANOVA
<b>Trust in the Saudi health system</b>				
Professional and business owners	89	3.26	0.85	<i>F</i> (3, 497) = 2.949, <i>p</i> = 0.032*
Manual and routine	271	3.23	0.91	
Retired	44	3.32	0.70	
Not employed	97	3.53	0.79	
<b>Perceptions of necessity of wasta to access care</b>				
Professional and business owners	82	3.00	1.06	<i>F</i> (3, 451) = 1.936, <i>p</i> = 0.123
Manual and routine	248	2.82	1.02	
Retired	39	3.03	1.17	
Not employed	86	3.10	1.02	

\* Statistically significant ( $p < 0.05$ )

**Table 11.26: Differences between occupation categories for the dimensions (sub-scales) of the questionnaire**

#### 11.6.3.7 *Public attitudes towards the health system of KSA and marital status*

One-way ANOVAs were conducted to investigate possible differences between groups with different marital statuses and each of the dimensions. Analysis of variance using Levene's test for homogeneity revealed homogeneity of the variances between the different categories in all the dimensions (Field, 2009).

Means and standard deviations of marital status for each dimension and their significance appear in Table 11.27. The results revealed statistically significant differences for three the dimensions:

For the 'Access and organisation of government health sector' dimension, statistically significant differences were found between participants with different marital statuses ( $F(2, 622) = 3.194, p = 0.042$ ). To investigate these differences, an ANOVA Bonferroni post hoc test was used. Analysis revealed no statistical significant differences between groups with different marital statuses; see Appendix XX, Table-s.

For 'MOH monitoring of the private health sector', statistically significant differences were found between participants with different marital statuses ( $F(2, 595) = 4.567, p = 0.011$ ). To investigate these differences, an ANOVA Bonferroni post hoc test was used. Analysis revealed statistically significant differences between single and married participants ( $p = .008$ ); see Appendix XX, Table-t. Analysis of means shows married participants held more negative attitudes towards than single participants. However, the effect size of this difference was small ( $\eta^2 = .015$ ; Ritchardson, 2011), indicating that participants with different marital statuses held a negative attitude towards this dimension.

For the 'Access and organisation of private health sector' dimension, statistically significant differences were found between participants with different marital statuses ( $F(2, 587) = 3.989, p$

= 0.019). To investigate these differences, an ANOVA Bonferroni post hoc test was used. Analysis revealed statistically significant differences between single and married participants ( $p = 0.015$ ); see Appendix XX, Table-u. Analysis of means shows single participants held neutral-positive attitudes compared to married participants. However, the effect size of this difference was small ( $\eta^2 = .013$ ; Ritchardson, 2011).

Dimension (subscale)	<i>n</i>	Mean	<i>SD</i>	One-way ANOVA
<b>Perceptions of public health status in KSA</b>				
Single	144	3.40	0.75	$F(2, 580) = 1.224, p = 0.295$
Married	408	3.29	0.83	
Divorced, separated, or widowed	31	3.43	0.97	
<b>MOH's financing of the government health sector</b>				
Single	147	3.08	0.85	$F(2, 567) = 1.913, p = 0.149$
Married	393	3.07	0.89	
Divorced, separated, or widowed	30	3.39	0.74	
<b>Access and organisation of the government health sector</b>				
Single	160	2.87	0.80	$F(2, 622) = 3.194, p = 0.042^*$
Married	430	2.73	0.78	
Divorced, separated, or widowed	35	3.00	0.70	
<b>Infrastructure and location of health care services</b>				
Single	157	3.31	0.68	$F(2, 610) = 0.356, p = 0.701$
Married	423	3.25	0.67	
Divorced, separated, or widowed	33	3.26	0.71	
<b>Doctor-patient communication</b>				
Single	156	3.42	0.74	$F(2, 609) = 1.702, p = 0.183$
Married	423	3.30	0.68	
Divorced, separated, or widowed	33	3.28	0.67	
<b>Affordability of care</b>				
Single	139	2.68	0.84	$F(2, 560) = 0.061, p = 0.941$
Married	395	2.70	0.85	
Divorced, separated, or widowed	29	2.70	0.84	
<b>MOH monitoring of the private health sector</b>				
Single	152	2.85	0.84	$F(2, 595) = 4.567, p = 0.011^*$
Married	415	2.62	0.80	
Divorced, separated, or widowed	31	2.68	0.87	
<b>Access and organisation of the private health sector</b>				
Single	150	3.27	0.77	$F(2, 587) = 3.989, p = 0.019^*$
Married	409	3.05	0.84	
Divorced, separated, or widowed	31	3.08	0.70	
<b>Trust in the Saudi health system</b>				
Single	162	3.34	0.85	$F(2, 617) = 1.829, p = 0.161$

Dimension (subscale)	<i>n</i>	Mean	<i>SD</i>	One-way ANOVA
Married	424	3.25	0.89	
Divorced, separated, or widowed	34	3.52	0.80	
Perceptions of necessity of wasta to access care				
Single	143	2.87	1.06	$F(2, 566) = 2.408, p = 0.091$
Married	398	2.92	1.02	
Divorced, separated, or widowed	28	3.33	1.11	

\*Statistically significant ( $p < 0.05$ )

**Table 11.27: Differences between marital status categories for the dimensions (sub-scales) of the questionnaire**

### 11.6.3.8 Public attitudes towards the health system of KSA and place of residence

Independent samples *t*-tests were conducted for each dimension (sub-scale) to investigate whether participants living in a city and participants living in rural areas differed in any of the sub-scales. Means and standard deviations of place of residence for each dimension and their significance appear in Table 11.28. The results revealed statistically significant differences between these two groups in four dimensions

Statistically significant differences were found between the two groups in ‘MOH’s financing of the government health sector’ ( $t(530) = -2.399, p = 0.017$ ). Participants living in rural areas held more positive attitudes than participants who stated that their place of residence was a city, but the effect size of this difference was small ( $d = 0.32$ ; Cohen, 1988).

Statistically significant differences were found between the two groups in ‘Access and organisation of government health sector dimension’ ( $t(587) = -3.201, p = 0.001$ ). Participants living in a city held more negative attitudes than participants living in rural areas, with the latter holding neutral attitudes. The effect size of this difference was also small ( $d = 0.37$ ; Cohen, 1988).

Statistically significant differences were found between the two groups in the ‘Affordability of care’ dimension ( $t(531) = -2.376, p = 0.018$ ). Participants living in a city held more negative attitudes than participants living in a city. However, the effect size of this difference was quite small ( $d = 0.27$ ; Cohen, 1988), indicating that despite this significant difference, both groups were almost alike in their attitudes and more likely to be dissatisfied with affordability of care.

Statistically significant differences were found between the two groups in ‘MOH monitoring of the private health sector’ dimension ( $t(561) = -3.072, p = 0.002$ ). Participants living in a city held more negative attitudes towards this dimension than participants living in rural areas. However, the effect size of this difference was small ( $d = 0.36$ ; Cohen, 1988), indicating that despite this significant difference, both groups were almost alike in their attitudes and more likely to be dissatisfied with the way in which the MOH monitors the private care in KSA.

Dimension (sub-scale)	<i>n</i>	Mean	<i>SD</i>	Independent sample <i>t</i> -test
<b>Perceptions of public health status in KSA</b>				
City	482	3.33	0.79	<i>t</i> (548) = 0.887, <i>p</i> = 0.375
Village	68	3.24	0.98	
<b>MOH's financing of the government health sector</b>				
City	470	3.06	0.87	<i>t</i> (530) = -2.399, <i>p</i> = 0.017*
Village	62	3.34	0.88	
<b>Access and organisation of the government health sector</b>				
City	507	2.76	0.78	<i>t</i> (587) = -3.201, <i>p</i> = 0.001*
Village	82	3.05	0.77	
<b>Infrastructure and location of health care services</b>				
City	495	3.26	0.66	<i>t</i> (575) = -0.471, <i>p</i> = 0.638
Village	82	3.30	0.67	
<b>Doctor-patient communication</b>				
City	494	3.34	0.69	<i>t</i> (574) = 1.398, <i>p</i> = 0.163
Village	82	3.22	0.67	
<b>Affordability of care</b>				
City	455	2.66	0.82	<i>t</i> (531) = -2.376, <i>p</i> = 0.018*
Village	78	2.90	0.93	
<b>MOH monitoring of the private health sector</b>				
City	486	2.66	0.81	<i>t</i> (561) = -3.072, <i>p</i> = 0.002*
Village	77	2.97	0.91	
<b>Access and organisation of the private health sector</b>				
City	477	3.12	0.83	<i>t</i> (554) = -1.197, <i>p</i> = 0.232
Village	79	3.23	0.74	
<b>Trust in the Saudi health system</b>				
City	477	3.12	0.83	<i>t</i> (584) = -0.999, <i>p</i> = 0.318
Village	79	3.23	0.74	
<b>Perceptions of necessity of waqta to access care</b>				
City	466	2.94	1.03	<i>t</i> (532) = 0.029, <i>p</i> = 0.977
Village	68	2.93	1.08	

\*Statistically significant ( $p < 0.05$ )

**Table 11.28: Differences between place of residence for the dimensions (sub-scales) of the questionnaire**

#### 11.6.3.9 Public attitudes towards the health system of KSA and SRHS

One-way ANOVAs were conducted to investigate possible differences between groups with different SRHS and each of the dimensions. Analysis of variance using Levene's test for homogeneity revealed homogeneity of the variances between the different categories in all the dimensions (Field, 2009).

