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Language difficulties in looked-after children aged 5 to 14 years

by

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Thesis submitted in fulfilment of the requirements for the degree of Doctor of Philosophy

Division of Language & Communication Science

School of Health Sciences,

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Dedication

Language is an essential, yet colourful toolbox which helps children to thrive and fulfil their potential. The unfortunate truth, however, is that the many looked-after children and young people have less opportunity to access and make use of this colourful toolbox. With this in mind, this PhD is dedicated to all looked-after children and young people who live in various out-of-home-care settings worldwide.

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Declaration by author

I acknowledge that an electronic copy of my thesis will be lodged with the University Library. I, therefore, grant discretionary permission to the University Librarian to allow this thesis to be copied in whole or in part without any further reference to me. This permit contains only single copies made for research purposes, subject to the given conditions of acknowledgement.

Abstract

Looked-after children (LAC) are classed as one of the most vulnerable populations in society. They also persistently demonstrate poor life trajectories in many areas. To date, the language difficulties of LAC have not received much attention; this is despite the issues of LAC's language difficulties appearing in parliamentary and wider political discussion (e.g., Children and Social Work Act, 2017).

Aim: The main focus of the current study is to investigate the language difficulties in LAC in a wider context and to explore the associations between LAC's language difficulties and their life trajectories, including educational attainment and social emotional behavioural difficulties (SEBD) or social, emotional and mental health needs (SEMH). The research addresses at a theoretical level the risk and protective factors for language development LAC experience. At a more practical level it is hoped the research will inform social care policies, legislation, and clinical practices.

Method: A mixed methods design has been used encompassing three studies. The first study involved conducting a scoping review, the second phase involved analysing a large sample of quantitative data, and the third phase involved analysing semi-structured interviews with professionals who worked with LAC on a daily basis.

This method allowed the investigation of language difficulties of LAC to take place in a wider context. This approach also enabled the collection of all available data sources to be considered.

In the scoping review, a six-step framework methodology (Arksey & O'Malley, 2005) examined and summarised the extent, range, and nature of research activities and findings of language difficulties in LAC. In the quantitative data, a range of parametric tests (e.g., t-tests, ANOVA and Pearson's correlation) were utilized as appropriate to compare language scores across the three language groups (green, amber and red groups), and the association between language difficulties in LAC and their life outcomes. In this stage, a multiple linear regression (MLR) approach was used to ask what combination of factors best predicted LAC's poor language scores. In the qualitative study, thematic analysis was utilized (Braun & Clarke, 2006) to identify common themes alongside sub-themes pertinent to each research question.

Findings: The combination of the three data sources revealed 4 main findings: (a) LAC are at higher risk of poor development of language skills across all areas of language including social pragmatics and related areas of verbal cognition; (b) there are specific demographic and environmental factors which relate to language development in LAC (e.g., OHC settings, maltreatment) although these relationships are likely to be complex and not picked up with routine data; (c) there is a link between language difficulties, educational, social, emotional and behavioural difficulties; (d) LAC face barriers accessing language assessment and intervention, but there are support strategies and systems relevant to LAC's language difficulties.

Conclusion: This study makes valuable contributions to the knowledge base regarding language difficulties in LAC and the association with language and LAC's life outcomes. Implications for policymakers, local authorities, clinicians, and future research are reported.

Keywords: Looked-after children, language difficulties, adverse life experiences, maltreatment

List of abbreviations

LAC	Looked After Children
LACYP	Looked-after children and young people
DLD	Developmental Language Disorders
SR	Scoping review
OHC	Out-of-home care placement
AL	Local authorities
EHC	Education, health and care
NEET	Not in education and employment and training
SEBD	Social emotional and behavioural difficulties
SEMH	Social, emotional and mental health
SES	Socio-economic status
ACEs	Adversities childhood experiences
DfE	Department for Education
UNICEF	United Nations International Children's Emergency Fund
NSPCC	National Society for the Prevention of Cruelty to Children
SEN	Special Educational Need
RCSLT	Royal College of Speech and Language Therapy
RCPCH	Royal College of Nursing and the Royal College of Paediatrics and Child Health
SCIE	Social Care Institute for Excellence
DfES	Department for Education and Skills
DfCSF& DfH	Department for Children, Schools and Families & Deportment of Health
DfE and DfH	Department of Education and Department of Health
NAVSH	The National Association of Virtual School Heads
SM	Service manager

CHAPTER 1: Overview and background

The focus of this PhD thesis is to explore the language development and possible difficulties in looked-after children (LAC). The PhD had multiple phases, which involved conducting a scoping review and a mixed-method approach which consists of a series of quantitative and qualitative studies. The purpose of the scoping review was to synthesize the full breadth of research on this subject area to inform both the quantitative and qualitative studies regarding the existing knowledge gaps for language difficulties in LAC. The quantitative study involved the evaluation of secondary datasets related to LAC's language screening results, educational attainment, and scores on a behavioural questionnaire through a quantitative analysis. The qualitative study aimed to gather the opinions and views of professionals regarding LAC's language needs through semi-structured interviews. Subsequently, the data collected from the interviews were subjected to qualitative analysis. The mixed-method approach combined both quantitative and qualitative data to portray a more complete picture of the current research field. This opening chapter lays out the foundations of the PhD and is divided into two parts. The first part provides the background information and key terms, concepts and legislation relevant to LAC. The second part presents the rationale for the study, followed by the aims, objectives, and organisation of the thesis.

1.1 Introduction: language development

Language helps people to share information, their feelings, thoughts, make connections with others, as well as evaluate their own experiences (Johnston, 2005; Ovens, 2014; Yang et al., 2019; Raaska et al., 2013; Taylor et al., 2013). Some theorists (e.g., Chomsky, 1956) have suggested that young typically developing children are biologically equipped to learn a language, while others highlight the importance of the environmental support that surrounds children (Brown, 2008). Understanding the development of language requires an appreciation of how different aspects are acquired, as well as how alterations or disruptions coming from both the child, as well as his or her environment, occur during human development (Kennison, 2014). In the typical situation, children's language development is enabled by their social-cognitive capacity to comprehend others' intentions and their ability to recognize patterns in human speech (Asmussen et al., 2018). Previous studies showed that certain aspects of parent talk and parent-child interaction (PCI) are positively correlated with children's typical language development (Hart & Risley, 1995; Huttenlocher et al., 2002; Rowe et al., 2016; Tamis-LeMonda & Bornstein, 2002). In the context of typical language development, children's first

words emerge naturally by the age of 10 to 12 months through adequate early interactions with adults. They start using two-word utterances and communicating their desires and ideas between the age of 18 to 24 months (Kennison, 2014; Brown, 2008; Lieven, 2006). During the following years, children develop highly complex language skills that allow them to communicate effectively with others around them (Onnis et al., 2018). Language processing abilities are also important in increasing the child's access to, and understanding of, the world around them. Language development carries on through later developmental stages, such as the transition from childhood to adolescence and adulthood (Brown, 2008; Kennison, 2014). For all children, language skills are critical to their development which facilitates better life outcomes and opportunities in literacy, education, and social and emotional well-being (O'Higgins et al., 2015; Berridge, 2017; Carlisle et al., 2010). Nevertheless, for a range of reasons some children have delayed language development and will consequently experience difficulties in fulfilling their potential in many areas of life.

Language difficulties or problems, are often referred to as a range of difficulties children may face in form, understanding content, and using or expressing language effectively (e.g., Cross, 1999). These difficulties may occur in various forms such as speech sound disorders, expressive or receptive language disorders, and social pragmatic difficulties (Bishop et al., 2016; Bishop et al., 2017; Matthews, et al., 2018). Further, language difficulty can be developmental and arise during childhood or can be acquired later in life due to neurological conditions, or other factors for which these difficulties can affect the ability to understand and express language effectively (Conti-Ramsden & Durkin, 2016; Harrison & Mcleod, 2010). Children might experience language development delays due to a set of risks coming from environmental (nurture) and biological (nature) factors (Taylor et al., 2013; Molai, 2016; Onnis et al., 2018). The case of Genie is an extreme example of impaired language development following the environmental deprivation of care and language input during an early sensitive period (Fromkin et al., 1974). Genie was kept in isolation, from before the age of 20 months until 13 years and 9 months. During this period, she lacked human company and other cognitive stimulation. Although there is some debate as to whether she had a cognitive impairment from birth, because she was not exposed in enough quantity to language through childhood, she did not learn to communicate in a typical manner even as an adult (Rowland, 2014; Fromkin et al., 1974). There are a range of situations where children, even those exposed to some language input, can experience a range of developmental outcomes stemming from both internal and

external factors (Rowland, 2014; Greenwood et al., 2020; Johnson et al., 2021). In the extreme case of Genie, the deprivation she suffered might be the reason for her impaired language skills.

There are also other children who despite living with loving, caring and stimulating parents do not develop language because of perceptual barriers. This is exemplified by children who are born deaf (Humphries et al., 2012; Woolfe et al., 2010; Morgan, 2020). These children do not acquire language typically unless they receive intensive training or signed language from fluent signers at an early age (Rowland, 2014). Studies of language development in deaf native signers (children who have learned a sign language from birth and from their parents/caregivers) indicate that children with early exposure to signs reach language developmental milestones at the same speed as their hearing peers (Friedmann & Rusou, 2015; Humphries et al., 2012; Mann & Marshall, 2012). Previous literature shows that children's language development greatly differs depending on the type of early home environments that they grow up in (Molai, 2016). For example, a range of studies demonstrate that children from low socioeconomic (low SES) households are at greater risk of having poor language skills than those from higher SES families (Vernon-Feagans et al., 2012; Hart & Risley, 1995; Hoff, 2003; Pace et al., 2017; Taylor et al., 2013; Humphreys et al., 2020). Further, there is fluctuation in trajectories of language development particularly in the preschool years (Reilly et al., 2010; Rice et al., 2008). However, it is essential to note that there is currently a debate (Dudley-Marling & Lucas, 2009; Tal & Arnon, 2018; Hoff, 2006 and 2012) surrounding certain studies (e.g. Hart & Risley, 1995), particularly those that involve testing children from low SES families and whether they were conducted in a non-native language e.g,. Paradis et al., 2013; Hoff, 2013; Paradis, 2011). This can raise questions about the validity and reliability of the findings, as language barriers can significantly impact test results. This can also lead to uncertainty about whether some researchers have taken the linguistic and cultural backgrounds of the individuals into account during the study, to ensure that their findings were representative and accurate. In particular, children who come from socially disadvantaged backgrounds have a higher prevalence of language delays and prevalence of Developmental Language Disorder (DLD) compared to those from a higher SES background (Law et al., 2017; Save the Children, 2018; Law et al., 2011). As, these children's development in many areas such as health, education and communication skills are poorer compared to their peers in higher SES groups (Department for Education (DfE), 2018a, 2018b, 2018c, 2019a; Oakley et al., 2018). The particular sample studied in the current thesis - looked-after children or LAC (aka children in care)- are part of this vulnerable group and will experience early disruptions in their

development (RCSLT-Factsheet, 2018; Locke et al., 2002; Pinto & Woolgar, 2015). The language difficulties of LAC represent the focus of this thesis.

Ample evidence suggests biological factors influence the child's language development (e.g., genetics, gender, prenatal and perinatal history). Specifically, it is essential to recognize that these biological components do not exist in isolation but interact in complex ways with the child's surroundings. The continuous interplay between biology and environment has a significant impact on the development of a child's language skills, showing the importance of both nature and nurture in this process (Asmussen et al., 2018; Vulchanova & Vulchanov, 2021). This highlights there is much overlap between the influence of the environment and any biological factors involved in language development. However, it is important to recognize that the influence of biological risk factors falls outside the scope of the current study. Yet, it is also important to note that, as with other language risk groups mentioned earlier, biological factors are likely to play a significant role in the poor language skills of LAC.

1.2 LAC - Background information

Very few children wish to become looked after outside of their own home, even though that family home is no longer a safe place for them to live (Sanders & Rowley, 2000; Kosher et al., 2018; HM Government, 2015). Over the past decade there has been a significant rise in the number of children in care across the world and including in the UK due to cuts in welfare benefits beginning in 2010, which has disproportionately affected families and their capacities to provide adequate care for their children (Webb et al., 2022; Knigt & Tregidgo, 2021; Sammons et al., 2015). A growing body of literature has revealed causal links between income, poverty, and child abuse and neglect (Gupta, 2016; Morrison, 2015; NSPCC, 2022; Jones et al., 2011; Bywaters et al., 2016). This relationship creates a social variance or slope in the incidence of child welfare interventions, whereby poorer families are increasingly likely to have children living in out-of-home care (Bywaters et al., 2018; Gupta, 2015; Featherstone et al., 2014). Furthermore, according to the recent statistics, the number of unaccompanied asylum-seeking children (UASC) has risen by 34%, which is reflected in the increasing number of LAC in recent years (e.g., DfE, 2022). The problem has been further worsened by nearly two years of COVID-related restrictions and lockdowns and new analysis shows that there are currently 104,898 looked-after children and young people in the UK (included all four nations), with this figure having continuously increased to over three-times the amount in three decades (Coram, 2021; NSPCC, 2022; DfE, 2022).

In addition, LAC are also known to face significant degrees of adverse childhood experiences such as maltreatment (e.g., abuse and/or neglect), trauma and social disadvantages which results in the vast majority of them going into care (NSPCC, 2022; Maguire et al., 2021; DfE, 2020; Morrison, 2015; Jones et al., 2011). The long-term impact of adverse childhood experiences (ACEs) on LAC's developmental milestones has been reported by some authors, both in regular care scenarios (Cobos-Cali et al., 2018; Di Sante et al., 2019; Raby et al., 2018; Moreno Manso et al., 2010; Pears & Fisher, 2005; Simms, 1989) and in extreme circumstances, such as LAC residing in Romanian and Russian children's institutions (Windsor et al., 2007; Windsor et al., 2011; Petranovich et al., 2017; Roy et al., 2000; Rutter et al., 1998; Rutter et al., 2007; Muhamedrahimov et al., 2004; Tirella et al., 2007).The negative influence of ACEs on LAC's developmental outcomes has appeared to differ by care status characteristics (Simkiss, 2012; Zajac et al., 2019; Windsor et al., 2011; Chambers et al., 2010; Clemens et al., 2018). This was clearly demonstrated in research that compared LAC who were raised in foster care with their peers who were brought up in children's institutions. This research discovered that children who lived in foster care had higher language abilities than their peers who were raised in children's institutions (e.g., Windsor et al., 2007; Windsor et al., 2011, 2013; Berument & Eyupoglu, 2011). Research has also been undertaken with regard to the impact of ACEs on developmental outcomes in those fortunately rare cases such as Genie (Curtis, 1977 cited in Rowland, 2014), where individual children have been rescued after being reared in extremely abnormal circumstances (Culp et al., 1991; Hwa-Froelich, 2012; Rutter, 1998; Nelson et al., 2006).