Means and standard deviations of SRHS for each dimension and their significance appear in Table 11.29. The results revealed statistically significant differences for only one dimension, ‘Trust in the Saudi health system’.

Statistically significant differences were found between participants with different SRHS and the ‘Trust in the Saudi health system’ dimension ( $F(2, 578) = 3.474, p = 0.032$ ). To investigate these differences, an ANOVA Bonferroni post hoc test was used. Analysis revealed statistically significant differences between participants who described their health status as poor or very poor and participants with very good or excellent SRHS ( $p = 0.036$ ); see Appendix XX, Table-v. Analysis of means shows Participants with poor or very poor SRHS held less trust in the Saudi health system compared to participants with very good or excellent SRHS. However, the effect size of this difference was small ( $\eta^2 = 0.012$ ; Ritchardson, 2011).

With regards to the remaining dimensions, no statistically significant differences existed amongst the groups with different SRHS ratings.

Dimension (subscale)	<i>n</i>	Mean	<i>SD</i>	ANOVA
<b>Perceptions of public health status in KSA</b>				
Excellent and very good	386	3.34	0.81	$F(2, 545) = 0.599, p = 0.55$
Good	144	3.25	0.85	
Poor and very poor	15	3.33	0.85	
<b>MOH’s financing of the government health sector</b>				
Excellent and very good	364	3.10	0.86	$F(2, 525) = 0.626, p = 0.535$
Good	149	3.09	0.92	
Poor and very poor	15	2.84	0.86	
<b>Access and organisation of the government health sector</b>				
Excellent and very good	416	2.81	0.80	$F(2, 582) = 0.519, p = 0.595$
Good	154	2.79	0.78	
Poor and very poor	15	2.60	0.70	
<b>Infrastructure and location of health care services</b>				
Excellent and very good	408	3.30	0.65	$F(2, 569) = 1.820, p = 0.163$
Good	150	3.20	0.68	
Poor and very poor	14	3.08	0.58	
<b>Doctor-patient communication</b>				
Excellent and very good	406	3.33	0.71	$F(2, 568) = 0.215, p = 0.806$
Good	151	3.32	0.65	
Poor and very poor	14	3.21	0.65	
<b>Affordability of care</b>				
Excellent and very good	374	2.74	0.84	$F(2, 526) = 2.35, p = .096$
Good	140	2.62	0.81	
Poor and very poor	15	2.35	0.92	
<b>MOH monitoring of the private health sector</b>				



Dimension (subscale)	<i>n</i>	Mean	<i>SD</i>	ANOVA
Excellent and very good	400	2.73	0.83	$F(2, 555) = 1.034, p = 0.356$
Good	144	2.62	0.84	
Poor and very poor	14	2.61	0.60	
<b>Access and organisation of the private health sector</b>				
Excellent and very good	391	3.18	0.79	$F(2, 548) = 2.426, p = 0.089$
Good	147	3.03	0.91	
Poor and very poor	13	2.92	0.63	
<b>Trust in the Saudi health system</b>				
Excellent and very good	412	3.33	0.85	$F(2, 578) = 3.474, p = 0.032^*$
Good	154	3.25	0.89	
Poor and very poor	15	2.76	1.01	
<b>Perceptions of necessity of wasta to access care</b>				
Excellent and very good	374	2.99	1.03	$F(2, 527) = 1.423, p = 0.242$
Good	141	2.82	1.06	
Poor and very poor	15	2.83	0.99	

\* Statistically significant ( $p < 0.05$ )

**Table 11.29: Differences between SRHS categories for the dimensions (sub-scales) of the questionnaire**

#### 11.6.3.10 *Public attitudes towards the health system of KSA and health insurance status*

Independent samples *t*-tests were conducted for each dimension (sub-scale) to investigate whether participants with health insurance and participants without health insurance differed in any of the subscales. Means and standard deviations of health insurance status for each dimension and their significance appear in Table 11.30. The results revealed statistically significant differences for six dimensions.

Statistically significant differences were found in ‘Access and organisation of government health sector’ ( $t(799) = 2.910, p = 0.004$ ). Participants with no health insurance held more negative attitudes towards this dimension compared to participants with health insurance. However, the effect size of this difference was small ( $d = 0.22$ ; Cohen, 1988), indicating that despite this significant difference, both groups were almost alike in their attitudes and more likely to be dissatisfied with the way in which government health sector is organised and their ability to access care in this sector.

Statistically significant differences were found in ‘Infrastructure and location of health care services’ ( $t(785) = 3.051, p = 0.002$ ). Participants with health insurance held more neutral-positive attitudes in this dimension compared to participants without health insurance. However, the effect size of this difference was also small ( $d = 0.23$ ; Cohen, 1988).

Statistically significant differences were found in ‘Affordability of care’ ( $t(717) = 8.150, p < 0.001$ ). Participants without health insurance held more negative attitudes on their ability to afford healthcare compared to participants with health insurance. The effect size of this difference was moderate ( $d = 0.61$ ; Cohen, 1988).

Statistically significant differences were found in ‘MOH monitoring of the private health sector’ ( $t(756) = 2.723, p = 0.007$ ). Participants without health insurance held more negative attitudes towards this dimension compared to participants with health insurance. However, the effect size of this difference was small ( $d = 0.37$ ; Cohen, 1988), indicating that the two groups held negative attitude towards this dimension.

Statistically significant differences were found in ‘Access and organisation of private health sector’ ( $t(766) = 0.909, p < 0.001$ ). Participants with health insurance held more neutral-positive attitudes compared to participants without health insurance. However, the effect size of this difference was small ( $d = 0.20$ ; Cohen, 1988), indicating that participants in both groups are neutral in their perception of this dimension.

Statistically significant differences were found in ‘Trust in the Saudi health system’ ( $t(793) = 3.519, p < 0.001$ ). Similar to ‘Access and organisation of private health sector’, participants with health insurance held more neutral-positive attitudes compared to participants without health insurance. However, the effect size of this difference was small ( $d = 0.27$ ; Cohen, 1988), indicating that participants in both groups are neutral in their perception of this dimension.

Dimension (subscale)	<i>n</i>	Mean	<i>SD</i>	Independent samples <i>t</i> -test
<b>Perceptions of public health status in KSA</b>				
Health insured	301	3.36	.82	$t(741) = 1.488, p = 0.137$
Not health insured	442	3.27	.81	
<b>MOH’s financing of the government health sector</b>				
Health insured	295	3.12	0.87	$t(731) = 1.86, p = 0.062$
Not health insured	438	2.99	0.88	
<b>Access and organisation of the government health sector</b>				
Health insured	336	2.87	.78	$t(799) = 2.910, p = 0.004^*$
Not health insured	465	2.70	.78	
<b>Infrastructure and location of health care services</b>				
Health insured	336	3.35	0.65	$t(785) = 3.051, p = 0.002^*$
Not health insured	451	3.21	0.59	
<b>Doctor-patient communication</b>				
Health insured	336	3.37	0.69	$t(784) = 0.1470, p = 0.142$
Not health insured	450	3.30	0.62	
<b>Affordability of care</b>				
Health insured	308	2.96	.82	$t(717) = 8.150, p < 0.001^*$
Not health insured	411	2.46	.82	

Dimension (subscale)	<i>n</i>	Mean	<i>SD</i>	Independent samples <i>t</i> -test
<b>MOH monitoring of the private health sector</b>				
Health insured	326	2.83	.82	<i>t</i> (766) = .909, <i>p</i> < 0.001*
Not health insured	442	2.53	.81	
<b>Access and organisation of the private health sector</b>				
Health insured	327	3.20	.81	<i>t</i> (756) = 2.723, <i>p</i> = .007*
Not health insured	431	3.03	.86	
<b>Trust in the Saudi health system</b>				
Health insured	330	3.42	.73	<i>t</i> (793) = 3.519, <i>p</i> < 0.001*
Not health insured	465	3.21	.85	
<b>Perceptions of necessity of wasta to access care</b>				
Health insured	296	2.91	1.03	<i>t</i> (728) = -.620, <i>p</i> = 0.535
Not health insured	434	2.96	1.01	

\* Statistically significant (*p* < 0.05)

**Table 11.30: Differences between health insurance status for the dimensions (sub-scales) of the questionnaire**

#### ***11.6.4 Perceptions of insurance coverage in KSA and type of insurance***

This section presents the differences between perceptions of insurance coverage in KSA between the health-insured sub-sample with different types of health insurance. One-way ANOVAs were conducted to investigate possible differences between groups with different type of insurance and the perceptions of health insurance in KSA dimensions. Analysis of variance using Levene's test for homogeneity revealed homogeneity of the variances between the different categories in the 'Perceptions of insurance coverage in KSA' dimension (Field, 2009).

Means and standard deviations of type of insurance for this dimension and their significance appear in Table 11.31. The results revealed high statistically significant differences ( $F(3, 306) = 14.820, p < 0.001$ ) between type of insurance and perceptions of insurance coverage in KSA. To investigate these differences, an ANOVA Bonferroni post hoc test was used. Analysis revealed statistically significant differences between participants with health insurance Class D or below and participants with VIP class or Class A ( $p < 0.001$ ) and between participants with health insurance Class D or below and participants with health insurance Class B to Class C ( $p = 0.002$ ); see Appendix XX, Table-w. Analysis of means shows participants with low health insurance coverage (i.e. Class D or below) held more negative attitudes towards this dimension compared to the other groups. The effect size of this difference was moderate but close to high ( $\eta^2 = .127$ ; Ritchardson, 2011).

Dimension (subscale)	<i>n</i>	Mean	<i>SD</i>	One-way ANOVA
<b>Perceptions of health insurance coverage in KSA</b>				
VIP and Class A	129	3.80	.70	<i>F</i> (3, 306) = 14.820, <i>p</i> < 0.001*
Class B and C	114	3.40	.86	
Class D or below	38	2.93	.89	
Other	29	4.01	.85	

**Table 11.31: Differences between type of health insurance for the ‘Perceptions of health insurance coverage in KSA’ dimension**

## 11.7 Discussion

This chapter has presented the results of the last stage of De Vaus’ (2002) questionnaire development to accomplish the study’s main aim: designing and validating a questionnaire that explores public attitudes towards the health system of KSA. This chapter discusses the answer to the third research question of the current research study: Which measures best capture the public’s attitudes towards the health system of KSA?

In order to answer this research question, after designing the questionnaire based on Phases 1 to 3 (presented in Chapter 9), qualitative validation of the questionnaire (content and face validity) was conducted. The questionnaire was then administered to a sample of participants living in the Eastern Province, KSA, and an assessment of the questionnaire’s quantitative validity and reliability tests were then carried out.

The process of establishing each survey item’s qualitative validity, content validity, and face validity was essential in indicating the appropriateness of each item and the performance dimensions used to design the questionnaire, as well as to check for cultural insensitivity and the clarity of items appearing on the questionnaire. Quantitatively testing the questionnaire’s validity was also essential to ensure that the questionnaire accurately described public opinion towards the health system and that all the items worked well together (i.e. reliability; Coaley, 2010; DeVellis, 2003; Streiner & Norman, 2008). The following section provides a discussion of the process that the researchers of the thesis followed to establish qualitative and quantitative validity.

### ***11.7.1 Qualitative validation of the questionnaire***

Qualitative evaluation of the questionnaire’s validity of the questionnaire is the minimum form of validation needed for a questionnaire to be accepted (Streiner & Norman, 2008). For this study, the evaluation involved conducting a panel review of experts to ascertain qualitatively that each survey item was valid and reliable in its measurement of public attitudes towards the health system of KSA. This experts’ panel review (*n* = 10) was used to minimise the limitations identified during the questionnaire’s design process. The review helped the researchers ascertain

the survey items' relevance to the performance dimensions used in designing the questionnaire (Davis, 1992), the cultural sensitivity of each item, and the respondents' ability to comprehend each item, with suggestions for editing or rewording unclear items (Tourangeau & Yan, 2007). The review also assisted with the elimination of redundant items (i.e. two or more items with the same meaning).

During the content validity stage, the researchers made extensive changes to the questionnaire based on the experts' judgment of each item. An assessment of item relevancy, wording, and appropriateness regarding cultural sensitivity was conducted. A second round in the content validity stage was considered, but due to each expert's in-depth assessment of and suggestions for the questionnaire item, as well as the thesis's time constraints, the researchers decided that one round of content validity was sufficient. Still, face validity with a sample of the target population was crucial.

An analysis of the questionnaire's face validity, conducted using a small sample of the target population ( $n = 25$ ), suggested that the items maintained high face validity. Participants commented on the questionnaire items according to their clarity, the likelihood that the target population would be able to answer the questions, the questionnaire layout and style (Parsian & Dunning, 2009), the length of the questionnaire, and whether the questionnaire failed to cover important items related to the evaluation of the Saudi health system and its performance. No major changes were made at this stage of qualitative validation.

After qualitative validation, the questionnaire contained 68 items. The researchers determined that the questionnaire's length represented a potential limitation in terms of administering the questionnaire to a sample of members of the public living in the Eastern Province, KSA. This would increase the likelihood of non-responders. However, a comparison with existing questionnaires identified in Chapter 4 and exploring public opinions about the health system found that many questionnaires are lengthy too (exceeding 100 items). These include the World Health Survey (WHS) (WHO, 2003), the Commonwealth Funds International health policy survey (2013), and PETU (Munro & Duckett, 2015). This might stem from the complexity of the topic, which requires dozens of items for measurement and therefore justifies the length of the designed questionnaire.

After qualitative validation of the questionnaire, the researchers distributed on-site and online questionnaires to a sample of adults living in the Eastern Province, KSA. This was done to establish the questionnaire's quantitative validity and reliability. A total of 813 usable questionnaires were received: 124 from on-site recruitments and 689 from online recruitments. Following is a discussion of the quantitative validation findings.

### ***11.7.2 Quantitative validation of the questionnaire***

A principle component analysis (PCA) was conducted on 61 attitude items; a separate PCA was conducted on the remaining seven items concerning the 'Perceptions of health insurance coverage' dimension, where only participants with health insurance were eligible to answer the items. The KMO for the data and Bartlett's test of sphericity suggested the high validity of the results and the meaningfulness of the factor solution obtained from factor analysis (Kaiser & Rice, 1974; Bartlett, 1937).

Quantitative validation resulted in a final questionnaire comprising 58 items, organised in a factor solution of five components. Then, a second-order PCA was conducted to measure the uni-dimensionality of each of the five sub-scales (i.e. dimensions) of public attitudes towards the health system of KSA. Based on PCA and internal reliability testing, our results confirmed that the most important dimensions capturing the public attitudes towards the health system of KSA were 'Perceptions of health status', 'MOH financing of the government health sector', 'Access to and organisation of the government health sector', 'Infrastructure and location of healthcare services', 'Doctor-patient communication', 'Affordability of care in KSA', 'MOH monitoring of the private health sector', 'Access to and organisation of the private health sector', and 'Trust in the Saudi health system' (Figure 11.9). Although items related to *wasta* ( $n = 2$ ) were discarded from the first PCA because of the low measures of sampling adequacy (MSA), it was important to test these two items together because of the emergence of *wasta* as an organisational barrier to accessing governmental health facilities in the qualitative FGDs. When these two items were tested separately using PCA, their loadings with each other were high (i.e. above 0.8), indicating the suitability of considering them as a scale. The latter scale was named 'Perceptions of the necessity of *wasta* to access care'.

Overall, the questionnaire demonstrated good psychometric properties in terms of construct validity and internal reliability. Internal consistency for the public attitudes towards the health system of KSA questionnaire was high (coefficient  $\alpha$  of 0.951), well above the minimum criteria of  $r > .7$  (Streiner & Norman, 2008). Internal consistency for each of the subscales was also high or acceptable, with coefficient's  $\alpha$  ranging from 0.540 to 0.889 (Streiner & Norman, 2008; Gliem & Gliem, 2003). Item-total correlations for each item were within the established criteria ( $r > .3$  and  $r < .9$ ; Tavakol & Dennick, 2011). These values showed that the questionnaire had good internal reliability and was capable of capturing differences reflecting the true relationships between the variables that the questionnaire measured.

Following validation of the questionnaire through PCA, responses were analysed to investigate how the performance of the Saudi health system was perceived – that is, what are the negative and positive attitudes towards certain aspects of the Saudi health system. This will be discussed briefly in the following sections. More in-depth discussion about the similarities and differences of the results obtained from the questionnaire, the systematic review, and the FGDs findings, where applicable, and their implications will be presented in the following chapter.

### ***11.7.3 Negative attitudes towards the Saudi health system.***

By comparing the mean scores of the dimensions, our questionnaire's results confirm that MOH monitoring of the private health sector ( $M = 2.66$ ) and affordability of care ( $M = 2.67$ ) dimensions were perceived as the most negative aspects of the Saudi health system performance. Participants reported their dissatisfaction with the way in which MOH controls prices at private healthcare facilities and had real concerns about the private health facilities' commerciality (i.e. they had doubts on the private health sector to work to provide high-quality care rather than monetary gains;  $M = 2.14$ ).

Participants also reported their frequent usage of out-of-pocket payments, an aspect of the affordability of care dimension, which would in turn lead to financial risks.

The frequent usage of out-of-pocket payments in the private health sector may be due to the evidence obtained from the questionnaire results about participants' dissatisfaction with access to and organisation of the government health sector dimension; the participants may be unable to access care out of hours and their dissatisfaction with the referral system implemented in the government sector. Another 'informal' access barrier that emerged from the questionnaire is the participants' concerns with the necessity of having *wasta* to access specialised care at the government health sector ( $M = 2.53$ ). More discussion about these findings in relation to the results of the systematic reviews (Phase 2) and qualitative FGDs (Phase 3) will be presented in the next chapter.

Health policymakers have long been concerned with protecting people from the possibility that illness will lead to catastrophic financial issues, and protecting people from catastrophic payments is widely accepted as a desirable objective of health policy (Filmer et al., 2002; WHO, 2000). Yet catastrophic expenditure is not rare worldwide; scholars have suggested that health policymakers are required to understand which characteristics make people more vulnerable to catastrophic payments (Xu et al., 2003). As the Saudi health system is currently in transition to privatisation, more focus on affordability of care, including the factors that lead some people to face such payments, need to be addressed in order to protect Saudi citizens from possible financial burdens in the private health sector.

### ***11.7.4 Positive attitudes towards the Saudi health system.***

Although the questionnaire results revealed negative attitudes towards the macro-policies in KSA – for example, MOH monitoring of the private health sector, cost of care, and the way in which the government health sector in KSA is organised. The results of the current questionnaire confirmed positive attitudes (neutral towards positive direction) towards the micro-level aspects of care – for example, doctor-patient communication ( $M = 3.33$ ). Previous literature has always stressed the importance of doctor-patient communication and refer to it as the 'heart and art of medicine' (Ha et al. 2010, p.38; Ong et al., 1995; Begum, 2014). Based on the questionnaire results, it seems that this important aspect of care is satisfactory in the Saudi

health system as participants had a neutral-positive attitude towards the doctors' ability to talk with them in their native language, the doctors' ability to explain things in simple language, and the respectful way in which doctors greet and talk to them.