Studies on the health and developmental needs of LAC indicate that a greater proportion of such children face difficulties with learning language. The rates reported across the literature range from 30% (Nathanson & Tzioumi, 2007) to 34% (Simms, 1989) of LAC presenting delays and/or difficulties in this area. These figures are considerably higher than the DLD rates reported in the general population, which range from 3 to 7% (Norbury et al., 2016a; Norbury et al., 2016b; Tomblin et al., 1997). Given these figures, it is most likely that LAC's language difficulties are compromised by their experiences with ACEs. The link between ACEs (in particular maltreatment) and children's language difficulties is already evident to some extent in the previous literature (Culp et al., 1999; Lum et al., 2015; Sylvestre et al., 2016).

Further, the effects of early ACEs on development and life trajectories have not only been observed during childhood and adolescence but also into adulthood (Jones et al., 2018;

Humphreys et al., 2020; Nelson et al., 2020; De Bellis et al., 2013; Mathers et al., 2016). Poor developmental outcomes and life chances are likely to interrelate with one another, and influence LAC's likelihood to fulfil their potential over their lifespan (Simms, 1989; Halfon et al., 1995; Stock & Fisher, 2006; Simkiss, 2012; Richardson & Lelliot, 2003; O'Higgins et al., 2015: Pinto & Woolgar, 2015; Oakley et al., 2018; Berridge, 2017; Sebba et al., 2015; Morrison & Shepherd, 2015). Some of these poor health and developmental outcomes include general developmental delays, social and emotional or academic problems, as well as physical health problems. A recent study reported that the majority of LAC do not receive the necessary interventions even when developmental delays and poor life trajectories are discovered (Krier et al., 2018). The long-term negative impact of these factors is linked to LAC's language development and difficulties (Golding, 2010; Pinto & Woolgar, 2015; Mathers et al., 2016). The wider literature stresses the importance of early detection of children's language difficulties regardless of background (Harrison & McLeod, 2010; Taylor et al., 2013; Conti-Ramsden & Durkin, 2016). This notion is supported by a small body of research into LAC's language difficulties, whereby the particular importance of identifying the language delays and/or difficulties early in the LAC population has been emphasised (e.g., Stock & Fisher, 2006; Hagaman et al., 2010). However, the literature suggests that, in general, early language delays in LAC have not been given sufficient attention, leading to unmet language needs (e.g., Cross, 1998; McCool & Stevens, 2011). To date, a relatively small set of studies exist on language difficulties in LAC, with many not having been replicated.

1.2.1 International versus England/UK care settings

It is crucial to understand how different care settings and systems affect the language development of children, especially those who are LAC. This understanding is essential when evaluating the effectiveness of these settings both at a national and global level. To achieve this, a careful and discerning approach to national and international literature is necessary. For instance, research from different countries may not always be directly translatable to the unique context of England and the UK as a whole, given the inherent complexities and differences in child welfare systems, policy frameworks, and sociocultural factors that vary significantly across countries (e.g., Iran, Turkey and Romania). These unique features inevitably shape the quality of care and support available to children in the care system, with direct implications for their language development. These discrepancies are already apparent in a growing body of literature focusing on Romanian orphanages and Russian mother and baby homes. Romanian orphanages have gained international attention for their poor conditions and the negative

effects of institutionalization on children's development, with studies by Rutter (1998), Nelson et al. (2007), and Windsor et al. (2007) shedding light on these issues. Conversely, Russian mother and baby homes have been scrutinized for allegations of neglect and abuse (Tirella et al., 2007; Muhamedrahimov et al., 2004). These institutions are shaped by diverse child-rearing practices and sociocultural backgrounds, often characterized by neglect and limited resources, indicating the contrast between tradition and modernity (Bakermans-Kranenburg et al., 201). Consequently, children in these settings may face early adversities, depriving them of essential positive and responsive caregiving experiences crucial for their language development (Bowlby, 1951; Petranovich et al., 2016; Bakermans-Kranenburg et al., 2011). Thus, it is crucial to recognize that the child welfare systems in England and the wider UK differ from that of other countries, influenced by various factors, including disruptions in family home environments, socioeconomic disparities, religious beliefs, and cultural influences. These unique elements can shape the quality of care and support available to children in the care system, directly affecting their language development. Therefore, it is vital to consider these variations in risk and protective factors when comparing the experiences of children in care across different nations. While placing children in various OHC settings is often viewed as successful in promoting a child's development (e.g., Byrne et al., 2018; Healey & Fisher, 2011), international literature highlights that children in care often face poor developmental outcomes (e.g., Asimina, 2017; Cobos-Cali, 2017; Nathanson & Trioumi, 2007). Consequently, a cautious approach is essential to ensure that evidence-based policies and interventions are tailored to each country's or region's specific care systems, requirements, and challenges. Recent reviews, such as 'Residential Care' published by What Works for Children's Social Care (2019), emphasize the UK's ongoing efforts to enhance its care system, emphasizing the importance of family-based care over institutional settings. Narey's (2016) review further highlights the significance of high-quality foster care and adoption as preferable alternatives to residential and or institutional care, supporting the shift away from institutionalization in the UK. Another study by Strijbosch et al. (2015) found that foster care yielded better outcomes compared to residential care. In contrast, some other countries continue to be faced with the challenges of improving their care and welfare systems, such as Romania, Russia, Iran, Egypt and Turkey (e.g., Ghelbash et al., 2021; Megahead & Cesario, 2008; Fluke et al., 2012). Thus, it is essential to acknowledge and respect the uniqueness of each countries' care systems and their approach towards care for children when considering the language and developmental needs of LAC.

Therefore, to address these gaps, this thesis is the first research study of its kind that aims to explore existing literature across countries, including England and the wider UK, and explore the prevalence rates and nature of language difficulties among LAC. It also investigates, for the first time, the associations between LAC's language difficulties and SEMH and educational attainments.

1.2.2 Who are looked-after children and young people?

To define children under state care, the term 'looked-after children' was introduced by the Children Act 1989 in the England and Wales (also known as children in care, children under welfare systems or social care services). The term applies to children under the age of 18 who are cared for by local authorities (LAs) "for a continuous period of more than 24 hours where the Children Act 1989 applies" (DfE, 2019a, p.16), and they fall under 'Children in Need' categories. Children in Need are a legally defined subcategory of children (under the Children Act 1989), recognized and assessed as in need of protection and safeguarding due to risks to their development or health. This group comprises children on child-in-need plans, children on child protection plans, children looked after by local authorities, care leavers and disabled children. Children in Need include unborn children, children and young people aged 18 or over who continue getting care and accommodation or support from child welfare services (DfE, 2022).

The terminology used to define looked-after children differs across countries or regions. For example, the USA, Sweden, Canada and Australia use the term 'children in out-of-home care' (OHC or OoHC) and the United Nations International Children's Emergency Fund (UNICEF) uses 'children in alternative care', whereas 'looked-after children or children in care ' is used mainly in the UK (O'Higgins et al., 2015; Franzen et al., 2008; UNICEF, 2017, 2018; Simkiss, 2012; DfE, 2018a, 2018c). As the current study took place in the UK and involved children living in the UK's care systems, the researcher will use the term looked-after children (LAC) as an umbrella term throughout the study to refer to all children under state care who live in a range of out-of-home care (OHC) placements. OHC placements are an alternative type of care environment that must be arranged when children have to be removed from their family home (Milligan et al., 2016; Berger et al., 2009; Mathers et al., 2016). The definitions of types of OHCs can be found in Appendix A.

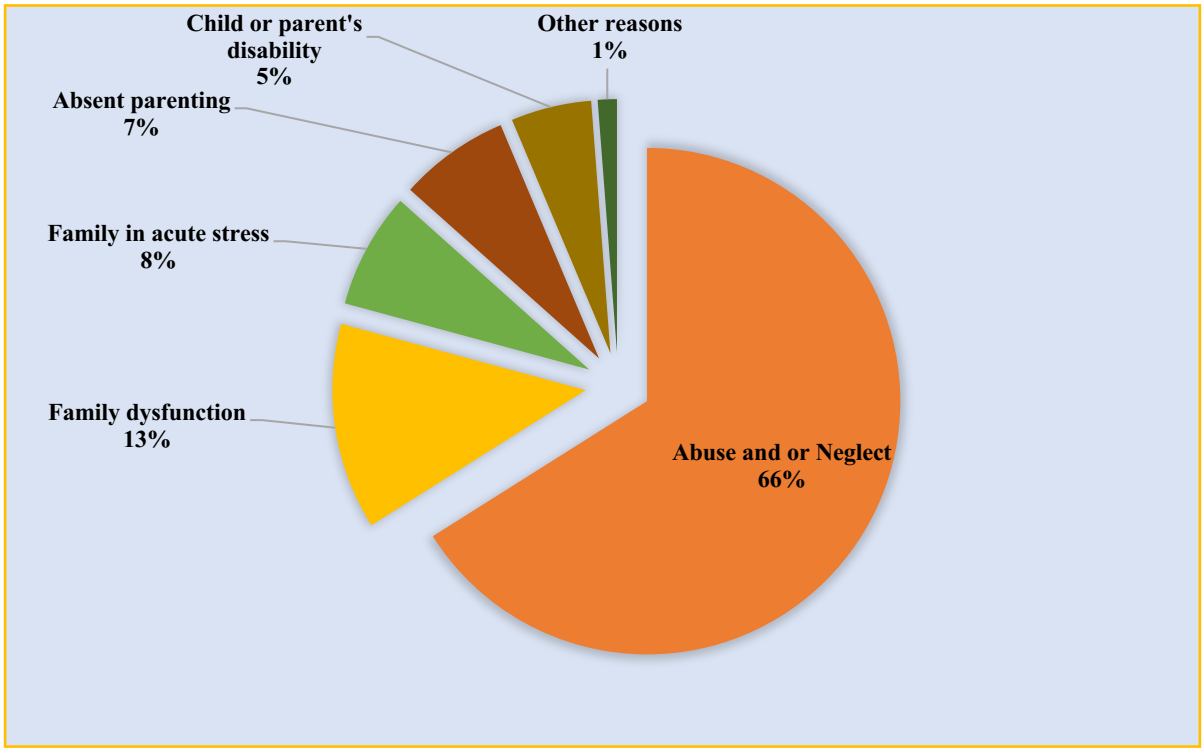
As mentioned earlier, the number of children in care in the UK is continuously increasing (Coram, 2021; NSPCC, 2022a; DfE, 2022), and there are four routes for children to become looked after which are outlined in Table 1.1 below. LAC are either subject to a care order made by court or voluntarily accommodated (e.g., with parental consent) by local authorities (Simkiss, 2012; DfE, 2018a, 2018c; Coman & Devaney, 2011; Wallace, 2015; RCPCH, 2019). Under the voluntary care arrangement, parental rights and responsibilities remains with parents, while local authorities still have responsibility for providing safe and secure accommodation for children or young people who are in voluntary care accommodation arrangements (Dickson et al., 2010; Legislation.gov.uk, 1989; DfE, 2015a, 2015b; DfE & DfH, 2015a; DfE, 2018d). Court orders can be made under section 31 of the Children Act 1989, which place the child under the local authority's care, and which means the parental rights of such a child will be shared between the parents and local authority. The court may issue a care order only if it finds a child is suffering or likely to suffer from significant harm caused by the child's parents or carers, or if the court is satisfied that the care given to the child by the parents or carers is likely to be insufficient, or if a child or young person will suffer or likely suffer from significant harm or abuse beyond parental controls (DfE, 2014a; SCIE, 2019).

Table 1.1: Routes for becoming a looked-after child (House of Commons, 2009; Dickson, Sutcliffe & Gough, 2010; DfE, 2018a)

• Children who are accommodated under a voluntary agreement with their parents (section 20);
• Children who are the subject of a care order (section 31) or interim care order (section 38);
• Children who are the subject of emergency orders for their protection (section 44 and 46);
• Children who are compulsorily accommodated. This includes children remanded to the local authority or subject to a criminal justice supervision order with a residence requirement (section 21). Such an order involves a placement order made under section 21 of the Adoption and Children Act 2002, which gives a local authority the legal authority to place a child for adoption with any prospective adopters who may be chosen by the authority

In 2022, 77% of LAC were the subject of compulsory care orders and most of these children entered into care due to various reasons such as abuse or neglect (65%), family dysfunction, illness or disability, or parental absence for a variety of reasons (DfE, 2019a; 2022). This may also involve a child being an unaccompanied asylum seeker or entering care through the youth justice system after becoming involved in criminal activities (Oakley et al., 2018; DfE, 2018a, 2019, 2017a; Simkiss, 2012; Golding, 2010). This indicates that despite sharing similar characteristics as a population, children living in care are not homogeneous as a group due to their individual circumstances. See Figure 1.1 for visual representation of reasons children enter in care.