### ***11.7.5 Correlation amongst the questionnaire dimensions***

Interestingly, based on the correlation amongst the questionnaire dimensions results, the 'Trust in the Saudi health system' dimension correlated positively and significantly with the questionnaire's other dimensions. The highest positive correlation was with Infrastructure and location of healthcare services and the Doctor-patient communication dimensions. This aligns with previous literature revealing positive relationship between trust in healthcare and the quality of healthcare service, including perceptions of receiving patient-centred care (Calnan and Sanford, 2004; Alrubaiee, 2011) as well as satisfaction with care (Lee and Lin, 2011; Shan et al. 2016; Alrubaiee, 2011).

### ***11.7.6 Factors influencing public attitudes towards the health system of KSA.***

Based on the results of the questionnaire, participants' attitudes towards the health system of KSA were mediated by many factors, including demographic and socio-economic factors, most notably nationality, level of education, income, occupation, and health insurance status. Less variance was identified in the participants' attitudes towards the different dimensions of the questionnaire by SRHS.

Nationality was found to be an important predictor of public attitudes towards the Saudi health system. As explained in Chapter 9, to reduce cultural sensitivity, nationality was used as a predictor of individuals' ethnic background. Significant difference was seen between Saudis and non-Saudis in many dimensions of the questionnaire. Non-Saudis had more positive attitudes towards the MOH's ability to finance the government health sector, access and organisation of the government and private health sectors, and affordability of care as well as more trust in the Saudi health system. In countries that have examined ethnicity, evidence exists that ethnic minorities are more likely to have negative attitudes towards care provision (Adamson et al., 2003; Riedel, 2009). For instance, in the USA and the UK, Black respondents were consistently less confident than White respondents were about receiving safe, high-quality care (Lillie-Blanton et al., 2000; Utz et al., 2011; Calnan & Sanford, 2004). They also reported reduced access to needed healthcare (Lillie-Blanton et al., 2000).

This is different from the current study, in which non-Saudis – who were expected to be the minority group as compared to Saudi national citizens – were more positive than Saudis in their attitudes towards the Saudi health system and had more trust in the Saudi health system. This might have occurred because of comparisons non-Saudis made between care they received in Saudi Arabia and care they received in their home countries as well as the mandated health



insurance for non-Saudi nationals in KSA. Therefore, non-Saudis were less likely to have trouble accessing healthcare services.

Similar to nationality, level of education was seen as an important predictor of public attitudes towards the Saudi health system. A significant difference was seen in almost all the questionnaire dimensions. Compared to participants with bachelor's or postgraduate degree, participants with no degree held more positive attitudes towards access and organisation of both sectors, MOH monitoring/financing of both sectors, the way in which their doctors communicate with them, and the infrastructure and location of healthcare services as well as more trust in the Saudi health system dimension. Contradictory results were seen in other studies (Naidu, 2009; Alrebaiee, 2011), which reported a positive association between education level and satisfaction with care. An explanation of this contradictory is that in the current study, participants with high education may have had more expectations than less well-educated participants and thus might tend to complain and report the weakness in the health system more often.

Participants' income was also seen as important predictor of public attitudes towards the Saudi health system. Significant differences were seen between participants with different income groups and access to and organisation of both health sectors, MOH monitoring of the private health sector, and Trust in the Saudi health system. Many studies conducted in developed countries have found a significant correlation between income, satisfaction, and access to care (Blendon et al., 2002; Blendon et al., 2006; Riedel, 2009; Richardson and Norris 2010). For example, Blendon et al.'s (2002) study of five countries, Australia, Canada, New Zealand, the UK, and the USA, revealed that dissatisfaction with one's healthcare system increases as income decreases and as it becomes more difficult to obtain care. However, findings from another study conducted in the USA indicated that public attitudes are similar across the income spectrum (How et al., 2008). Another study, conducted in China, suggests that there is no significant association between healthcare attitudes in the Chinese health system and economic status (Duckett et al., 2013). This may be because the majority of respondents in these two studies were dissatisfied with their health system regardless of income.

Interestingly, the current study revealed different findings in previous literature. Poor participants (i.e. those who earn less than 5,000 SR per month) held more positive attitudes towards their ability to access both sectors and in the way in which both sectors are organised in KSA, and they had more trust in the Saudi health system. This difference might be due to the participants' appreciation of free-of-care services provided in the government health sector in KSA, which allows them to get the care they need without any financial contribution such as out-of-pocket payments or tax fees. Even poor non-Saudis, who are less likely to be eligible to seek care free of charge at the government health sector, must be covered by health insurance. This in turn might positively influence their satisfaction with some aspects of the Saudi health system and their trust in the Saudi health system overall.

Likewise, occupation, a predictor of individual's socio-economic class, was seen as an important predictor of public attitudes towards the Saudi health system. Supporting these findings, a meta-analysis study revealed that patients who have different occupations have remarkably different satisfaction ratings (Hall and Dornan, 1990).

Significant differences were seen between participants with different occupations and five of the questionnaire dimensions. Participants who were not employed had more positive attitudes towards the dimension 'Doctor-patient communication', indicating that they were more satisfied with the way in which their doctor communicates with them and allows them to be involved in the decision-making process compared to participants who are employed. Unemployed participants also held more positive attitudes towards MOH's monitoring of the private health sector and access to and organisation of the private health sector, and they held more trust in the Saudi health system. The explanation given for the differences in the attitudes between low- and high-income participants might also apply to unemployed participants. Professional and business owners, who are assumed to earn more monthly income, held more positive attitudes towards the 'Affordability of care in KSA' dimension.

Marital status differs significantly in only three dimensions. Single participants held more positive attitudes towards access to and the organisation of both sectors and MOH's monitoring of the private health sector compared to participants with other marital status. It is important, however, to note that the divorced, separated, or widowed group is small compared to that of single and married participants. Future studies are needed to include a larger number of participants in this group.

A significant difference was seen between health insurance status and many of the questionnaire dimensions, including access to and the organisation of both health sectors, infrastructure and location of health services, affordability of care, the MOH's monitoring of the private health sector, and trust in the Saudi health system. Participants with health insurance held more positive attitudes towards these dimensions compared to participants with no insurance. Similarly, many studies revealed that the type of insurance influences public opinion of the health system (Lillie-Blanton et al., 2000; Hardie & Critchley, 2008; Blendon & Benson, 2009; Utz et al., 2011). For example, a study conducted in America, using HCS, revealed that health-insured individuals' confidence in the US health system is double that of people with no insurance (Utz et al., 2011).

Interestingly, although some researchers did not report gender as a significant predictor on perceptions of health systems (Daien, 2008; Hardie & Critchley, 2008; Duckett et al., 2013), the current study found significant differences between gender and doctor-patient communication, affordability of care, and access to and the organisation of the private health sector. Female participants have more positive attitudes towards doctor-patient communication and access to and the organisation of the private health sector, but males were more positive about their ability to afford healthcare service in the private health sector than females. Few studies

reported that males had more satisfaction with care than females (Nguyen-Thi et al. 2002; Priporas et al. 2008). One study, conducted in Jordan, a country that shares similar cultural characteristics with KSA such as customs and religion, reported that females tended to have higher satisfaction scores with care than males (AlRabee, 2011). The latter study argued that in Jordan, men tended to complain more than women, and one reason is that men are considered the key decision makers for their family and thus are in charge of deciding where to treat their dependents (e.g. children, wife, and parents; AlRabee, 2011). This might also be the case in KSA. The results that show females holding less positive attitudes towards the affordability of care in KSA compared to males might arise because the 60% of employed individuals in KSA are men (Ministry of Civil Service, 2016). Thus, it can be assumed that men are more likely to have a job than women in KSA, allowing them to have more monetary power, which indeed helps them to be more able to afford the cost of care than women.

Participants' attitudes towards the Saudi health system did not differ significantly amongst age groups except for the two dimensions related to the private health sector: 'MOH monitoring of the private health sector' and 'Access and organisation of private health sector'. Referring to the literature, the nature of the relationship between attitude and age varies highly between countries. This is mostly because of different international approaches to the provision of health insurance for people in different age categories. For example, in the USA, the elderly are privileged over younger adults because they receive Medicare services (Ellis et al., 2014), allowing the elderly to receive better health coverage. Supporting this, Dien (2008) reveals that there is a positive relationship between age and public attitudes towards the US health system, including their confidence in receiving high quality, safe, and sophisticated medical technology.

In this study, younger participants (aged between 18 and 29) held more positive attitudes towards the MOH's ability to monitor the private health sector, its ability to access care, and the way in which the private health sector is organised compared to participants with other age groups. Similarly, studies conducted in Croatia and Turkey revealed that younger people had more positive perceptions of the health system than did older people in general, as well as more positive attitudes towards payments for healthcare (Mastilica & KuBec, 2005; Jadoo et al., 2014). These countries, as well as KSA, have no health coverage that is specific to elderly populations, such as the Medicare health coverage implemented in the USA. As most individuals experience increased disease with age and are more likely to be retired from their job, this lack of health insurance likely results in increased financial burdens with age. This, in turn, may have led to the healthcare dissatisfaction observed.

Place of residence was seen as a predictor of public attitudes towards the Saudi health system. Significant differences were seen between participants living in rural and urban areas in MOH monitoring/financing of both the health sector and access to and the organisation of government health sector dimensions. Referring to the literature, it seems that the role of residential area in healthcare system attitudes has only been examined in developing countries, where a clear and

visible divide often exists between the health resources provided to individuals in different neighbourhoods. Four national studies looked directly at the influence of residential area on healthcare attitudes, two of which were conducted in China, one in Turkey, and another in Russia.