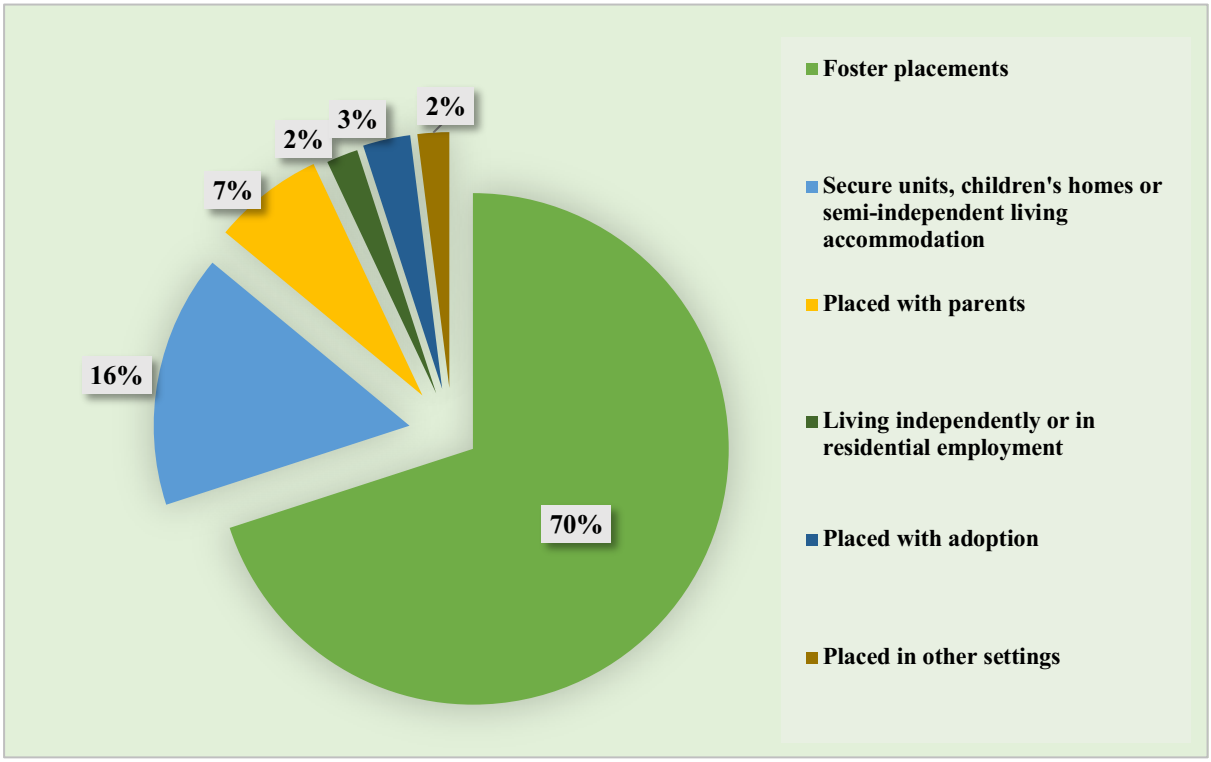
Figure 1.1: Reasons children enter in care (November 2022, 2019b, DfE)



In the UK, local authorities have a legal right and responsibility to those children they look after, wherever they live or are placed. If, however, a placement is not feasible with the children's own parents, it is local authorities' responsibilities to arrange the most appropriate and suitable OHC placement that promotes the welfare and safety of the child and meet their needs (DfE, 2019a, 2018a; McGrath-Lone et al., 2016). The OHC placements can be either emergency placements, short-term placements, or long-term placements which includes foster care, kinship care, special guardianship care, residential care (schools and/or homes), children's institutions, secure accommodation, semi-independent living accommodation, and in some

cases adoption pathways are introduced as a permanent option too. The definitions can be found in Appendix A (DfE, 2022, 2018a; Sargent, 2003; McGrath-Lone et al., 2016; Thoburn & Courtney, 2011; UNICEF, 2017). Of all of these, a foster care placement is one of the common types for LAC to be placed. According to recent statistics published by the DfE (2022/2019b), 70% of LAC were placed in foster care and 7% of those children were placed with either a relative or friends. Moreover, the statistics reported that the proportion of children placed in secure accommodation was 16%. These are followed by much lower numbers of children living independently or in residential placements (2%), children placed in other settings (2%), and children who were adopted (3%). See Figure 1.2 below for proportions of children living in different OHC settings. As mentioned earlier, OHC placements cover all kinds of settings that LAC are accommodated and/or reside in within the UK and across the world (see section 1.2.1 above and Appendix A). While there are variations in placement types that LAC usually live in, the researcher in the current study will use the term OHC placements or settings when referring to placement types throught the thesis.

Figure 1.2: Placements of looked-after children (November 2022, 2019b, DfE)

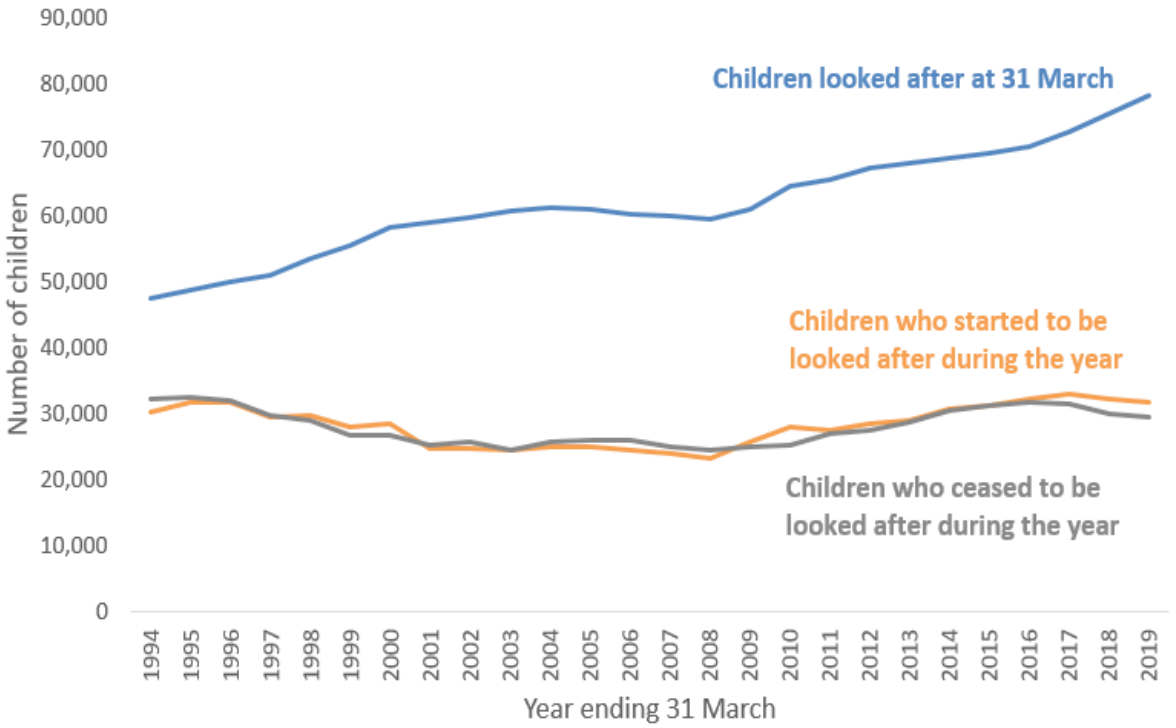


1.2.3 National and global context: number of children in care

Children in care are more likely to experience ACEs and have suffered from serious traumatic events leading up to going into care. Recognition of the adversity has led many countries to

make great efforts to prevent such events occurring and, if possible, to reduce the number of children taken into care (Petrowski et al., 2017; McGrath-Lone et al., 2016; O'Higgins et al., 2015). It is thus essential for countries to obtain accurate estimates of the numbers of children living in care so that they can achieve these objectives; however, despite the importance, the available statistics usually lack accuracy, and the numbers of children living in alternative care vary across countries (Petrowski et al., 2017; UNICEF, 2017). According to the literature, an estimated 2 to 8 million children of ages of between 0 and 17 years are living in OHC globally and this is equivalent to a rate of 120 children per 100,000 (Petrowski et al., 2017; UNICEF, 2017; Bradford et al., 2016). It is possible that the figures are underestimated and there are more children who are not registered with local authorities for various reasons (Petrowski et al., 2017; UNICEF, 2017). The recent statistics published by UK governments across the four nations (England, Northern Ireland, Scotland and Wales) reported that, in 2021, there were approximately 104,898 looked after children in the UK (DfE, 2021; SCCSfNI, 2021; CSWSS, 2021; Sherwood,2022), with 80,850 of those LAC living in England (DfE, 2021). A similar trend was seen in 2020 where there were 80,080 children (67 children per 10,000), with this figure having increased by 2% from 78,140 in the previous year (DfE, 2021, 2019b, 2017a; Oakley et al., 2018). Currently, in the context of England, the number of LAC by local authorities in England rose to 82,170, up by 2% in 2022, which represents a rate of 70 additional children per 10,000, and this figure continues to rise (DfE 2022b). Moreover, the gender gap has widened in the UK, where there was a 14% increase for boys between 2015 and 2019, but only a 10 percent increase for girls (NSPCC, 2021). See Figure 1.3 for more information below.

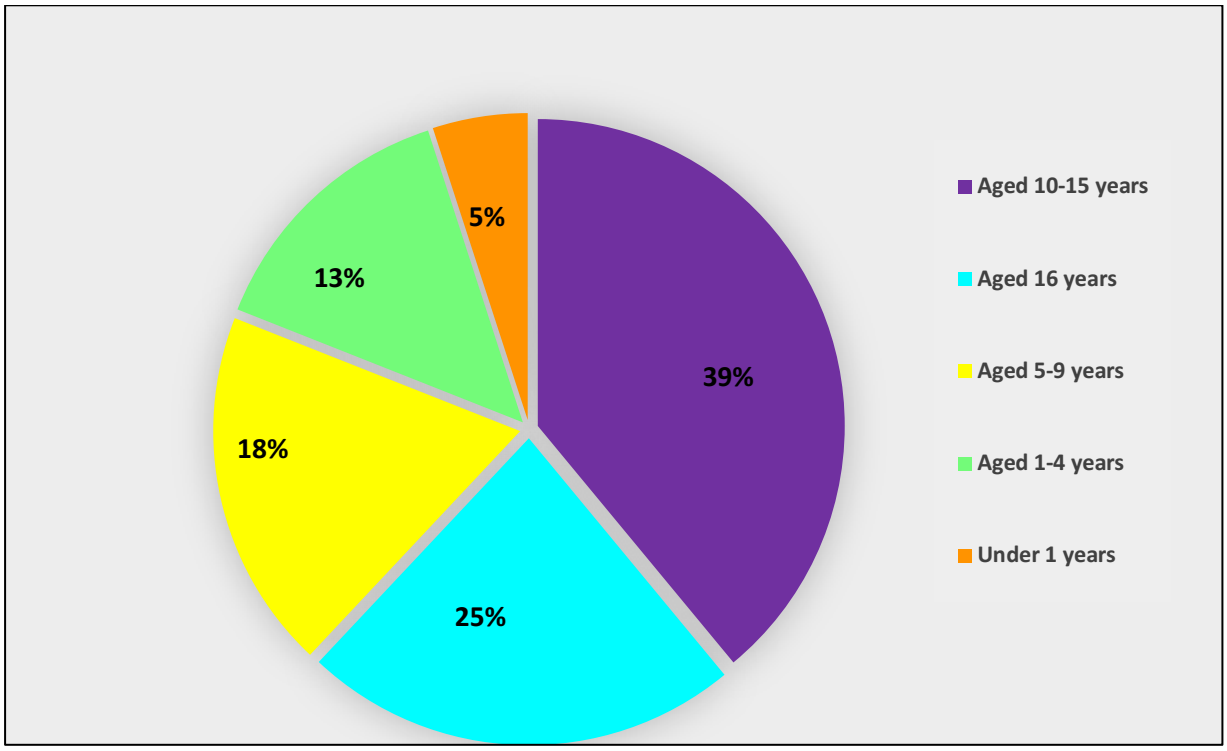
Figure 1.3: The number of children started and ceased to be looked after in England (DfE, 2019b)



1.2.4 Demographics of LAC

According to the DfE's (2018a; 2022; 2021) reports, the characteristics of LAC stayed the same in 2018 and 2022 as the previous year (31st November 2021), which were 56% of these children were male and 44% female. Overall, children aged 10 to 15 years make up the largest number (39%) and children who are aged 16 and over follow them (23%) (DfE, 2022). Figure 1.4 illustrates the proportions of LAC by age. Regarding the ethnicity of LAC and young people (LACYP), the largest proportion are being of white ethnicity (73%), and only 10% of mixed ethnicity and 7% of Black or Black British ethnicity (DfE, 2022, 2021, 2019b, 2018b). As per the DfE (2018a), the ethnicity breakdown of this population has reduced slightly since 2014, steadily from 78% to 75% white ethnicity whilst the proportions of other ethnicities (Asian or Asian British and other) have increased slightly (DfE, 2018a, 2017a). But, since 31st March 2016, the numbers of unaccompanied asylum-seeking children have risen, and the vast majority of these children are boys and over 16 years of age (DfE, 2018a).

Figure 1.4: Proportions of looked-after children after by age (DfE, 2022)



1.2.5 National policy context for improving life trajectories of LAC

With a continuing increase in the numbers of children entering the care system, it is important to consider the ongoing issues LAC encounter. Recent decades have seen notable developments in UK policies related to vulnerable populations. Whilst it is not within the remit of this thesis to discuss the policy context in detail, some of those policies include key elements which are notable. For example, the Children Act 1989 provides a comprehensive legal framework for the safety and security of all children and young people in the England and Wales. The Act must be followed by all local authorities as it sets out specific duties under sections 20, 22, 31, 44 and 46 to safeguard and promote the well-being of children whom they are looking after and caring for (see Children Act 1989 for more details). In addition, significant changes in the England and Wales governments since 1989 have led to changes in the legal framework related to LAC and the introduction of numerous laws to address LAC's poor life outcomes. For instance, key government policies such as Care Matters: Transforming the Lives of Children and Young People in Care (DfES, 2006), Care matters: Time for Change (DfES, 2007) and the Children and Families Act 2014 were introduced to address complex issues relevant to LAC. In particular, the aim of Care Matters: Time for Change (2007) is to deliver better services to improve the outcomes such as better educational attainment, mental health, and well-being

(DfES, 2007a, b). Similarly, the Children and Families Act 2014 requires all local authorities in the UK to designate at least one person to ensure the local government's fulfilment of legal duties in improving the life trajectories of LAC (DfE, 2014a, 2018a, 2018e, 2018g; DfCSF & DfH, 2009). That lead person is called a 'Virtual School Head' (VSH), who is employed by the local authority.

As an appointed leader, it is the VSH's role to ensure that the local authority is fulfilling its legal obligation towards all LAC (DfE, 2018e, 2018f; The National Association of Virtual School Heads: Navsh, 2018). A recent and very important policy for the protection and safeguarding of LAC's welfare is the Children and Social Work Act 2017. The act introduces the corporate parenting principals for the local authorities thoroughly, so they can be the best parent to the children they are looking after. The significance of this Act is that, during the creation of it, parliament concurred to put more resources into the field of LAC's language needs (e.g., identification, training related to communication difficulties) and in order to ensure that these children have better opportunities for developing their speech, language and communication skills, in order to have direct impact on their life outcomes (Legislation.gov.uk, 2017; Basw.co.uk, 2017; Cross, 2018). However, the range of issues affecting this disadvantaged population is not always well understood, prioritised or addressed in a single overarching governmental policy. This is despite the positive shift in government policies and the raising awareness of the complex and interconnected matters relevant to LAC.

1.2.6 Brief overview of LAC's outcomes

LAC experience a variety of lower outcomes compared to their non-looked-after peers (non-LAC); thus, this has been of long-standing concern by both national and international organisations (DfE, 2018a, 2007, 2019a; Ward et al., 2009; Oakley et al., 2018). The literature shows that despite recent improvements, the gaps between LAC and the general population have remained significant and even widened (DfES, 2007; Oakley et al., 2018; Berridge, 2007; Sebba et al., 2015; O'Higgins et al., 2015; Berridge, 2017), as the outcomes for LAC continue to be comparatively poor (Coman & Devaney, 2011). Education, for example, has become a main issue both nationally and internationally (Berridge, 2017). A recent study found gaps between the educational outcomes for LAC and their peers across countries (O'Higgins et al., 2015). This was also evident in the DfE's statistics, with only 17.5% achieving grade 4 or above in both English and maths (standard pass and above) in 2018, compared to nearly 60% of the national population (DfE, 2018b). Moreover, a study in England showed that compared to all

children, those leaving care were nine times more likely to have been permanently excluded from school, and four times more likely to have had a fixed term exclusion, than children as a whole (Dixon et al., 2015).