In China, the place of residence was seen as a significant factor that could influence the public attitudes towards the health system, where participants living in rural areas held less satisfaction than participants living in cities (Duckett et al., 2013). Similarly, in Turkey, Jadoo et al. (2014) found a significant relationship between living in rural areas and having negative attitudes towards the health system.

Contradicting these findings, participants in the current study who described themselves as living in a city held more negative attitudes, apart from affordability of care, on MOH monitoring/financing of both health sectors, access to and the organisation of government health sectors compared to participants living in rural areas. Similarly, a study conducted in Russia indicated that people who live in rural areas are more likely to be satisfied with the health system performance than those in urban areas (Footman et al., 2013). The authors of the latter study argued that this might be explained by the low expectations of those in rural communities regarding access and quality of healthcare (Footman et al., 2013). This explanation is in line with other studies, which show that public opinion towards the health system is dependent on their expectations; low-performing healthcare systems foster lower expectations (Harutyunyan et al., 2010; Murray et al., 2001). This might be also the case in KSA.

However, the results of the current study need to be treated with caution as the number of participants living in rural areas are smaller than participants living in urban areas, indicating the over-representation of people living in urban areas.

SRHS was not seen as an important predictor of public attitudes towards the Saudi health system. Only one significant difference was seen between participants with different SRHS and the 'Trust in the Saudi health system' dimension. Participants who described their physical health as excellent or very good held more trust in the Saudi health system compared to participants with poorer SRHS. Similarly, studies conducted in the UK and the USA revealed that people in poorer health generally have negative attitudes and less trust towards their health system than people in better health (Calnan & Sanford, 2004; Dien, 2008; Utz et al., 2011). In contrast to this, in Austria, people with poor self-rated health status, such as elderly people with multiple health problems, tend to have more positive attitude and greater trust towards their health system (Hardie & Critchley, 2008). This was thought by the authors who conducted the latter study to occur because of their self-reported close interrelationship with their healthcare providers and frequent visits to healthcare services (Hardie & Critchley, 2008).

It is important to note, however, that the number of participants who rated their health status as poor or very poor in the current study was small compared to participants with excellent and good SRHS, indicating that the sample is overly healthy and altering the representativeness of

the group with poor SRHS. Future studies are needed to include a larger number of participants in this group.

Overall, some socio-demographic characteristics were considered strong predictors of participants' attitudes towards the health system of KSA. Nationality and health insurance status were found to be the most frequent predictors of satisfaction of all the factors considered in the study.

### ***11.7.7 Strengths and limitations of the study***

The designed questionnaire's findings were interpreted with caution as it was not possible to ascertain their representativeness. Despite the use of strategies (online and onsite recruitments) to ensure that the sample was representative (see Chapter 10 for further details), these recruitments were considered convenient non-probability sampling techniques. Such techniques were chosen due to a lack of available databases for potential participants, which would have facilitated the drawing of random sampling. However, the study's main aim was to design and validate the questionnaire, which was possible using the questionnaires obtained. The findings' reliability was determined by subjecting the data to tests of appropriateness of data for PCA, as discussed earlier (see Chapter 10, section 10.7.3 for details about these tests). Therefore, the questionnaire findings can be seen only as preliminary; future studies with random samples are necessary.

In addition, the sample size from the on-site questionnaires ( $n = 124$ ) was quite small compared to that from the online questionnaires (i.e. via Twitter;  $n = 689$ ). One can argue that a significant gap existed between on-site and online recruitment; thus, more on-site recruitment might be needed. However, a systematic review examining the effectiveness of recruiting participants for health-related research via social media networks showed that most of the included studies (86%) concluded that their online-recruited samples via social media were representative of samples recruited via other more traditional methods (Thornton et al., 2016). Also, as stated in Chapter 9, this stage aimed to assess the questionnaire's construct validity rather than to generalise its findings to the Saudi population. Thus, the sample drawn in this study was deemed appropriate for the study's aim.

Another limitation was that ascertaining the extent to which the given answers truly reflected reality was not possible. In other words, questionnaires might have been subject to social desirability; therefore, the results might have been biased or might not have corresponded to the truth (Olson, 2010).

During development and administration of the questionnaire, strategies were used to minimise the effects of social desirability. Likert scales were chosen because they use multiple items to measure the same concept. This did minimise response error stemming from social desirability and increase reliability through the collection of more information about the same construct (Nelson, 2008). A neutral point in the response scales was provided; thus, as Chapter 9 stated,

respondents may have tended to choose this neutral point to avoid providing a more accurate answer (Garland, 1991). However, individuals responding to the questionnaire were expected to be truly neutral on some items. In addition, in the section about sample characteristics (e.g. gender), the option ‘prefer not to say’ was included for some items, allowing respondents to determine which information they would provide.

Despite the limitations related to questionnaire administration, comparisons of the sample characteristics with the demographic census in the Eastern Province, KSA, showed that the sample was broadly representative of the population. Integration of findings from the systematic review (Phase 2) qualitative FGDs (Phase3) will be described in Chapter 12 where appropriate, enhancing the reliability of these findings.

## **Chapter 12      Discussion and conclusion**

### **12.0 Introduction**

The results of each study have been discussed separately in this thesis. This final chapter discusses the answer to the fourth research question of the current research study: What are the prevailing attitudes towards the health system of KSA? To do this, the results of the thesis are integrated by highlighting the findings from the systematic review (Phase 2) reported in Chapter 6, the main results from the questionnaire (Phase 4) reported in Chapter 11, and the findings of the qualitative FGDs (Phase 3) reported in Chapters 8. Finally, this chapter will describe the future applicability of the designed questionnaire and the implications the study's findings have for health policy and make recommendations for future research.

### **12.1 Prevailing attitudes towards the health system of KSA**

How well the Saudi health system performs along the current study results is the concern in this section. As stated previously, the results of the systematic review (Phase 2) and the findings of the FGDs (Phase 3) were integrated, when applicable, with the questionnaire's preliminary findings.

#### ***12.1.1 Barriers to access care in the government health sector***

Based on the results of the systematic review, the majority of the included studies examining access to care in KSA reported low levels of satisfaction with access in the government health sector due to inconvenient working hours, especially at primary healthcare centres (AlMoajel et al., 2014; AlGhanim, 2011). This issue had some implications that led people to bypass primary healthcare and/or avoid interacting with it (AlGhanim, 2011; AlHassan, 2009).

Similar results were found in the questionnaire of the current study; negative attitudes were reported towards access and organisation of care in the government health sector ( $M = 2.77$ ). Most notably, participants were dissatisfied with the organisation of primary care, their ability to get basic healthcare services at primary care, and the referral system.

Comparing that with the findings of FGDs, many participants also described their concerns on accessing care in the government health sector and considered primary healthcare facilities the main barrier accessing this sector. They explained the reasons behind their dissatisfaction with the organisation of primary care and described their frustrations in interacting with non-approachable receptionists who were always unwilling to help them get the care needed. This in turn led them to be less likely to be able to get the referrals they want. This dissatisfaction with the organisation of primary care (emerge from the questionnaire) as well as the dissatisfaction with the way in which receptionists at primary healthcare centres interact with patients

(emerged from the FGDs) might be some of the ‘hidden’ reasons that led people to avoid interacting with primary care in KSA.

This of course would lead to some implications in the Saudi health system, which can be summarised into three main issues. One issue is that even the MOH is providing free-of-charge primary care services; barriers to primary care access persist, which might alter the efficiency of resource utilisation in the primary care level. The other issue is that as suggested by previous literature, patients with poorer timely access to primary care are more likely to be self-referred to the ED department in the UK, which in turn costs the health system (Cowling et al., 2013; Agarwal et al., 2012). Future research is recommended to explore the impact of timely access to primary care and the ED visits in KSA. Finally, one of the consequences of difficulties of access to care at government health sector may be a move towards private health sector, which in turn may not be experienced as satisfactory by public, more in depth discussion about this issue will be discussed in the next section.

### ***12.1.2 Cost of care in the private health sector***

The results of the systematic review (Phase 2) revealed that two studies suggest perceived financial burden may impact patient’s ability to get needed care (AlSaquer et al., 2015; AlJamaan et al., 2014), where insured patients were more satisfied with the financial costs of care than non-insured patients (AlSaquer et al., 2015).

This aligns with the results of the current questionnaire; many participants reported negative attitudes towards the affordability of care dimension. The questionnaire results confirmed that many of the questionnaire’s participants reported that they usually paid their medical bills out of pocket and reported that they had serious issues paying their medical bills. A significant difference in attitudes towards the affordability of care was identified based on insurance status; participants with no insurance held more negative attitudes towards this dimension than did participants who had insurance. This is not surprising as the wider literature has revealed that health insurance status affects access to care. Uninsured people – that is, those who pay their medical bills out of pocket – might be more likely to face financial burdens; thus, cost of care becomes a barrier to healthcare access (Atim et al., 2008; Xu et al., 2003).

The questionnaire results also revealed that participants perceived MOH monitoring of the private health sector as the most negative aspect of the health system. Participants reported negative attitudes towards the way the MOH monitors the private health sector and the way the MOH controls prices in the private health sector.

This perfectly matched the findings from the FGDs, whose participants felt that prices in the private sector were exaggerated and blamed the MOH for not controlling those prices.

However, one might ask why people in KSA tend to shift to out-of-pocket payments when the Saudi government allocates a significant amount of its budget to provide free-of-charge care to



its citizens. Weak but important evidence from the systematic review (Phase 2) revealed that people might rely on out-of-pocket payments if they do not have personal connections and are thus less able to access care at government healthcare services (AlJamaan et al., 2014). This evidence emerged too in the qualitative FGDs, when participants felt that personal connections – *wasta* – played a vital role in determining who could access specialised care in KSA and described people with no *wasta* as disadvantageous. Based on the questionnaire results, many of the questionnaire’s participants said that accessing specialised care in the government health sector in KSA was difficult unless they had personal connections (i.e. *wasta*). The study suggested that participants were alike in their attitudes towards the importance of *wasta* in accessing care at governmental hospitals in KSA – that is, their attitudes did not vary significantly according to demographics and other personal characteristics.

Similar to *wasta*, some access issues had been identified in previous literature but differ in their concept – that is, the use of bribery as a facilitator to access healthcare has been discussed in many countries such as Romania (Goerge et al., 2018), Uganda (Hunt, 2010), and some minority refugees in Australia (Sheikh-Mohammed et al., 2006). However, in the case of KSA, people cannot grant the benefit of *wasta* via monetary means but through their ability to have connections with other people who have the power to accelerate their access to care. The emergence of this issue is more likely to occur because of the culture of KSA, as presented in Chapter 2. It is important to note that although the issue of *wasta* in KSA was rarely investigated in health-related literature, it seems that *wasta* is not solely about accelerating a person’s access to care but also about accelerating a person’s job search in KSA (Fawzi, and Almarshed, 2013; Millahi, 2007).

### ***12.1.3 Perceptions of health insurance coverage***

Analysis of the questionnaire’s individual dimensions (sub-scales) revealed that participants have positive perceptions of health insurance coverage in KSA. The questionnaire’s results revealed that participants with health insurance were mostly satisfied with their health insurance coverage and believed they could pay the co-payments for their medical bills and prescriptions without financial issues. In addition, they reported that their health insurance companies usually approved their medical claims and did so in a short period. However, it is worth noting that questionnaire participants varied significantly in their attitudes according to their insurance class; participants with a low insurance class (i.e. Class D or below) had more negative attitudes towards their health insurance coverage than did participants with higher insurance classes.

These findings could not be compared to those from the systematic review (Phase 2) since no studies were identified to tackle this issue. However, the findings of the questionnaire aligned with the FGDs’ findings, where participants were dissatisfied with the variations in health insurance coverage amongst the insurance classes. Patients who had a low insurance class experienced unjustified rejections of their medical claims; also, their health insurance

companies did not quickly respond to medical claims, and the co-payments were above the participants' budgets.

Many studies revealed that health insurance coverage influences public opinion of a health system, such as in the USA and Australia (Lillie-Blanton et al., 2000; Hardie & Critchley, 2008; Blendon & Benson, 2009; Utz et al., 2011). Health insurance is viewed as a way to improve access to healthcare and reduce the direct financial burden in using care (Ataguba & Goudge, 2012). In KSA, as explained in Chapter 3, since 1999, the government has acknowledged the access barriers at governmental hospitals. In 2006 it sought to involve the private sector more heavily in healthcare delivery by implementing Cooperative Health Insurance (CHI) for non-Saudi nationals, thereby reducing the burden on government-funded hospitals. While this is what is often predicted by the theory of health insurance, health insurance does not always provide the expected financial protection (Lindelow, & Wagstaff, 2005) for those who are 'insured'. This is often because of the high co-payments and limited insurance cover that may also reduce utilisation (Jowett et al, 2003). The gap in the features and co-payment policies between health insurance classes in KSA may have implications on access to care. This gap must be addressed to ensure fairer and affordable coverage for all health insurance classes.

#### ***12.1.4 Language and doctor-patient interaction***

The findings from the systematic review (Phase 2) show that language barriers were one of the major problems participants faced when communicating with non-Saudi health professionals whose native language was not Arabic (AlKhathami et al., 2010; AlFozan, 2013; Atallah et al., 2013; Suliman et al., 2009; Saati, 2013). The results of the systematic review also revealed that respondents found difficulties in understanding the information provided by the healthcare provider on account of the use of overly technical language (Albarakati, 2009; AlTurki and Khan, 2013; Al-Abbad, 2015; Harakati et al., 2011; AlMomani & AlKorashy, 2012).

However, the results from the current questionnaire revealed contradictory results as participants perceived quality of doctor-patient communication as the most positive aspect of the health system. Participants maintained positive attitudes towards doctors' ability to speak in their native language and the doctors' ability to provide explanations in a language that was easy for the participants to understand (i.e. avoiding medical terms).

In the FGDs (Phase 3), participants had not raised doctors' use of overly technical language as an issue while communicating with their doctors. However, some language barriers issues arose from non-Arab participants, who explained their struggle to communicate with doctors who only spoke Arabic fluently.

These contradictory results between different phases of the current research might arise for two reasons. Firstly, as stated in Chapter 1, there has been a significant increase in the level of education in KSA, which in turn might enhance a patient's ability to understand better the information given by health providers. In particular, some studies revealed an increase in health

literacy in KSA (Al-Ruthia et al., 2017; Alamari et al., 2017). Evidence from the wider literature revealed that health literacy positively influences patients' understanding of the medically technical terms, or 'jargon' (Van Servellen, 2009; Edwards et al., 2015), although it has always been suggested that doctors avoid the use of jargon even with health-literate patients in order to reduce the likelihood of patients' misunderstanding (Fields, et al., 2008). Secondly, the significant increase in the 'Saudisation' of the health workforce after 2013, as explained in Chapter 3, section 3.3.3 might help Arab patients benefit from this new health policy and become less likely to face language issues while communicating with doctors. However, this 'Saudisation' might create language issues with non-Arab patients. The differences in the findings from the qualitative FGDs and the questionnaire results might arise from the low percentage of non-Saudi participants of the questionnaire, which might create under-representation of non-Arab participants.

### ***12.1.5 Control of the agenda during clinical encounter***

A crucial aspect of patient-centred care is to broaden care beyond the patient's disease, and to interact with the patient as a 'whole' person, and as such being listened to in a respectful way (Goodrich & Cornwell, 2008). Findings from the systematic review revealed public expectations that providers engage in a holistic and flexible way and a disappointment at healthcare providers' unwillingness to listen to patients or understand their perspectives on their health (Albarakati, 2009; AlTurki, 2013; Al-Abbad, 2015; Harakati et al., 2011).

This aligns to some extent with the questionnaire's results showing that some participants had less positive attitudes towards the amount of time doctors spent addressing all their health-related issues compared to the other aspects of doctor-patient communication and the way in which doctors or pharmacists provide enough information about the side effects of certain medicines.

This also matches with the findings of FGDs, where participants described their dissatisfaction with time given to them during the clinical encounter and felt that doctors usually have inflexible control of conversation, which in turn affects their ability to share their concerns on their health-related issues. One reason for the doctors' control of conversation during the clinical encounter as explained by FGDs is the overload doctors have in their clinic, which in turn makes them unable to allow patients to express all their health and/or emotional concerns more fully. This matches with previous literature, where scholars argue that some doctors might avoid discussing patients' emotional problems, which might be part of their health-related issues, because of the doctors' fear to handle these issues and/or not have enough time to discuss them adequately (Maguire and Pitceathly, 2003). Doctors' avoidance behaviour may result in patients being unwilling to disclose problems, which could delay and adversely impact their health recovery (Maguire and Pitceathly, 2003).

A lack of open dialogue between patients and doctors can cause problems because it might lead individuals to avoid seeking care until a condition becomes serious. This means that patients' use of accident and emergency departments may become greater (Gulliford et al., 2002). The incompatibility of service provision and what patients actually need aligns with the conclusion of El Bcheraoui et al.'s (2015) national study, which found that patients in KSA avoid interacting with the Saudi health system until they become seriously ill. Participants' expectations on the doctors' use of SDM while communicating with them might be an important implication for practice in KSA.

However, it is worth noting that attitudes towards doctor-patient communication in the questionnaire vary significantly depending on education level and occupation, which can both be considered predictors of participants' social level (Verlinde et al., 2012). This aligned with the wider literature, which found that individuals at a low educational level were more satisfied with the way their doctors communicated with them compared to people at higher educational levels (Piette et al., 2003). An introduced explanation was that participants at lower educational levels had lower expectations of their patient-provider relationship or were less comfortable criticising their doctors (Verlinde et al., 2012). Another possibility was that healthcare providers spent more time counseling those patients whom they perceived as needing extra attention (Piette et al., 2003; Fiscella et al., 2002).

### ***12.1.6 Involvement in Shared decision-making***

A second key aspect of patient-centered care is clinicians' willingness to share healthcare decisions with patients. The questionnaire results and the FGDs of the current research make significant empirical contribution to the Saudi literature as perceptions of involvement in decision making (SDM) have rarely been investigated, based on the results of the systematic review (Phase 2). The questionnaire results revealed that some participants had less positive perceptions of their ability to share decisions about their health and/or being able to seek a second opinion if they wanted to compared with other aspects of doctor-patient communication.

This aligned with the findings of the FGDs, Participants felt that SDM between patient and doctor and between doctors themselves (in the form of a second opinion) may be uncommon in the KSA because of cultural norms regarding reluctance to question professional expertise and authority. Yet interestingly, despite that fact, participants from a range of demographics still seemed to expect styles of care that would align with SDM approach, demonstrated in their dissatisfaction with the mainly paternalistic approaches they experienced.