It is evident that LAC facing various disadvantages require significant attention and support to ensure their well-being and development. However, it is important to note that not all LAC who face difficulties and disadvantages experience uniformly negative outcomes. Despite their challenging circumstances, it is crucial to acknowledge the diversity among LAC, some of whom achieve positive outcomes in areas such as education and other developmental aspects (Jackson & Cameron, 2012; Biehal et al., 2014; Kirk et al., 2012; Healey & Fisher, 2011). These positive achievements could serve as potential indicators of resilience and the positive impact of tailored interventions and support systems to address the diverse needs of LAC (Forsman & Vinnerljun, 2012). Furthermore, LAC are over-represented in school exclusions rates, with this outcome being five times more likely than for their peers (e.g., Mathers et al., 2016; Oakley et al., 2018), and they are ten times more likely to have a statement of special educational need (SEN) or education, health and care plan (EHCP) compared to all children (DfE, 2018a, 2017a). These are some of the factors which are likely to affect their educational attainment. Further, the literature indicates that LAC constitute a substantial portion of educational psychologists' (EP) caseloads (DfE, 2018a; Jackson & McParlin, 2006). The introduction of the Children and Families Bill (2014) highlighted the importance of EPs' work and their role in supporting LAC's needs in multi-agency contexts (Legislation.gov.uk, 2014; Norwich, 2010; Hughes, 2006; Ryres, 2006). Due to their unique knowledge and expertise, EPs become integral contributors to the support system for LAC (Legislation.gov.uk, 2014). The literature supports this. For instance, EPs' involvement with LAC has led to a favourable perception from social workers and caregivers in areas related to measurable outcomes such as decreases in truancy, school exclusions, and placement breakdowns (e.g., Sinclair et al., 2005). These findings indicate the potential of EPs to address the multifaceted needs of LAC, extending their impact beyond educational outcomes. Specifically, EPs can play a crucial role in identifying language needs for children in care early and in a timely manner.

In addition, evidence suggests that poor educational attainment among the majority of looked-after children and young people is apparent in the high degree of long-term unemployment of those who were previously care leavers (Oakley et al., 2018). It was also reported in 2017 that a high percentage of care leavers (40%) aged between 19-21 fall within the 'not in education,

employment and training' (NEET) categories (Oakley et al., 2018). This shows that children and young people in care are more likely to experience disadvantages during their lifetime and receive lower outcomes, including in relation to unemployment (NSPCC, 2019; Bazalgette et al., 2015; Oakley et al., 2018; O'Higgins et al., 2015; Institute of Public Care, 2007). Regarding studies of LAC's mental health, social, emotional and behavioural outcomes, the existing literature suggests that a majority of LAC are at risk of having poorer outcomes in these areas (Bazalgette et al., 2015; Lyons et al., 1998; Emerson, 2005; Koller & Bertel, 2006; DfE, 2018a; Staudt, 2003; Lau & Weisz, 2003; Mooney et al., 2009). For instance, in their 2003 study, Meltzer et al. (2003) found that nearly half of all LAC experience diagnosable mental health difficulties (45%) compared to approximately 10% in the general population (WHO, 2021; Mooney et al., 2009; RCPCH, 2015). The research of Ford and colleagues compared the prevalence of mental health problems between LAC and children living in disadvantaged and non-disadvantaged private households in the UK (Ford et al., 2007). They found that LAC had a significantly higher prevalence of most psychiatric disorders compared with those from non-deprived households. The prevalence rates of behavioural difficulties in LAC are also reported to be significantly high compared to non-LAC peers, at almost 39% (see Table 1.2 for more information). In another UK study it was reported that LAC are over four-times more likely to experience mental health issues than non-LAC, and over five-times more likely to have a diagnosed mental health problem compared to the general population (Bazalgette et al., 2015). This study further stressed that the causes of higher mental health difficulties in LAC stem from their exposure to adversities such as length of exposure to maltreatment and biological risk and resilience (Bazalgette et al., 2015). Lastly, an earlier study by Sempik and colleagues (2008) found that 72% of LAC residing in residential care presented with emotional and behavioural difficulties.

Table 1.2: Comparison of rates of mental disorder among British children aged 5–17 (Ford et al., 2007 cited in Bazalgette et al., 2015, p.12)

Category of disorder	Non-disadvantaged children (n = 1,253)	Disadvantaged children (n = 761)	Looked after children (n = 9,677)
Any disorder	8.5%	14.6%	46.4%
Anxiety disorders	3.6%	5.5%	11.1%
Post-traumatic stress disorder	0.1%	0.5%	1.9%

Depression	0.9%	1.2%	3.4%
Behavioural disorders	4.3%	9.7%	38.9%
ADHD	1.1%	1.3%	8.7%
Autistic spectrum disorder	0.3%	0.1%	2.6%
Other neurodevelopmental disorders	3.3%	4.5%	12.8%
Learning disability	1.3%	1.5%	10.7%

Moreover, research documents that LAC have a higher degree of physical health problems and risks than the general population, with this possibly being due to their ACEs and traumatic background experiences (Institute of Public Care, 2007; Mooney et al., 2009; Scott et al., 2013). As per the literature, two-thirds (66.7%) of LAC have reportedly had at least one physical health complaint, including bedwetting, coordination difficulties and eye or sight problems (Meltzer et al., 2003; RCPCH, 2015). The cause of such health problems and risks is assumed to be related to early abuse and neglect, as well as being in care which may contribute to LAC's poor physical health outcomes (Gallagher, 1999 cited in McSherry et al., 2015).

In summary, the above literature review overviews profiles of LAC and confirms that poor outcomes of LAC have been a long-standing concern for both national and international organisations (DfE, 2018a, 2019a; Ward et al., 2009; Oakley et al., 2018; Petrowski et al., 2017). Furthermore, it provides significant evidence that a number of children enter in care due to ACEs and social disadvantages. Thus, the lived experiences of LAC are likely to be diverse and have an impact on their language difficulties, as well as their wider developmental trajectories.

1.3 Rationale for the current PhD study

According to existing literature, language difficulty is a widespread childhood condition that affects approximately 7% of children (Tomblin et al., 1997; Bishop et al., 2017; Norbury et al., 2016). However, in some ways, despite affecting many children worldwide, language difficulties are often regarded as a 'hidden condition' and often receives significantly less public interest and financial support than other neurodevelopmental conditions such as ADHD or ASD (Bishop & Morty, 2010). This could be particularly problematic for LAC, as the number of LAC in the UK continuously increases due to ACEs, social disadvantages, austerity, family

welfare cuts and numbers of UASC enter in the country each year which create significant safeguarding concerns for local authorities to intervene and remove children from their family homes.

Consequently, LAC's language needs are more likely to be overlooked or go unnoticed because of their unique circumstances and vulnerabilities, which can lead to significant concerns for their language needs. Nevertheless, the developmental phenomenon related to LAC's language need has received very little attention from researchers, policymakers and clinicians to date. Thus, this lack of research and/or attention means that we have limited knowledge of the degree of language difficulties that are experienced by LAC and how to address their needs effectively. The fact there is a limited data available from the previous literature suggests that LAC's language abilities may be more delayed than those of their non-LAC peers (e.g., Cross, 1998, 2004; McCool & Stevens, 2011; RCSLT - Factsheet, 2018).

Further, a large body of research has consistently shown that LAC are at risk of experiencing negative outcomes, not only during their childhood but also throughout their lifespan, due to their unique pre- and in-care experiences. These outcomes are evident in areas such as educational attainment, mental health and social exclusion (e.g., Mathers et al., 2016; Bell, 2007; Berridge, 2017; Berridge et al., 2015; Bazalgette et al., 2015), in which there are possibilities that LAC's language difficulties closely link with their life outcomes. Unfortunately, existing literature and many of the well-meaning policies and initiatives that have been implemented by recent governments have yet to be focusing directly on the early identification of LAC's language difficulties as such. In turn, the language skills of LAC continue to be mismatched with other groups; this is despite the fact that adequate language is known to be crucial to later outcomes (Bercow, 2008) and affected by circumstances experienced by LAC, such as social disadvantages. Therefore, there is an urgent need for researchers and policymakers to gain a deeper understanding of this highly prevalent childhood condition and try to improve early identification and intervention strategies in order to effectively address and even prevent the long-term difficulties LAC face as a result of their poor language abilities.

In addition, considering all this evidence, the impact of ACEs and social disadvantage on language development is deemed to be cumulative, as children who are exposed to these have poorer language skills in comparison with children who do not experience these (e.g., Sylvestre

et al., 2016; Lum et al., 2015; Hoff, 2003). LAC are often taken in care due to these very experiences and share some risk factors with other groups from socially deprived backgrounds who also experience language difficulties (Sempik et al., 2008; Pinto & Woolgar, 2015; Conway, 2012; RCPCH, 2015). However, when discussing the language difficulties in LAC, one cannot accurately ascertain the exact percentage of children in this group who have such difficulties and whether their difficulties are influenced by the same conditions as the other disadvantaged groups. Presently, there are very limited empirical data available that address LAC's language needs. Taking the lack of attention and limited evidence into consideration, this thesis is the first research project of its kind with the aim of expanding our understanding of language difficulties in LAC by exploring this developmental phenomenon in detail and addressing the gaps in the evidence. In doing so, this thesis aims to incorporate data from several sources to enhance current practices concerning the early identification of language difficulties and the current knowledge surrounding the associated long-term outcomes of language difficulties in LAC.

1.3.1 Aims of the study

The focus of this study is to investigate the language difficulties of LAC in a wide context by bringing together several data sources. The study further seeks to explore the link between LAC's language difficulties and their educational attainments, as well as SEBD or SEMH outcomes. To access such evidence and research literature, a variety of methods have been used, and the study was conducted in three phases.

Phase one: A systematic scoping review (study 1)

The overall aim of phase one was to evaluate the extent of language difficulties in LAC by conducting a scoping review. This was to synthesize the existing literature to date. To fulfil the study purposes, the following research questions were developed and addressed:

- RQ1: What is the reported prevalence of language learning difficulty in LAC?
- RQ2: What aspects of language development are affected in LAC?
- RQ3: What protective and risk factors for language difficulties are connected to OHC settings or the circumstances leading to becoming LAC?

Phase two: Quantitative study (study 2)

Following on from the aims of phase one, phase two comprised of a quantitative study based on existing data about LAC's language collected by a London local authority. This study sought to investigate the language difficulties in a LAC sample and had four aims. Firstly, it sought to identify the degree to which the proportion of language difficulties identified within a sample of LAC differed from the expected proportion of language difficulties in the general population. Secondly, it explored what domains of language are most affected in LAC. Thirdly, the link between specific environmental risk factors and LAC's language skills was explored. A final aim was to examine the associations between their language and educational, social, emotional and behavioural outcomes. With these aims in mind, the following research questions were developed:

- RQ1: How many LAC have language difficulties?
- RQ2: In LAC with identified language learning difficulties, what aspects of language are affected?
- RQ3: Which, if any, demographic and environmental factors are associated with language difficulties in LAC?
- RQ4: How does language difficulty associate with educational achievement/progress and strength and difficulties results?

Phase 3: Qualitative study (study 3)

The purpose of study 3 was to gather and analyse the views of relevant professionals on language difficulties in LAC. It aimed to further enrich the findings from the scoping review and study 2 by drawing on the thoughts of those who are directly involved with LAC on an everyday basis. This was necessary to understand the issues in the diagnosis and assessment of LAC's language difficulties, and to synthesize the knowledge of professionals, as well as specialist Speech and Language Therapists (SaLTs). The following research question was developed with these aims in mind.

- RQ1: What are the views and opinions of professionals concerning language difficulties in the LAC population?

The use of data from three studies enabled the thesis to present a more comprehensive view of language difficulties in LAC and the implications for delays in these children's life, as well as highlighting the expectations and restrictions of the current systems.

1.3.2 Structure of the thesis

The thesis is organized into seven chapters, with a visual representation of this structure shown in Figure 1.5. This introductory chapter (Chapter 1) has provided background information on LAC by describing legislation aimed at improving life trajectories, including their language needs. It has also highlighted the importance of investigating the language difficulties and nature of language difficulties of LAC, and presented the rationale for the research, followed by the thesis' aims, questions and organisation.

Chapter 2 includes a narrative overview of language development research. The first part is focused on influences on development from the environment. The second part reviews studies of children developing language in adverse situations including LAC.

Chapter 3 consists of a scoping review (SR) of language difficulties in LAC.

Chapter 4 presents the quantitative study. It describes the research methodology, ethical considerations, accessing the study's database, sampling, description of the data collection techniques and the procedure for recruiting study participants. The main part of the chapter presents the data analysis and results.

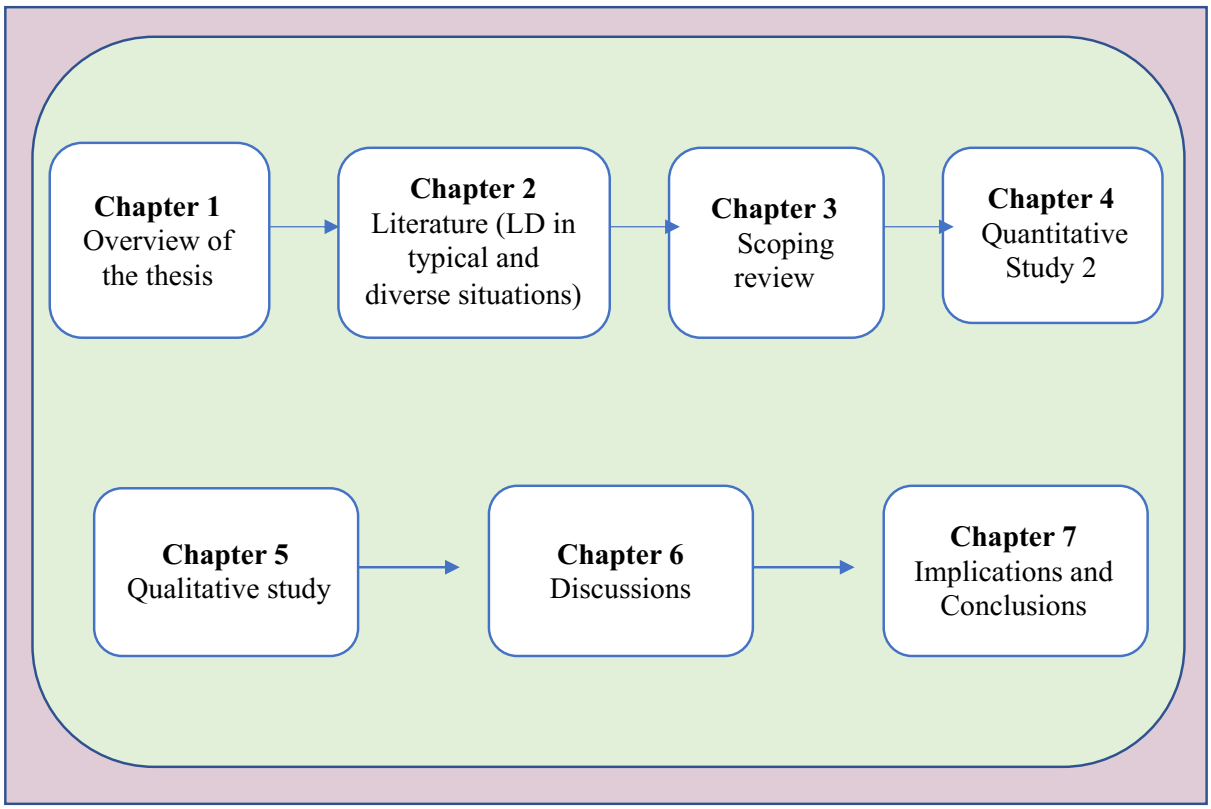
Chapter 5 reports the qualitative study, methodological justifications, sampling and data collection procedures, thematic data analysis and results. This chapter highlights the value of capturing the views of professionals regarding language difficulties and DLD in this population using semi-structured interviews. The steps taken by the researcher to overcome research obstacles and a reflexive account detailing the role of the researcher are also discussed.

Chapter 6 presents a discussion of the results of the SR, quantitative and qualitative studies. It continues by providing the overall pattern of findings across the three phases, a synthesis of results and research inferences, informed by the previous published literature reviewed in Chapters 1 and 2. Implications for future research are discussed along with some limitations of

the current study. The discussion covers ideas and recommendations for potential future research which have emerged from this thesis and the contribution of the knowledge generated.

Chapter 7 presents the overall implications for practice and conclusion from the research findings.

Figure 1.5: Organisation of chapters



1.4 Chapter summary

This chapter introduced the current PhD study by providing background information about the subject of interest and research questions, as well as the structure of the thesis chapters. It also provided a brief account of the major gaps in relation to investigations of LAC's language difficulties and stressed the importance of the current thesis. The next chapter explores the literature on language development and environmental factors in diverse situations such as in the case of LAC.

CHAPTER 2: Language development in typical and in diverse situations

2.1 Introduction

Regardless of different theoretical debates concerning how children develop language, it is considered one of the most important skills in childhood (Johnston et al., 2010; Beckner et al., 2009; McLeod & Verdon, 2014; Asmussen et al., 2018; Tomasello & Farrar, 1986). Language development constitutes a fundamental set of skills which help children to talk about their needs, emotions and participate in social activities. All of which facilitate children's social and emotional well-being, in their own rights (Conti-Ramsden & Durkin, 2008; Zubicaray & Fisher, 2017; Raaska et al., 2012). All forms of communication are involved in language, whether communicated in the form of writing, in words, through facial expressions and the use of signs or gestures (ASHA, 2022; Owens, 1996, 2014). It is well-established that language development also provides a major base for later literacy and academic attainment (Asmussen et al., 2018; Gibson et al., 2021; Conti-Ramsden & Durkin, 2008).

Language development is said to progress through discrete but overlapping phases. Most children follow the same patterns in their learning of language, although at varying rates (Law et al., 2017; Law et al., 2017a). Children's language development is linked to more general abilities such as the comprehension of the psychological objectives of other people and the capacity to identify different patterns in information the child perceives such as human speech (Asmussen et al., 2018). Before birth and in the course of the initial months of life, children are expected to identify and differentiate speech sounds from other sounds that they need to take notice of (Briscoe et al., 2001; Snowling & Hulme, 2012; Asmussen et al., 2018; Tsao et al., 2004). By communicating with their parents and other family members regularly, the majority of children start uttering some words by their first birthday and have begun to use simple sentences by their second birthday (Kennison, 2014; Law et al., 2017a; Weisleder & Fernald, 2013). Language develops in a social setting and regular changes continue to occur through a growth in effective communicative interactions (Markus et al., 2000). Children's participation in social interaction with adults provides input of both language forms and pragmatic conventions which encourage language development (Kinard & Watson, 2015; Tomasello & Farrar, 1986; Markus et al., 2000).

2.2 Aspects of Language Development (in the general population)

In light of the COVID-19 outbreak, the data collection process for core aspects of language development (phonology, semantics, and grammar) was unable to take place. Nevertheless, it was necessary to provide concise summaries of the fundamental aspects of language development in this section.

2.1.1 Development of phonology

The acquisition of the speech-sound system is known as phonological development, and it is significantly connected to the overall language development of the child (Bailoor et al., 2014; Asmussen et al., 2018; Wanger & Torgesen, 1987; Stoel-Gammon, 2006). The various distinctions present in the language's speech-sound system need to be learnt by children and they should also extract the speech-sound patterns and then organize these patterns into meanings (Asmussen et al., 2018; Bavin, 2009). The phonological development serves as a foundation for future development of literacy (Bus & Van IJzendoorn, 1999).

2.1.2 Semantics

Semantics is referred to as the study of the meaning in language units such as words, phrases, sentences and larger units (Rämä, Sirri & Serres, 2013; Botting & Adams, 2005; Ricketts, et al., 2016). Semantic knowledge is, however, not only limited to word definitions and their knowledge but also includes the word types and their classification using grammatical function such as verbs, adjectives and nouns (DiStefano, et al., 2019; Feson et al., 1994; Asmussen et al., 2018). Through semantics, children can comprehend and extend their morphological markers, identify and use categorizing labels in vocabulary, and understand the descriptive utterances (Robert & Owens, 1996). Semantic abilities also include the ability of children to create relationships amongst objects, thoughts, events and words (Robert & Owens, 1996; Gladfelter, 2014; McGregor et al., 2007). Thus, a child's vocabulary is considered as the foundation for their thought procedures and of the fundamental linguistic unit that helps create the categorical concepts and delivering the intent and meaning (Gladfelter & Goffman, 2018; Gladfelter, 2014; McGregor et al., 2007).

2.1.3 Grammar (morphology and syntax)

One of the most unique human language features is grammar. This means, typically, meanings are conveyed through sentences, where comprehension requires not only understanding the specific words but also the morphology and syntax frame comprised in the words **(**Dapretto &

Bookheimer, 1999)**.** The structural language rules and foundation are both present within this aspect, indicating methods through which the words are integrated using a sequence to establish clauses and phrases. The child's syntax assessment and morphology or morpheme use is integrated (Asmussen et al., 2018). Once children learn a language, they will develop an understanding of both its syntax and its morphology (Pullum & Huddleston, 2002; Asmussen et al., 2018). The literature indicates that TD children experiment with the rules of grammar in their second year and develop their understanding gradually as they get older. During their second year, they form sentences of two or more words (Asmussen et al., 2018). Initially, these sentences will be quite simple, involving adjectives, noun phrases, basic verbs or others. When child development occurs, they will learn to combine various kinds of words or phrases to form sentences that are elaborate and present complicated meanings (Radford, 2004; Pullum & Huddleston, 2002; Kenninson, 2014).

2.3 Summary of language development (in the general population)

While the above aspects of language are conventional ways of considering language development, this research project did not conceptualise language using specific domains. Instead, it adopted a broader framework, specifically focusing on receptive/expressive and pragmatic language. As discussed in Sections 4.3.1.1 and 4.4.2, this choice was partly driven by practical considerations, as the researcher faced limitations in testing LAC's language skills within these domains during the COVID-19 pandemic. As a result, a more comprehensive language screening was used to establish the primary measure, comprising the broader aspects of language detailed in Section 4.4.3. These aspects are summarized below.

2.3.1 Receptive and expressive language

From the early life months, years and beyond, language features continuously develop through the support of the environment, social relationships and complete maturational system. Typically developing children begin detecting and using both verbal and nonverbal communication for a range of purposes from a very young age, such as expressing feelings, sharing thoughts, commenting, questioning and requesting information (Falkum, 2018, 2020, 2022; Bohn & Frank, 2019). Language development begins with receptive learning and thereafter expressive language, which involves speaking and listening in order to communicate (McIntyre et al., 2017). During the toddler and preschool years, children's receptive and expressive language increases at an exponential rate as they simultaneously master the speech sounds, vocabulary, and grammatical structures of the language being learned as well as

internalising the often-implicit rules that guide the social use of communication (La Valle et al., 2020; Huttenlocher et al., 2010; Mashburn et al., 2008).

Receptive language involves receiving and decoding or interpreting formal or expressive language, thus facilitating the encoding or production of a message (McIntyre et al., 2017; Lisa et al., 2019). The primary element of receptive language is listening for comprehension, a process that includes all of the steps necessary to comprehend and make sense of spoken language (Wise et al., 2007; McIntyre et al., 2017). This procedure could involve any or all of differentiating speech sounds, understanding word meaning morphology and syntax, and making inferences related to the content (Asmussen et al., 2018; Pullum & Huddleston, 2002; Matthews et al., 2018; O'Neill, 2007). These abilities are necessary, as the active cognitive process involves conscious attention to sounds in order to extract meaningful information from them (Heald & Nusbaums, 2014; Mclntyre et al., 2017; Asmussen et al., 2018). Determining speech sounds or listening in turn requires attending behaviour, acuity of hearing, auditory discrimination, and comprehension (Bailoor et al., 2014; Asmussen et al., 2018; Wagner & Torgesen, 1987; Stoel-Gammon, 2006). During the early months of life, children become able to recognize and separate speech sounds from other noises that require their attention (Briscoe et al., 2001; Snowling & Hulme, 2012; Asmussen et al., 2018; Tsao et al., 2004). This ability of a child to pay attention to, differentiate, and process speech-sound mechanisms and other auditory information are important for language, social, and academic development (Bus & van IJzendoorn, 1999; DiDonato & Suprenant, 2015). By 6 to 12 months, a typically developing child may be expected to grasp and recognize words for common items, as well as listening with increased curiosity to new words (Raaska et al., 2013; Rafferty et al., 2011; Meins et al., 2011; Akhtar & Gernsbacher, 2007). From 1 to 2 years of age, a child may also be expected to look in the appropriate direction in reaction to simple questions (Asmussen et al., 2018), while by the time they are in preschool, children typically have the ability to listen to short stories and answer simple questions relating to those stories, as well as being able to follow simple instructions using natural objects (Kennison, 2014; Brown, 2008). As children develop, they also become increasingly adaptive with respect to combining and repeating various words and phrases to create more elaborate sentences that convey complex meanings (Radford, 2004; Pullum & Huddleston, 2002; Kennison, 2014). Children's language development starts with their receptive knowledge which adds to the expansion of children's expressive language skills. Typically, children begin producing their first words between the age of 12 to 18 months (Kennison, 2014; Brown, 2008).

A child's first word is considered a key milestone in their expressive language development which is referred to as a powerful tool within the world of this child (Asmussen et al., 2018; Gibson et al., 2012; Del Tufo et al., 2019). Children's receptive vocabulary, usually, shows a steady increase in it and by the time they produce their first word, most infants would have attained a receptive vocabulary of approximately 80 to 100 words and then be expected to produce 200 to 500 words around 2 years of age (Asmussen et al., 2018; Fenson et al., 1994). Throughout secondary school, this figure becomes quite enhanced and by 19 years of age, there are nearly 60,000 words learnt by them (Grantham-McGregor et al., 2007; McGregor et al., 2002; Nippold, 2002). Children then begin to apply morphosyntax skills at around 2 to 3 years of age and which involves children's use of the plural-s (e.g., dogs) and prepositions (e.g., in), irregular (e.g., has), articles (e.g., a), as well as the irregular past tense such as the words "begun" and "grown" (Bavin, 2012; Eisenberg & Germezia, 2012. Morphosyntax abilities are use of words and sentences at grammatical levels (Bavin, 2012; Eisenberg & Germezia, 2012; Shipley et al., 1991; Owens, 2014; Leonard et al., 2003).

At about 6 years of age, children start using prefixes, suffixes, and figurative language in academic environments as well as developing their skills with use of root words (e.g., jelly/fish - jellyfish; re/act -react), word relationships, and more complicated vocabulary (Brown, 2008; Lieven, 2006; Owens, 2014). Children's expressive language use becomes more sophisticated as they learn to quickly memorise the labels given to items and the connections between referents and the phrases that represent them (Asmussen et al., 2018; Sowell et al., 2004). These abilities evolve as children start to establish their semantic vocabulary systems, which in turn contribute to their ability to organize concepts and use complicated language (Wagner, 2010). These higher-level language abilities enable children to arrange ideas, draw conclusions from associations, and determine about how things are arranged (Wagley & Booth, 2021; Pullum & Huddleston, 2002; Radford, 2004). It is thus clear that receptive elements pertain to children's understanding of language, while expressive elements involve their abilities to reproduce and communicate with language (Asmussen et al., 2018). This full range of language skills allows children to learn and organize thoughts and ideas for effective use in communication. Learning a language is thus a major developmental operation for children. They must develop their receptive and expressive language skills to become effective communicators (McIntyre et al., 2017; Asmussen et al., 2018), as well as to achieve successful academic, social, and emotional outcomes (Conti-Ramsden, Durkin et al., 2009; Bishop et al., 2017).

However, typical pathways of language development are not the case for all children: a large body of data reveals that children who come from socially disadvantaged backgrounds and those who have been exposed to ACEs are more likely to struggle with language development (Locke et al., 2002; Hart & Risley, 1995; Qi et al., 2006; Sylvestre et al., 2016; Lum et al., 2015; Hoff, 2006; Ryan et al., 2016; Raviv et al., 2004; Serrat-Sellabona et al., 2021). Such children may have difficulties and/or delays with either receptive or expressive language, or even a combination of both (Prevost et al., 2018; McIntyre et al., 2017; Cross, 1999).

In summary, not all children develop language the same and there are many risk factors that can be considered as indicators of forms of ACEs and social disadvantages or a combination of both.

2.3.2 Pragmatic language

Pragmatic language includes the socially appropriate utilisation of language, such as modifications according to the audience and keeping up with conversation changes through diverse social situations (Owens, 2014; Kennison, 2014). It is described as social communication, including various complex non-verbal and verbal abilities which are necessary for real-world conversations (Matthews et al., 2018; Matthews, 2014; Bishop, 2014). Typically developing children begin early detecting and using their verbal and nonverbal communication skills which include smiling, eye contact and gestures. Children engage in joint attention (e.g., eye gazing, showing things by pointing while looking back and forth between the individuals and objects) from approximately 9 months old and rely on the intentions of communicators while learning their first words between the age of 14 to 18 months (Tomasello, 2003; Falkum, 2022, 2018; O'Neill, 2007). This pre-verbal phase may still be thought of as a stage of pure pragmatics (Matthews, 2014). In this early period, communication proceeds despite the lack of an expressive lexicon or any grammar (Matthews, 2014; O'Neill, 2007). These abilities develop later into first speech utterances, taking turns in a conversation and understanding figurative language (Matthews, 2014; Longobardi et al., 2017; Longobardi, 2016; Matthews et al., 2018; Matthews, 2014; Blain-Briere et al., 2014; Abdoola et al., 2017).