Many studies have explained the importance of SDM in terms of adherence to treatment plans, health outcomes, and satisfaction with care (Ong et al., 1995; Elwyn, et al., 2011; Elwyn et al., 2013). According to a systematic literature review (Joosten et al., 2008), patients who are well-informed about their treatment plan options and who, therefore, make decisions with the support of their doctors are more likely to adhere to treatment plans, thus increasing the probability of

better health outcomes – a core goal in healthcare. However, the implementation of the SDM approach has been remarkably slow in primary and secondary care practice (Joseph-Williams et al., 2017), even in countries with a ‘long-standing interest’ in it, such as the UK (Elwyn et al., 2010, p. 971). This is because, unlike the paternalistic approach, SDM is a time-consuming process that requires emphasis, interaction, and consensus building (Elwyn et al., 2012). In addition, for a doctor to engage in SDM, he or she must give the patient sufficient time after the clinical encounter to review the decision-making aides that the doctor provided. Thus, when negotiating limited resources and high demand for care, doctors sometimes find that the implementation of SDM is challenging as it can slow down the care delivery process (Elwyn et al., 2010).

In the case of the KSA, findings might also demonstrate that the lack of SDM practice in KSA might not only emerged because of the Arab cultural norms, as described above, but also doctors in KSA might be unwilling to forego what has been described in a USA context before almost four decades as ‘professional dominance’ (Friedson, 1970). Doctors in USA achieved autonomy over their work (ie not answering to anyone else, only members of their own profession); they were understood to have achieved this autonomy and control by convincing the public that they are doing reliable, ethical, valuable work (Wolinsky 1988).

The time challenge, Arab cultural norms, as well as the professional dominance, might all explain the limited implementation of SDM in KSA. It seems however from the findings of the current study that the expectation of SDM in KSA indicates these Arab norms and professional dominance to be changed. Public in KSA, are, in some respects, no longer convinced of this, at least in some respects; especially people who in the context of social/economic change over the past few decades have gained high educational and socio-economic status levels, as explained in Chapter 1 and thus are currently more critical and may be less willing to afford doctors this autonomy. This conclusion aligns with the wider literature, in which expectations of shared decision-making and the preference to take on an active role in the decision-making process increase among those with higher levels of education (Charles et al., 1997; Levinson et al., 2005).

### ***12.1.7 Trust in the Saudi health system***

As stated previously in Chapter 11, the questionnaire results confirm that there is a good deal of public trust in the Saudi health system. Members of the public held a neutral-positive level of trust on the Saudi health system, especially its ability to provide adequate care for them and their family members in the future.

Comparisons with the systematic review results discussion in Chapter 6 cannot be made as no studies were identified to measure this dimension in KSA.

However, the questionnaire neutral-positive results on trust in the Saudi health system, aligned with the FGDs’ findings. Here, participants showed high levels of trust and pride, particularly in

the government health sector. They expressed the reasons for their sense of pride: free-of-charge care and the different health reforms implemented in KSA, including the cooperative health insurance, which, in their point of view, reduced the burden in the government health sector and helped to improve healthcare delivery in KSA. Our results were consistent with a study conducted on a similar two-tier health system (Hardie and Critchley, 2008), which reveals that Australian citizens held a robust trust in their health system.

However, it is important to note that participants' trust in the Saudi health system varied significantly with almost all the demographic variables except for gender and place of residence. Younger participants, participants who did not hold a degree, participants who were not employed, participants who earned less than 5,000 SR per month, and participants who were single had more trust in the Saudi health system as compared to other groups. It can be assumed that all the groups stated above are from a low socio-economic class and thus might have less expectation on the health system in general compared to the other groups. They might also appreciate the fact that the Saudi government is providing all types of care, including primary, secondary, and tertiary care, with free-of-charge care making them more likely to trust the health system. Scholars argued that trust in publicly funded health systems, such as that implemented in KSA, encompass a large degree of government-citizen interaction, trust of health systems may contribute to a general trust of government and visa versa (Ableson et al., 2009). Thus, these findings support a mandate for a more responsive healthcare delivery in KSA that meets public expectations from all socio-economic levels.

## **12.2 Future applicability of public attitudes towards the health system of KSA questionnaire.**

Public involvement was an element of successful health reforms in Asia (Rechel et al., 2012), with governments' seeking input from the public acting as a first step towards public inclusion in the decision-making process (Bhatia et al., 2009). In addition, as stated in Chapter 1, section 1.3, health is a people-oriented service that is ultimately paid for by the general population; so eliciting public attitudes is essential for public accountability (Woodward et al., 2000; Boote et al, 2002; Bhatia, et al., 2009; Munro and Duckett, 2015). This is particularly crucial in the KSA, where the New National Transformational Program, known as 'Saudi Arabia's vision 2030', highlighted the importance of hearing the public voice and involving it in many areas of public policy, including healthcare. In KSA, the questionnaire designed and validated in this study can be used as a first step in fulfilling the Saudi Arabia's new 2030 vision in healthcare.

In addition, exploration of public attitudes towards a health system may facilitate understanding of how reforms are experienced at the population level and can be important in shaping health policies, providing feedback on the quality and responsiveness of services (Blendon & Benson 2001; Footman et al., 2013). The questionnaire designed in this study will be useful in highlighting which important aspects of the Saudi health system are perceived as unsatisfactory,

guiding the design of interventions to improve these aspects while maintaining aspects that were perceived as positive. Applying the questionnaire nationally across all the regions in KSA will also provide invaluable information about differences in attitudes across the different regions in KSA, highlighting regions with lower satisfaction and thus suggesting interventions for healthcare improvements.

After the implementation of the new Saudi health reforms (the so-called Health Care Model described in Chapter 3, section 3.4), the questionnaire will provide useful information on the levels of satisfaction before and after the reforms, ultimately highlighting the successes and helping to improve public satisfaction with the Saudi health system.

Finally, population satisfaction may affect how people utilise services and whether they trust the health system and the reforms implemented in the health sector (Footman et al., 2013). Future uses of the designed and validated questionnaire in this study will provide insight into how public attitudes towards the health system relate to the utilisation of healthcare services and ultimately on health outcomes.

The current study was carried out just before the announcement of the new Saudi health reforms, the Healthcare Model. Thus, it explored public opinions on the Saudi health system before the full implementation of the new health reforms. However, it was crucial to measure the public attitudes before the reform implementation. That is because expectations of the changes in the health system are important predictors of satisfaction after the reforms. In addition, it is difficult to measure attitudes towards the reform without having a baseline measurement (i.e. before the implementation of the new reforms). If questions were asked only after the reforms, the data would be retrospective and may be subject to bias and memory recall errors. It is important to replicate the current study after formally implementing the new health reform, which will produce useful information to detect the trend in public opinion on the Saudi Arabian health system and to discern whether the implementation of the Saudi Healthcare Model will make a difference on people's attitudes.

### **12.3 Novel contribution of the study**

This study's main contribution to knowledge is its exploration of public attitudes towards the health system of KSA and to provide the most thorough and up-to-date understanding of public attitudes towards the Saudi health system during a time of significant change in not just the health system but also in terms of the relationship between the Saudi government and public, i.e., the significant reforms that the Saudi government is making, especially in acknowledging the importance of hearing the public voice and having a stated commitment to do so in Saudi Vision 2030. This study does not directly contribute to the evidence on the impact of public attitude research on government policy or other outcomes, as the work focused specifically on the generation of exploratory data in this area and on an instrument for capturing this. However, in exploring public attitudes towards the health system, this study comprised an early example

of the implementation of the Saudi Vision 2030 (Government of Saudi Arabia, 2016). It will also facilitate opportunities for follow-up studies on the ways in which results of public opinion on Saudi health system inform policy (or not).

The second contribution to knowledge is the development and validation of a comprehensive, evidence-based survey instrument designed specifically for use within the context of KSA. The instrument is considered a tangible output of this thesis and a crucial tool to be used in future research in order to achieve the Saudi vision 2030, by “giving public the opportunity to have their say” so that the Saudi government can serve them better and meet their expectations.

The third contribution to knowledge can be linked to this thesis’ discoveries in terms of the study participants’ attitudes towards macro-level and micro-level policies of the health system in KSA as well as the factors associated with public satisfaction with the healthcare system in KSA. This includes the socio-demographic factors, the effect of health insurance status on public attitudes towards healthcare, and the self-rated health status (SRHS).

At the macro level, this study contributes to the literature on how the public and private sectors are reported to operate alongside one another. We can argue that the health reform implemented in 2006 – the CHI – significantly enhanced the private health sector’s partnership in healthcare provision in KSA and thus eroded public trust because participants who were covered by health insurance were satisfied mainly by their health insurance policies and had more trust in the Saudi health system compared to the non-insured. However, it seems that the private health sector in KSA is serving as a backup for non-insured in particular those lacking personal connections “*Wasta*” to timely access to government sector, who may mainly pay their medical expenses using out-of-pocket payment methods and thus have concerns on the cost of care in the private health sector. This may put them at financial risk and compromise a barrier to receive necessary medical care (Collins et al, 2006). In the UK, having private health insurance is a determinant of public trust in the NHS (Calnan and Sanfor, 2004). Policymakers concerned with maintaining trust and confidence in the Saudi health system need to focus on implementing macro-level policy interventions to control costs in the Saudi health market in order to achieve this aim.

In terms of new knowledge about public’s attitudes towards the Saudi health system, at the micro level, it seems that expectations to play an active role in the SDM process are dominant in KSA. This was especially notable in the findings of the FGDs. Thus - on this evidence – the difference between KSA and Western countries in terms of the desire for more involvement in shared decision-making is minimal; a significant difference might appear more clearly in the implementation of the phenomenon of SDM in practice and the scarcity of efforts to meet public expectations for more SDM in the clinical encounter.

Finally, in terms of the methods that this thesis used, and according to the systematic review presented in Chapter 6, this is the first study that uses mixed-methods research to explore public opinion about healthcare and the Saudi health system. Again, according to the systematic review



presented in Chapter 6, none of the included studies used an online survey as a data collection method. This research study employed a novel recruitment method for health-related research in KSA – that is, use of the social networking site Twitter, between May and August 2017. This fact may provide valuable information about methods of online questionnaires in the context of KSA.

## 12.4 Recommendations for health policy

The main recommendation for Saudi health policy is that attention be paid to the affordability of care in the private health sector. This is an aspect of access to care. The MOH in KSA should implement policies that monitor pricing in the private health sector, ensuring that costs fall within the budgets of KSA citizens who earn an average income. This is especially important because, as indicated in Chapter 3, the health system in KSA is moving to privatisation reforms. Thus, financial burdens related to medical care expenses could be eliminated or at least controlled. Particular attention should be paid to the gap between the health insurance classes, starting with policies to approve medical claims and ending with the proportion of co-payments. In other words, the health insurance policy in KSA offers several features for individuals with a high insurance class, such as VIP and Class A. These features include full insurance coverage and low co-payments. On the other hand, people of a low insurance class (and who likely have limited incomes) receive limited insurance coverage and face high co-payments. This might put them in significant financial trouble. Fairer health insurance policies should provide full coverage for basic healthcare services and calibrate co-payments to income level; thereby helping people with a low insurance class afford care and avoid financial burdens.

Policies should also be implemented to provide fairer access to the government health sector. Although *wasta* operates outside high-level health policymaking, it seems that the MOH is not paying proper attention to this ‘hidden’ access issue and thus lacks clear regulations in this matter. Most participants decried this practice. Slight interventions in access regulations would help eliminate the ‘endless’ waiting list in the government sector and thus give people (especially the poor) a better opportunity to seek required care promptly.

Another policy recommendation for policy refers to patients’ opportunities to be involved in the decision-making process. Despite expectations that patients should be more involved in decision-making activities (Ong et al., 1995; Elwyn et al., 2011; Elwyn et al., 2013) and ethical reasons for respecting patients’ rights to be involved in the healthcare they receive, as discussed in Chapter 1, section 1.2.2 (Elwyn et al., 2010), findings from the current study revealed that participants felt they were not involved in making decisions about their treatment plans. Interventions that enhance the culture of shared decision-making in KSA are necessary to ensure better adherence to treatment plans and thus better health outcomes. One of these interventions could include giving doctors tools (e.g. booklets, websites, and videos) that patients could view after their clinical encounters to make their final decisions (Elwyn et al.,

2012). There also might be a desire of training to improve doctors' ability to involve patients in decision-making process in KSA.

At some level and in some way, the public should have more of a say in the decision-making processes that affect them and to reap an advantage from their expertise by experience in KSA. The context of involving "experts by experience" and hearing the public voice has just emerged in the context of KSA. There are many countries started to apply the concept of public involvement in healthcare and policy. Thus, KSA would have a range of models to draw on the path through the public involvement in healthcare and policy.

For instance, before the implementation of this concept in real life, we recommend the public to be appropriately prepared for this stage, for instance, by informing them about their role in the effort. In addition, health policy makers in KSA must adequately understand the public role in policy-making participation. The WHO suggested a strategy called "Participation Academy", which is a programme that can be created to focus on learning and development for people who want to explore roles as patient and community leaders in healthcare (Ferrer, 2015). Health authorities in KSA can get an advantage from organisations, such as the King's Fund, who has wide experience in public involvement in order to implement guidelines and workshops targeting potential lay representatives in KSA.

In addition, different involvement approaches will work for different people. Therefore, because the concept of involvement is new in KSA, we recommend that policy-makers offer a range of ways in which people can become involved in strengthening the health system and in the decision-making process. For instance, citizens' juries such as that implemented in many countries including the US, Canada and the UK were recognised as an effective way in eliciting the public opinion about health system (Street et al., 2014). As a starting point, the health authorities might get benefit of Twitter popularity in KSA and can post announcements for the public to participant in the citizens' juries. Potential representatives identified from Twitter might be used to suggest other people from the public to be involved in the citizens' juries.

In addition, Making Every Adult Matter (MEAM) program in the UK suggested several strategies of public involvement in health policy (MEAM, 2016). For instance, patients with extensive experience, such as those who live with multiple conditions, can be invited to attend and speak at events (MEAM, 2016). This will allow experts by experience to share their opinions about health services delivery in KSA with policy-makers and health professionals, as well as make them more aware of health policy developments in KSA.

Moreover, because not everybody wishes to talk publicly and in front of others, it is crucial to give experts by experience the opportunity to share their views in a manner with which they feel comfortable, such as by establishing an online blog or Twitter account to share and collect their opinions as suggested by the UK national advisory group (INVOLVE) (INVOLVE, 2012). The MOH in KSA can consider posting policy issues, especially that might have direct influence on peoples' interaction with health services, such as their ability to access care or policies related to

involvement in the decision-making process for patients' own health, and give the public the freedom to give their say about these issues.

Regardless of the approaches mentioned above and the methods that the MOH can implement in KSA, the most crucial point, as suggested by INVOLVE, is to involve the public as early as possible before the implementation of any new policy or reform that could directly affect people's healthcare delivery, as well as to keep them informed about key developments in healthcare planning and any progress made (INVOLVE, 2018). If someone has invested his or her time into helping to strengthen the Saudi health system, it is the health policy-makers' responsibility to keep them up to date in a manner that works for them. For example, not everyone has an email address, so flexibility is required in terms of ways to contact people. When possible, a department at the MOH can be established to arrange panel forums and to serve as a source of information if people have questions or concerns.

## **12.5 Recommendations for future research**

Unlike blame cultures that might appear in some countries worldwide, it seems that public attitudes in KSA is more "appreciating" than "criticising". Evidence of this might be taken from the experience of conducting FGDs in this thesis. As presented earlier in Chapter 8, the data show that in the early discussions about the health system in KSA, participants voiced pride in, and satisfaction with, services administered by the government. However, when digging deeper into participant experiences, negative views regarding access and standard of care provided, both governmental and private sectors were also disclosed. This might give an initial insight that eliciting public attitudes in KSA maybe challenging because they might resist criticising some services, health professionals, or policies. This might emerge from the fact that, in the past, it was not a norm in a monarchical political system like that implemented in KSA to welcome and hear the public voice on public services. However, as said earlier, this concept has recently changed and the government of KSA considers public involvement to be a core theme in its new vision, i.e. Vision 2030.

Thus, researchers who intend to conduct healthcare qualitative studies in KSA are recommended to give more space for deeper discussions in order to draw a clear picture about the "reality" of public attitudes towards healthcare and policy in KSA. Nonetheless, it is still questionable how the health policy makers will interact with public attitude studies, i.e. whether health policy makers in KSA will create and/or modify some policies to meet public desires.

Due to the difficulty involved in identifying public representatives, i.e. lay people who are prepared to be lay representatives, with whom we could talk during the FGDs, and in achieving Saudi Vision 2030, which encourages public involvement in healthcare activities. We recommend that the research department at Health Affairs of Eastern Province, KSA, as well as the research department at Imam Abdulrahman Bin Faisal University, maintain a list/database of

members or what called “People bank” (Ferrer, 2015), of the public who can register their interest in participation opportunities related to healthcare research in KSA. This can be implemented in KSA by asking prior participants in health related studies to register their contact details in the “People bank”, if they prefer, to be contacted for participation in future researches. Another method that can be used in KSA is, again to use the popularity of Twitter, and post announcement for the public to register their interest to participate in future studies by giving them a link of online form to enter their contact details in the “People bank”.

Because the issue of *wasta* has been identified as a factor affecting access to specialised care in the government health sector, future qualitative research is needed that explores the typology, prevalence, and consequences of *wasta* in KSA. The current study’s FGD was found to be a promising method for initial exploration of this issue, but such research should create a more in-depth definition and investigate the history and aspects of *wasta* in KSA, including its influence on the provision of services in KSA. This would help to include more items in the public attitudes towards the health system of the KSA questionnaire concerning the issue of *wasta* to access care in KSA.

A more representative sample would have been useful as it would have allowed the researchers to create two sub-samples for conducting a confirmatory factor analysis and thereby further ascertaining the questionnaire’s validity and reliability (DeVellis, 2003). Confirmatory factor analysis with the second sub-sample would have allowed the researchers to replicate the results obtained from the exploratory factor analysis conducted in this study, thus confirming the consistency and stability of the results (DeVellis, 2003).

Interestingly, although ethnicity has been widely examined among developed, non-Islamic countries, it has notably been avoided by studies conducted in Islamic countries such as Turkey (Jadoo et al., 2014) as well as the studies conducted in KSA and included in the systematic review (Phase 2). This might be because of the fact that ethnicity-based discrimination is a sensitive topic and is prohibited in Islam. It might be useful to investigate the reasons behind avoiding ethnicity questions in Islamic countries such as KSA and identify the possible pathways to consider this important predictor in future studies in a more culturally acceptable manner.

Because the current study’s goal was to create a questionnaire exploring public attitudes towards the health system of KSA, the researchers elicited no in-depth data regarding the impact those attitudes had on participants’ health decisions. Thus, future studies should investigate in more depth the relationship between public attitudes towards the Saudi health system and the public’s health-related decisions in order to ensure better utilisation of healthcare services in KSA.

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