Development of pragmatics is thus regarded as a way in which children develop their skills in applying language for communicative purposes, allowing them to express their intentions, as well as to reach conclusions about others' intentions (Falkum, 2022; Mashburn, 2008; Di Sante

et al., 2019; Moreno-Manso et al., 2016). This means being able to maintain the topic of a conversation, initiating a new and relevant topic and the ability to adapt the language appropriately to the conversational context (Matthews et al., 2018). In typical development, pragmatic skills are learned implicitly during social interactions within a child's home and then in the wider world that the child experiences (Matthews, 2014). They are underpinned by comprehending the speaker's conversational intentions and discourses (Longobardi et al., 2017). Pragmatic language has been shown to be related to core language abilities such as language comprehension and vocabulary (Matthews et al., 2018). Furthermore, features of pragmatic language are also strongly associated with children's cognitive skills (theory of mind, inhibition and working memory) and core language abilities (Matthews et al., 2018; Blain-Briére et al., 2014).

However, as with other aspects of language, some children may have difficulties with the development of their social pragmatic skills. This may negatively affect one or more of several domains, including assessing others' intentions; introducing, maintaining, and changing topics; conversational turn taking; seeking clarification when needed; and effectively adapting their communication to the interests of those around them (Reindal et al., 2021; Li et al., 2018; Hoff, 2009; Swineford et al., 2014; Prevost et al., 2018; Cummings, 2014; Matthews, 2014; Longobardi et al., 2017; Matthews et al., 2018; Matthews, 2014; Blain-Briere et al., 2014). Pragmatic language delay is associated with social, emotional and behavioural problems and mental health difficulties, as well as academic performances (Matthews et al., 2018; Ketelaars, et al., 2009; Hyter et al., 2001; Botting & Conti-Ramsden, 2000; Mackie & Law, 2009; Blain-Briere et al., 2014). These concerns are relevant for LAC who carry risk factors on multiple levels.

In summary, language development is a key skill which all children must acquire to learn to talk and interact with their surroundings. Children may gradually comprehend fundamental linguistic patterns and steadily grow their vocabulary before reaching a point where they can use it to speak fluently. Even though all children go through the same phases of language development, not all children develop language the same, the pace at which they advance can differ significantly from one another. A child's capacity for learning a language can be affected by a variety of factors, including their environment they are raised in and their genetic susceptibilities or a combination of both.

2.4 The influence of nature and nurture on language development

Most children learn language effortlessly despite this process being complex and requiring input from environmental experience, and the child's own cognitive skills (Onnis et al., 2018; Asmussen et al., 2018; Law et al., 2017a). The debate in the language research field is how much language learning is driven by genetically inherited abilities (nature) such as a Universal Grammar or inborn cognitive capacities that are not uniquely linked to language per se e.g., attentional and memory capacities (Brown, 2008; Kennison, 2014). On the other hand, how important are environmental experiences (nurture) for the development of language? It is probably the case that language development should be understood from both of the two different viewpoints i.e., nature and nurture (Onnis et al., 2018; Newbury & Monaco, 2010; Zubicaray & Fisher, 2017).

The nativist perspective represents a strong belief in the idea that an infant is born with some innate understanding of language. In this view, the researchers argue that language development is a biological growth that every typically developing (TD) child goes through in broadly the same way across cultures which results in automatic language learning (Molai, 2016; Barman, 2014). Nativist views maintain that language development is a core ability, involving their innate, inborn mental grammar which is controlled by a Universal Grammar (UG - Chomsky, 1965 cited in Ovens, 2014; Barman, 2014). Through a UG, children are able to apply a grammar on the language they are exposed to in order to develop related representations which work for a communicative intention (Asmussen et al., 2018; Kennison, 2014; Goodluck, 2010; Ornat & Gallo, 2004; Mitchell & Ziegler, 2013). A UG helps children understand structure and form countless new language expressions (Mitchell & Ziegler, 2013; Dabrowska, 2015).

On the other hand, a socio-environmental perspective on language development highlights the nurture that a child receives as an important factor. Children require more than just their biological qualities for satisfactory language development (Hulit et al., 2011; Brown, 2008; Kennison, 2014). It is believed that nurture plays a more critical role in language development as children try to repeat the words of others, they frequently observe and gain responses from their surroundings through encouragement or an attempt to keep the interaction and communication going (Skinner, 1985; Samkange, 2015). This signifies children learn language as long as they are part of such surroundings where they are given adequate support and are regularly exposed to a meaningfully accessible human language (Humphries et al., 2012). The

evidence indicates that both nature and nurture are important in the development of language. This is due to the fact that children need the capacity to acquire languages (nature) before they can begin to utilize it, and that this ability is developed through extensive exposure to the target language through hearing and speaking practice (nurture). This suggests that in typically developing environments both nature and nurture contribute to children's language developments. The impact of nature and nurture on language development is cumulative, with difficulties increasing with the number of concurrent risk factors over time.

Further, over the last 20 years, the connectionist model has begun to provide novel information on language development. It is important to note that this approach differs greatly from traditional language theories. Unlike the latter, this approach views the child as a statistical learner, where language acquisition is influenced by exposure to linguistic patterns and their frequencies (Thomas, 2019; Westermann et al., 2009; Onnis et al., 2005). This updated version of language development highlights the interactive and distributed nature of language development (Poll, 2011; Plaut, 2004, 1998). In the context of DLD, Thomas (2019) explored the connectionist model further. His exploration of this perspective offers a profound insight into the impact of disrupted neural connections on a child's capacity to extract and process statistical patterns in language. His work contributes significantly to our understanding of language difficulties, and DLD, across various contexts, shedding light on the complex relationship between cognitive processes and language development. Indeed, it is clear that connectionism offers a distinct and valuable perspective, moving away from traditional rule-based approaches and enriching our understanding of the complex mechanisms that underlie language development in children, particularly those with language difficulties and or DLD.

In the case of LAC, it may be possible that they are more likely to experience language delay as a result of environmental factors, as opposed to the genetic factors that are typically associated with language disorders. For example, the language development process which needs reinforcement and encouragement may be severely disrupted in the case of LAC. Some of these disruptions are mentioned in section 1.2 in Chapter 1, where both experience of ACEs and inadequate OHC placements were reported to have significant impact on LAC's language skills who were in regular care (e.g., Raby et al., 2018; Moreno Manso et al., 2010) and extreme care scenarios (e.g., Petranovich et al., 2017; Windsor et al., 2007). This small body of literature about LAC's language suggests that environmental stimulations and exposure to quality input from others play a crucial role in language acquisition; LAC's language skills are highly

vulnerable to exposure to ACEs and inadequate OHC placements. For example, according to the study results that compared LAC who resided in institutional settings with their foster care peers, it was found that conditions of institutional care, and length of time prior to foster care placements, as well as age of entering in foster care had significant impact on LAC's language skills (Windsor et al., 2007; Windsor et al., 2011). Further, Pears and Fisher (2005) compared the cognitive abilities of maltreated preschool LAC in foster care with a group of non-maltreated pre-schoolers, all with similar SES backgrounds, and found that maltreated LAC exhibited significantly lower scores on language, and general cognitive functioning than non-maltreated peers. The literature reviewed here indicates that the effect of the environmental causes can be more extreme, and that language difficulties and/or delays might be unavoidable consequences in LAC who faced early ACEs or in those from socially and linguistically deprived backgrounds (Rowland, 2014; Snow, 2009; Sylvestre et al., 2016; Knollle et al., 2018).

It is clear that a great number of factors are known to be implicated during the language development process (Asmussen et al., 2018; Law et al., 2017a). However, it is not easy to identify the relative effect of these influences, but much research highlights several important aspects (Molai, 2016; Vernon-Feagans et al., 2012; Harrison & McLeod, 2010; Pancsofar & Vernon-Feagans, 2006; Coster & Cicchetti, 1993; Sylvestre & Mérette, 2010; Cohen, 2010) which are discussed in the next section.

2.4.1 Caregiver-child interaction

The language development of a child takes place in natural environments, which include interaction behaviours (Hoff, 2003; Weisberg et al., 2013; Gilkerson et al., 2017; Neppl et al., 2020; Okorn et al., 2022; Tamis-LeMonda et al., 2001). Since the communication that occurs between parent and child is the first healthy social contact that children are exposed to, the sensitivity and responsiveness of the parent/caregiver play a vital part in developing the linguistic and cognitive skills of children (Razuri et al., 2017; Yoder & Warren, 1997). The growth of communicative abilities is promoted by parents' responsiveness a long time before children start producing regular words (Tamis-LeMonda et al., 2014). For instance, young children learn language more successfully from sensitive and responsive caregivers who are likely to offer prompt and meaningful input (Reed et al., 2017). This includes parent and child communicating while in joint attention (Raaska et al., 2013; Rafferty et al., 2011; Meins et al., 2011; Akhtar & Gernsbacher, 2007).

By the age of 24 months, children are recognizing the signs parents offer during interaction such as eye gaze and pointing in determining word-to-world reference (Reed et al., 2017; Kennison, 2014). The degree of language learning differs across children exposed to the quality of the early communicative exchanges they experience. Some parents make use of richer vocabularies and gestures while communicating with children compared to other parents. These differences in the amount and quality of language input can lead to differences in development (Weisleder & Fernald, 2013). How early interaction links to the early language development of the child is the subject of much research (Tomasello & Farrar, 1986; Markus et al., 2000; Hurwitz & Watson, 2015; Mundy et al., 2007; Akhtar & Gernsbacher, 2007; Kinard & Watson, 2015). One important aspect is the skill of the parent in achieving contingency (utterances that relate to each other and the current focus of the child) during communicative interaction which helps children's language to thrive (Topping et al., 2013; Hoff, 2006; Safwat & Sheikhany, 2014). In a seminal study, Hart and Risley (1995) studied 40 families over the course of 3 years as a way of including the periods before, during, and after the children of these families learned to communicate. The results revealed that there was a gap of almost 1,500 words spoken per hour between professional and low-SES parents, leading to an annual difference of approximately eight million words per year, which might represent a significant word gap by the time a child reaches the age of 4. Hart and Risley (1995) further remarked that this study provided significant evidence that the intensity of parental speech was directly associated with the development of children's vocabulary, and that the wide range of language experiences was closely related to the differences observed in children's language outcomes. However, Hart and Risley's data and findings must be interpreted cautiously for several reasons: a) methodological issues around related participant selection and data collection. They focused on families from a specific region and used income as the main inclusion criterion for determining their socioeconomic status; b) Of their 42 participants, only six families were families receiving government welfare funding, which may lead to bias and assumptions about the language and cultural habits of middle- and upper-class households; c) Hart and Risley failed to consider that developing adequate language is not necessarily related to higher income, as there might be some people who can be rich in their culture even though they are from low-SES backgrounds who can interact with their children and support their children's language more effectively than higher-income families; d) Their study found a significant difference in the number of words heard between children from high-income and low-income families, which could be explained by the large number of African American

families in their study. Lastly, Hart and Risley's study did not consider the ethnic, racial, and linguistic diversity of the participants, which may have contributed to the word gaps in children rather than the family's SES.

Overall, there is evidence that the environment is proven to be playing a crucial role in children's language development, but the pathways are likely to be complex, and different for different cultures. In particular, how much of that language the child hears, the quantity and quality of interactions which indicate close relationship between parents/caregivers-child interactions and language development.

2.5 Variations in language development related to socio-economic disadvantage

Many studies have compared language development in children in different socio-economic contexts (Hoff, 2003; Snowling et al., 2011; Ruther, 2003; Choudhury & Benasich, 2003; Barry et al., 2007; Newbury et al., 2005; Molai, 2016; Vernon-Feagans et al., 2012; Harrison & McLeod, 2010; Pancsofar & Vernon-Feagans, 2006; Cohen, 2010). Although the explanatory mechanism is not clearly understood, children from lower socio-economic status (SES) families are at higher risk of language learning difficulties (Asmussen et al., 2018; Noble et al., 2006; Perkins et al., 2013; Balladares et al., 2016; Roy & Chiat, 2013; Qi et al., 2006; Pace et al., 2017; Hart & Risley, 1995; Hoff, 2003). When taking into account the influences of lower-SES, it is suggested that financial stress increases parental emotional distress, which in turn results in poor parenting styles and fewer chances for interactions and nurturing towards their children (Pace et al., 2017; Vernon-Feagans et al., 2012; Perkins et al., 2013). Further, living in disadvantaged environments is linked to lower levels of safety, increased noise, exposure to toxins, poor nutrition, poor access to healthcare, and higher levels of stress and instability in the families (Meir & Armon, 2017). There is evidence that families from disadvantaged backgrounds are at higher risk of having mental health issues and using drugs and alcohol during their pregnancy and after their children are born, which might significantly affect children's language development (Pace et al., 2017; Perkins et al., 2013). For example, children might not have a chance to be exposed to rich language environments; they are more likely to be exposed to a variety of toxic stressors (e.g., abuse) and limited social and educational opportunities due to a family's low income. They might live in inadequate home environments with might have fewer books and less opportunities to attend social activities such as going to playgrounds, museums and zoos. This suggests it is most likely that disadvantages involve lower incomes which have adverse effects on language through both effects on parenting and

increased stress, suggesting fewer opportunities than for children exposed to language-rich environments (Vernon-Feagans et al., 2012; Harrison & McLeod, 2010; Pancsofar & Vernon-Feagans, 2006; Cohen, 2010; Hoff, 2005; Roubinov & Boyce, 2017).

Further, even though the individual effects of the various SES components (e.g., poor educational level, employment, and occupational status) are currently treated as an aggregate variable, the effects of SES on children's language environment and development are both robust and significant (Hoff, 2006; Qi et al., 2006; Pace et al., 2017). For instance, studies on SES and parenting have noted that parenting can help mediate the relationship between risk and early language development (Vernon-Feagans et al., 2012; Hoff, 2018; Hoff et al., 2002; Roubinov & Boyce, 2017). Parents who are poorer and less educated are more likely to be less engaged, sensitive, or linguistically stimulating with their children, and as a result, those children will exhibit poorer language skills (Vernon-Feagans et al., 2012; Fernald et al., 2013; Meir & Sharon, 2017; Hart & Risley, 1995). Because of this, by the time they enter preschool, children from disadvantaged backgrounds will differ substantially from their more advantaged peers in terms of language development (Adlof et al., 2014; Law et al., 2011; Hoff, 2006). A key example of this was a study by Roy, Chiat and Dodd (2014) which demonstrated that a higher proportion of children raised in lower SES enter preschool with poorer speech, language and attentional abilities (e.g., being able to focus and concentrate on specific tasks or paying attention to details) for their age and were at increased risk of clinically significant language impairments. This is also evident in an earlier study where Locke et al., (2002) found that in comparison with population norms, children from low-SES backgrounds presented significant expressive and receptive language delays. Fernald et al. (2013) reported a 6-month gap between low and higher SES groups in processing skills related to language were evident at 24 months. Differences in language processing skills for comprehension are evident in infants even as young as 16 months from higher and lower-SES backgrounds (Deanda et al., 2016).

2.6 Adverse Childhood Experiences

Adverse Childhood Experiences (ACEs) influence many aspects of child development including language. ACEs may include maltreatments (e.g., abuse, neglect) and trauma which occur after a person is exposed to an incident or events that physically or emotionally harm them such as child maltreatment (Segal & Collin-Vézina, 2019; Felitti et al., 1998; Becker-Blease & Freyd, 2005). In general, children (e.g., LAC and non-LAC groups) who have experienced maltreatment are found to be at greater risk of developing a variety of

developmental disorders, including speech and language difficulties (Nathanson & Tzioumi, 2007; Kaltner & Rissel, 2011; Coster et al., 1989; Sylvestre et al., 2016; Snow, 2009). This represents cause for concern, as these difficulties are known to be significant predictors of children and young adult's educational, social, and mental health outcomes (Conti-Ramsden et al., 2018; Spratt et al., 2012; Coster et al., 1989). Some researchers argue that the impact of ACE is seen at a neurobiological level which is linked to difficulties with communicative development and emotional regulation (Westby, 2018; Segal & Collin-Vézina, 2019). Others argue that experience of ACEs has a significant impact on children's communication skills even before they start school (e.g., Segal & Collin-Vézina, 2019). In the case of LAC, increased awareness of the long-term implications of ACEs (e.g., pre-care experiences of abuse or neglect) on their development is necessary, given that as a direct consequence, they may carry or bring such experiences to their respective care placements (Richardson & Lelliott, 2003; McGrath-Lone et al., 2016; Pinto & Woolgar, 2015; Simkiss et al., 2012; Jones et al., 2011; Coman & Devaney, 2011). These include high levels of challenging behaviour, poor social competence and social skills and poor emotional well-being, which can, in turn, compromise life outcomes, including poor language skills (Krier et al., 2018). Such factors are also known to have a negative impact on the outcomes and lives of LAC, including their language and communication skills (Coman & Devaney, 2011; Pears & Fisher, 2005).

2.6.1 Language development and maltreatment (abuse and neglect)

Research has linked maltreatment with children's reduced capacity to share their needs and emotions, as well as hold logical discussions (Westby, 2007; Rogers-Adkinson & Stuart, 2007). In particular, some studies indicate maltreatment can lead to weak cognitive functioning and language development (e.g., Eigsti & Cicchetti, 2004; Sylvestre & Mérette, 2010; Kaltner & Rissel, 2011; Moreno-Manson et al., 2015). The association between language development and maltreatment has been observed in various features of communication (e.g., semantics, syntax, understanding), as well as social abilities (Merritt & Klei, 2015; Allen & Oliver, 1982; Coster & Cicchetti, 1993; Culp et al., 1991; Stock & Fisher, 2006). Several studies have described in detail that some children who are exposed to maltreatment find it challenging to develop a clear understanding of abstract communication abilities (e.g., sarcasm) and are likely to have pragmatic language difficulties such as understanding others' non-verbal cues (Lum et al., 2018; Westby, 2007; Rogers-Adkinson & Stuart, 2007). According to a meta-analytical review, for example, a noticeable delay was perceived in the language skills of children who were exposed to maltreatment compared to non-maltreated children (Sylvestre et al., 2016).

2.7 Section Summary

Taking all these influences together the literature reviewed previously reports that in typically developing children, the growth of their language is often influenced by a number of factors, including stimulating learning experiences outside their home, enriching learning resources, age-appropriate toys, books and supportive household learning environments (Reed et al., 2017; Yoder & Warren, 1997). Further, it reports that living in language-rich environments and having access to sensitive and responsive parents/caregivers are also essential elements for children to develop adequate language skills. On the other hand, numerous risk factors are found to be closely associated with children's poor language skills. In particular, the negative effects of social disadvantages and ACEs on children's language difficulties, indicating that the variations in interaction and the social environment in which early language development takes place do, in fact, significantly influence childrens language abilities (Hoff, 2003; Roy & Chiat, 2013; Qi et al., 2006). It seems that these implications will extend to all aspects of children's language development; children's poor language skills closely associated with degree social-disadvantages and ACEs. This is already evident in a growing body of literature (Locke et al., 2002; Qi et al., 2006; Sylvestre et al., 2016; Westby, 2007, 2018). For LAC with a history of social-disadvantages and ACEs the degree of language difficulties could be more profound compared to their non-LAC peers, as their exposure to social disadvantages and ACEs could be more extreme. These risk factors may include poor prenatal income, mental health, malnutrition, neglect, abuse and few opportunities to engage in activities that facilitate language development (Pace et al., 2017; Law et al., 2017). Potentially, due to these negative early experiences, many LAC can present poorer language skills as a consequence compared to non-LAC. The aim of the current PhD is thus to focus on LAC's language, who are known to experience social disadvantages and ACEs. The next section will examine the definition of specific language impairment in the mainstream population.

2.8 Overview of language difficulty in the non-LAC population

Developmental language difficulties (DLD) is a recognized and used term in the language research field, and the current study adopted two main terms: the term 'language difficulties' and the term 'Speech, Language, and Communication Needs' (SLCN). The decision to use these terms was made because comprehensive and standardized language tests might not always be available, and these terms thus were thought to provide a more general structure for defining children's language difficulties. This was the case in the current study where the researcher had to rely on other sources of data which was based on non-standardized language

screening to identify children's language difficulties. The use of the term 'language difficulties' allows for a wider definition that encompasses a range of difficulties children present, including difficulties with speech, understanding grammar rules, vocabulary, sentence structure and conversational skills (Bishop et al., 2017; Reilly et al., 2007; Taylor et al., 2013; Muter et al., 2004). Children may have difficulty in only one of these areas, but others may have difficulties in more than one e.g., understanding the non-verbal cues and rules of good communication (RCSLT-Factsheet, 2022; Batman & Brownlie, 2014; Locke et al., 2002; Spencer et al., 2011). Similarly, the term SLCN recognizes that language difficulties can be part of a broader spectrum of communication-related difficulties that can influence children's ability to interact with others and participate in everyday activities (Lindsay et al., 2010; ICAN, 2006; Law et al., 2017; ICAN, 2022).

In recent years, language difficulties in children have received much attention from many researchers and clinicians, both in the national and international context. This is mainly because concern has been expressed by children's parents and caregivers regarding the development of their children's language learning process (Conti-Ramsden & Durkin, 2016; Reilly, Bishop & Tomblin., 2014). Children experiencing language difficulties are generally acknowledged as having difficulties from the outset of the language development and tending to struggle to meet the normal language developmental milestones (Conti-Ramsey & Durkin, 2016; Bishop, 2006; Evans & Brown, 2016; Reilly et al., 2014; Hawa & Spanoudis, 2014).

Further, it is acknowledged that language difficulties can manifest in various ways and can affect children differently. Some children experience early language delays and difficulties without apparent cognitive, neurological or sensory issues, and these children are often called late talkers (Zubrick et al., 2007; Whitehouse et al., 2011). However, despite the absence of these conditions, these children may struggle with language learning, which can have long-term effects on their academic and social development (Zubrick et al., 2007; Whitehouse et al., 2011; Rice et al., 2008; Dale et al., 2003; Durkin & Conti-Ramsden, 2007; Schoon et al., 2010; Law et al., 2017).). This is evident in some of the population studies that identified children in the low range of language ability at an early age and followed them up at a later age, which showed that while some children with early language difficulties have persistently low language ability, others catch up with their peers and develop language skills within the normal range (Rice et al., 2008; Rice et al., 2018. Whereas other children may experience mild to moderate difficulties in some cases which could be temporary, others may face more severe or

specific difficulties in language that persist throughout their childhood and adolescence (Cross, 1999; Law et al., 2000; Robinson, 1991; Clegg et al., 2009; Conti-Ramsden & Durkin, 2016; Conti-Ramsden et al., 2019; ICAN, 2006).

Language difficulties alone is one of the highly prevalent childhood disabilities and according to the literature 7% in school-aged children have such difficulties (Tomblin et al., 1997; Bishop et al., 2017; Laasonen et al., 2018). In areas of social disadvantage, this figure can be between 40% to 50% of all children and young people, which includes those with delayed language, as well as children diagnosed with language difficulties (Locke et al., 2002; Law et al., 2011). This high prevalence rate, compared to 7% for the general population, makes children from socially disadvantaged backgrounds one of the largest groups of children and young people with language difficulties. However, the prevalence rate could be higher because of undiagnosed language difficulties or disorders in various groups, such as LAC, and the diversity of cut-off points used in standardized testing (Bishop et al., 2017). Language difficulties also overlap with other aspects of children's cognitive function. This is evident in research carried out by Tomblin et al. (2000), which identified a strong correlation between children's speaking and reading skills; with reading difficulty being observed in 52% of language difficulties children compared to 9% of the control group. Further, Finneran et al. (2009) examined the sentence production skills of children with language difficulties and discovered that their speech was substantially more disturbed than that of typically developing children, despite the fact that both groups achieved high levels of grammatical accuracy. Thus, the study suggest that different profiles of language difficulties are quite common across children (Garraffa et al., 2018; McGregor et al., 2020).

The literature mentioned above clearly indicates the complex and multifaceted association between language difficulties and ensuing poor life trajectories. Children with language difficulties are generally described as a heterogeneous group. Different profiles of language difficulties may be described in children, such as they may be weaker in grammar and in expressing and sequencing ideas and have limited vocabulary (Garraffa, Coco & Branigan, 2018; McGregor, 2013). Whilst, as stated above, the literature confirms that language difficulties are a common condition among children (in the United Kingdom, there are over 1.4 million children and young people who have language difficulties or SLCN (Bercow, 2018), there are other groups of children who may be at a higher risk of language difficulties, with LAC being one of these groups, and it is possible that some of the LAC are included in these

SLCN data. Further, despite sharing similar risk factors with other language risk groups, it is possible that LAC are the most vulnerable groups in terms of language difficulty rates. Consequently, the literature reviewed here informs and assists the current PhD thesis in investigating language difficulties in LAC.

2.9 Specific risk and protective factors influencing LAC's development

While a range of developmental outcomes have improved for LAC in recent years, there is still a significant gap with the general population across education, mental health and well-being (DfES, 2006; Legislation.gov.uk, 2014; Oakley et al., 2018; House of Commons Education Committee, 2022). This section covers specific risk and protective factors for child development in LAC which stem from the pre-care experience, the in-care experience itself or both that might influence their language skills (Aguilar-Vafaie et al., 2011; Coman & Devaney, 2011; Morrison & Shepherd, 2015; Mathers et al., 2016; Hagaman et al., 2010).

Regarding language difficulties within the LAC population, it is imperative to situate whether these problems fit within the broader context of diagnostic terms such as DLD or SLI in the non-LAC population. LAC often face multifactorial early childhood adversities (see Section 2.8 in Chapter 2 and Section 6.3 in Chapter 6 for more details), in which they exhibit language difficulties that are not easily categorized into the established diagnostic frameworks of DLD or SLI. Instead, their language difficulties appear to align more closely with the concept of Speech, Language, and Communication Needs (SLCN- ICAN, 2006; ICAN, 2022). One crucial aspect to note is the ambiguity surrounding whether LAC truly manifest DLD or SLI, primarily due to the use of limited standardized language assessments in most research studies. As, most studies in the LAC field rely on a single standardized language assessment tool (e.g., Morena-Manson et al., 2009, 2010). Further, their language needs are assessed as part of LAC's general health or educational evaluation checklists, instead of standardised assessment tools for specific measurement of language (e.g., Evans et al., 2004; Nathanson & Trioumi, 2007; Halfon et al., 1996). This approach may not fully capture the diagnostic criteria of DLD within this population, which further complicates our understanding of the specific nature of their language difficulties. Thus, when discussing language difficulty in the context of diagnostic terms for LAC we need to recognise that it becomes evident that their difficulties are best encapsulated by the broader framework of SLCN, with the exact diagnostic categorization remaining elusive.

The language difficulties encountered by LAC are complex and multifaceted, with their unique backgrounds and experiences playing a critical role in exacerbating these difficulties. Unlike other developmental disorders such as autism, where children may exhibit robust non-verbal, academic and social skills alongside their language difficulties (e.g, Neuhaus et al., 2022; Joon et al., 2022; Parsons et al., 2019), diagnoses of DLD or SLI in LAC is not straightforward as they face more complex adversities than other language risk groups such as children with DLD or SLI (Montgomery et at., 2018; Montgomery & Evans, 2009; Conti-Ramsden & Durkin, 2008). LAC's adversities, including but not limited to maltreatment, early emotional development disruptions and removal from parental homes, collectively contribute to a broader spectrum of difficulties (e.g., Stacks et al., 2011; Common & Devany, 2011; Mathers et al., 2016). Hence, for this population, it is not merely a matter of isolated language difficulties; instead, multifactorial and additive interconnected factors adversely affect their language development (Pinto & Woolgar, 2015; Simkiss et al., 2012; Byrne et al., 2018; Di Sante et al., 2019). In essence, the severity of their language difficulties is significantly compounded by the complex adversities surrounding them, which set them apart from the general population and children with DLD or SLI populations. More information on this area can be found in 'Understanding risk model of language development in LAC' in Section 6.3 in Chapter 6.

2.9.1 Pre-care experiences

Pre-care experiences that influence development in LAC can often involve poverty, maltreatment, insufficient parenting, parental alcohol misuse, domestic violence, parents with a history of mental health and/or substance misuse disorders (Coman & Devaney, 2011; Morrison & Shepherd, 2015; Simkiss et al., 2013; Mathers et al., 2016; Coman & Devaney, 2011; Morrison & Shepherd, 2015). Children's pre-care experiences are linked to a range of consequences e.g., LAC may become anxious regarding the well-being of their parents and subsequently take a great deal of responsibility to ensure the safety of their siblings and parents (Coman & Devaney, 2011; Gordon, 2003; Berube et al., 2017; Madigan et al., 2007). Studies of LAC who have been removed or separated from their parents and who enter into the care system report trauma (Kliewer-Neumann et al., 2018; Richardson, 2002), as do LAC who have been forcibly removed from their parents because of abuse or neglect (Morrison & Shepherd, 2015). Several studies find that LAC are more likely to develop insecure attachments, experience more compelling emotional, behavioural, social and academic problems than their peers, but are also less likely to receive any treatment than their peers (Rock et al., 2013;

McCool & Stevens, 2011; Pinto & Woolgar, 2015; Morrison & Shepherd, 2015; Madigan et al., 2007; Vasileva & Petermann, 2018; Krier, 2018).

In contrast, for some young people, being placed in care might be a positive result, as being removed from ACEs can provide them with new families, schools and troubling circumstances such as trauma or maltreatment (Morrison & Shepherd, 2015). However, such relief might not apply to all children who enter into the care system as being in care might have adverse effects on their outcomes as they might feel guilty about being removed from their parents. Indeed, such aspects/dispositions often affect children's relationships with caregivers, social-care workers and others (Cowman & Devaney, 2011; Morrison & Shepherd, 2015). In addition, regarding the routes into care, as discussed in Chapter 1, some children come into care voluntarily with their parents' agreement or consent, while others enter after involvement in the youth justice system or in criminal activity. These variations indicate that each LAC's situation should be handled with care and caution, as their pre-care and traumatic experiences will not go away once they enter care (Aguilar-Vafaie et al., 2011). While pre-care experiences play a role in outcomes seen in LAC, a failure to deal with the aftermath of these experiences also contributes to difficulties (Kliewer-Neumann et al., 2018; Richardson, 2002; Coman & Devaney, 2011).

2.9.2 In care experience

It is expected that LAC in care systems live their lives the same as children who are not living in care systems; however, achieving 'normality' for most LAC can be unsuccessful and impossible to predict (Steels & Simpson, 2017, p.1705). While many LAC live in the care system for a short period of time, a significant number spend a longer portion of their childhood in care (Jones et al., 2011; Mathers et al., 2016; Pinto & Woolgar, 2015; Morrison, 2015; Richardson, 2002). As noted above, being in care can be a positive move for some children but for others entering care systems can also affect their life profoundly, with some in-care issues being the stigma of residing in OHC or being abandoned (Oakley et al., 2018; Harker et al., 2004; Martin & Jackson, 2002). Further, suppose these children are forcibly and involuntarily (see Table 1.1 in section 1.2.1 Chapter 1 for information about routes going into care) removed from their parents. In that case, they might find it difficult to deal with such trauma and feel wounded or even feel guilty, despite being abused or neglected. This can lead LAC to develop serious attachment disorders. For some children's ACEs, being removed from birth families can also be aggravated by in-care experiences (Viner & Taylor, 2005; Harker et al., 2004;

Martin & Jackson, 2002; Simkiss et al., 2012; Mathers et al., 2016; Jones et al., 2011). For example, the long-term effects of attachment difficulties in the absence of birth families or siblings can manifest and appear in LAC as being withdrawn, distant, distressed and emotionally unavailable and have limited interaction with their caregivers (Kerr & Cossar, 2014; Aguilar-Vafaie et al., 2011; Scott, 2011; Spieker et al., 2003; Woolgar & Baldock, 2015). Further, it is likely that when children are placed in care, the interruptions or loss of their attachment to their birth parents may cause them distress and negatively affect their relationship with their new caregivers and/or care team (Stovall & Dozier, 2000; Dozier et al., 2008; Lawrence et al., 2006). Some LAC can be mistrustful of adults and reluctant to seek support from their new caregivers (Dozier et al., 2008; Dozier et al., 2019). Some studies report that the longer a child remains in care, the higher the incidence of language, physical and cognitive delays (Windsor et al., 2007, 2011; Groze & Ileana, 1996; Rutter, 1998; Nelson et al., 2007). This could be linked to inadequate OHC placements that do not meet children's basic needs, for example feeding, changing, hygienic procedures, as well as absence of affection (Bakermans-Kranenburg et al., 2011a; Bakermans-Kranenburg et al., 2011b). Such a link is already evident in the literature (e.g., Windsor et al., 2011, 2013; Tirella et al., 2007). In their study of Russian Baby Homes, Muhamedrahimov and colleagues discovered not only an absence of reciprocity and mutuality between carers and infants, but also some violence, such as caregivers pushing spoons into babies' mouths (Muhamedrahimov et al., 1999 cited in Bakermans-Kranenburg et al., 2011a). That study also discovered that caregivers were shouting and banging on windows as an acceptable form of disciplining the children, despite these actions causing fear responses in these young children (Muhamedrahimov et al., 1999 cited in Bakermans-Kranenburg et al., 2011a; Muhamedrahimov et al., 2004). The conclusions that may be drawn from the literature are that some in-care experiences have cumulative negative effects on LAC's development.

2.9.3 Foster care placements

As discussed earlier, the majority of LAC are placed in foster care (Hayden, 2005; DfE, 2020). Foster care placements are regarded as the most suitable OHC and/or alternative care placements as they are most similar to natural family-like home environments (Dozier et al., 2014; Goemans et al., 2015; Roy et al., 2000). Nevertheless, some studies still report that removing children from their families of origin and placing them in foster care is associated with negative language and other developmental outcomes (Stacks et al., 2011; Lawrence et al., 2006). This is because of psychological difficulties and loss of family at the start of their

foster placements (Goemans et al., 2015; Goemans et al., 2016; Vasileva & Petermann, 2016; Gypen et al., 2017). LAC in foster care can exhibit mental health difficulties (Zlotnick et al., 2012), lower educational attainments and trouble finding employment (Oakley et al., 2018) and have higher use of drugs and alcohol in adolescence and early adulthood (Ainsworth & Hansen, 2014; Turney & Wildeman, 2016). Some studies estimate between one-half and two-thirds of the LAC entering the foster care system demonstrate emotional or behavioural problems significant enough to warrant mental health treatment (Healey & Fisher, 2011). Therefore, the literature suggests that placing children and young people in foster care should be undertaken carefully to ensure that these settings are suitable to meet their needs (Fice Youth, 2010; UNICEF, 1989). Althought there is a large body of studies providing evidence on ways in which to promote better outcomes for LAC, such as few or no changes in placement and more stable placements (e.g., Bell, 2007; Mathers et al., 2016; Jones et al., 2011; Rubin et al., 2007), to date no evidence has been provided in particular about the relationship between 'careful' placement changes and LAC's outcomes.

2.10 Protective factors

The studies discussed in previous sections have established that LAC is a particularly vulnerable group at risk of negative life outcomes. It is important to recognize that research has also reported protective factors in experiences of LAC (Healey & Fisher, 2011; Coman & Devaney, 2011). For example, stable OHC placements are found to positively affect LAC's language skills. A recent study shows that within six months of entry into various OHC settings, LAC presented improved language skills (Byrne et al., 2018). Although the relationship between foster care settings and language has not been investigated widely, some studies find LAC in foster care have better language skills than those who remained in institutions (e.g., Windsor et al., 2011, 2013). In particular, a positive relationship with a foster carer can compensate for inadequate primary caregiver relationships in the birth family (Proctor & Linley, 2011; Sugden, 2013; Coman & Devaney, 2011). Other factors linked with good outcomes include local OHC placements with siblings, placements with older and more experienced foster carers with strong parenting skills and stability and permanency, all of which reduce the likelihood of re-entering care (Thomas et al., 2005; Schofield, 2002; Schofield & Beek, 2009; Bergin & Bergin, 2009; Mathers et al., 2016; Jones et al., 2011; Riley, 2012; MacDonald & Marshall, 2021; Healey & Fisher, 2011; Martin & Jackson, 2002; Morrison & Shepherd, 2015). Further, positive relationships with caregivers, providing a mentor and supportive adult, support from foster carers and encouragement to form a positive

relationship with a significant adult and mentors have also been highlighted as helping to provide experiences that may buffer against difficulties in LAC (Bell, 2007; Krier et al., 2016; Mathers et al., 2016; Martin & Jackson, 2002; Logan-Greene & Jones, 2017; Jones et al., 2011; Bergin & Bergin, 2009; Mathers et al., 2016). Lastly, keeping children in the same school after placement changes, providing school and community-based activities, providing access to educational psychologists and early interventions, and providing support in a wider network of friends are all suggested to help LAC to fulfil their potentials in life (NICE, 2013, 2015; 2020; Bell, 2007; Morrison & Shepherd, 2015; Martin & Jackson, 2002).

The reviewed research indicates that there are a number of protective factors which can contribute to LAC's life outcomes including their language. These protective factors can act as a buffer against the impact of risk factors caused by their pre-care experiences.

2.11 Summary of chapter

This chapter has described the key concepts contained in the current study. It began with a general overview of the biological and environmental factors that influence the language development of children. Variations in children's capacity to acquire language is linked to a range of environmental and hereditary factors. Several associations between ACEs, social deprivation, and language difficulties have been identified, however these are complicated and multifaceted. This chapter specifically examined the consequences of child-caregivers' interactions, socioeconomic disadvantages, ACEs and maltreatment. Further, this chapter has discussed the aspects of language development, and terminologies used to describe children with language difficulties. Finally, it has reviewed a growing body of empirical studies that investigated the specific risks and protective factors that contribute to LAC's life language difficulties.

In conclusion, the present chapter has laid a strong foundation for conducting a systematic scoping review of language difficulties in LAC presented in the following chapter. Given the widely divergent literature on various areas of language and often focusing on different groups of children, a scoping review was critical in consolidating and synthesizing the evidence on LAC's language to inform studies 2 (Chapter 4) and 3 (Chapter 5).

CHAPTER 3: Language Difficulties in Looked-after Children: A Scoping Review

The previous chapter reviewed the wider literature on LAC's development. This chapter covers a scoping review (SR) on language difficulties in LAC. It is subdivided into two parts. Part 3.1 outlines why language development and difficulties is of concern in LAC and provides justifications for the need for this SR. Next, the SR methodology, structure, and strategies used are described. Part 3.2 discusses the SR findings in detail. It also provides an overview of its strengths and limitations. The chapter concludes with a reflection on the purpose of the SR for this current thesis and the extent to which it has been fulfilled.

3.1 Introduction

Children typically develop their language through a combination of social and cognitive abilities (Asmussen et al., 2018; Morgan et al., 2021). As discussed in detail in Chapter 2, previous literature has indicated that the process of language development and its underlying mechanism are affected by biological and environmental factors (e.g., Asmussen et al., 2018; Carniel et al., 2017; Rocha-Neves et al., 2016; Kulh, 2004; Raaska et al., 2013). Language development begins in early life and continues beyond that period, though it requires both adequate scaffolding and effective support from appropriate adults, as well as the consistent practice of language skills (Tomasello, 2008; Olson & Masur, 2015). Research shows that children normally follow a natural pace for developing speech and language skills (Brown, 2008; Asmussen et al., 2018). However, not all children develop language robustly and that disparity in language learning often arises early (Taylor et al., 2013; Reilly et al., 2014). This means that some children have difficulties that range from delays that will eventually resolve, to situations where other children may potentially have to face chronic impairment (Bishop, 2006; Evans & Brown, 2016; Reilly et al., 2014). In particular, as discussed in Chapter 2, certain risk factors play a crucial role in children's development and can impair their language skills (Carniel et al., 2017; Vernon-Feagans et al., 2012; Pace et al., 2016; Coster et al., 1989; Sylvestre et al., 2016; Snow, 2009).

3.2 Variability of environmental influence

Chapter 2 discusses the fact that children who are exposed to a range of environmental risk factors have been found to have poorer language skills than their non-LAC peers (e.g., Segal

& Collin-Vézina, 2019; Hounry & Mercy, 2019; Roy et al., 2014; Lum et al., 2015; Ruther, 2003). The majority of research on environmental factors focuses on the unique contributions of low-SES (Pace et al., 2016; Fernald et al., 2013; Deanda et al., 2016; Hoff, 2006; Qi et al., 2006; Olson & Masur, 2015; Vernon-Feagans et al., 2013) and ACEs on children's developmental outcomes (Westby, 2018; Rutter, 2003; Westby, 2007; Rutter, 1998; Nelson et al., 2006). This body of evidence has shown that multiple ACEs and social disadvantages are linked to poor development in children. In particular, it has been reported that the typical development of language remains dependent on the degree of ACEs (Fox et al., 1988; Eigsti & Cicchetti, 2004; Westby, 2018; Hwa-Froelich, 2012; Westby, 2007; Stacks et al., 2011) and social disadvantages which children face (Choudhury & Benasich, 2003; Barry et al., 2007; Newbury et al., 2005; Vernon-Feagans et al., 2012; Harrison & McLeod, 2010; Pancsofar & Vernon-Feagans, 2006; Fernald et al., 2013; Deanda et al., 2016). Most studies indicate that such risk factors, individually and in combination, are likely to continue to show a detrimental influence on children's continuing language development unless their experience is adequately buffered by a spectrum of protective compensating factors such as healthy parent-child interactions (Spilt et al., 2015; Gibson et al., 2013; Tomasello, 2008; Olson & Masur, 2015; Vernon-Feagans et al., 2013). The studies draw further attention to the negative impacts of environmental risk factors on children's development, which imply that the social context and variations in early language development do have an impact on later language learning (Deanda et al., 2016; Qi et al., 2006; Pace et al., 2017; Hart & Risley, 1995; Hoff, 2003; Segal & Collin-Vézina, 2019; Richardson & Lelliott, 2003; McGrath-Lone et al., 2016; Krier et al., 2018; Coster et al., 1989; Sylvestre et al., 2016; Snow, 2009). Although ample evidence suggests multiple ACEs and low-SES are detrimental to children's developmental outcomes, including language development, little research has been completed to investigate LAC's language difficulties and the effects of such environmental factors.

Understanding language difficulties in LAC and causes of their difficulties is important because children who experience adversity may have difficulties in all aspects of language, including social pragmatic and cognition as adults. For example, research has shown that individuals with deficits in cognitive skills e.g., executive functions, often have difficulties with language processing and production, such as vocabulary, sentence formulation, and comprehension (Kaushanskaya et al 2015; Gooch et al., 2016; Shokrkon et al., 2022). Therefore, this suggests that LAC's poor language abilities are closely linked with their cognitive skills. Further, due to their unique circumstances, the effects of such environmental

risk could be more extreme for LAC, which may subsequently pose cumulative effects on their language development. Thus, specifically, this comprehensive review of empirical studies focuses on an exploration of the existing literature on language difficulties in LAC, who represent an important but under-researched subgroup of disadvantaged children who have been exposed to multiple ACEs and social disadvantages.

3.3 Aims of the review

The aim of the present scoping review was to provide an overview of the existing literature on language difficulties in LAC. With that in mind, following SR questions were established:

- RQ1: What is the percentage of language difficulties in LAC?
- RQ2: What aspects of language development are affected in LAC?
- RQ3: What protective and risk factors for language difficulties are connected to OHC settings or the circumstances leading to becoming LAC?

3.4 Methods of the scoping review

A scoping review usually requires the identification of all published and unpublished papers and any other empirical evidence available in a given field of interest (Arksey & O'Malley, 2005; Levac et al., 2010). Scoping reviews are particularly useful in such cases where the aim is to map the existing literature in a particular field regarding its context, characteristics, and quantity (Peters et al., 2015; Khalil et al., 2019). Scoping reviews involve a comprehensive search that synthesizes research evidence and can be conducted in complex areas that have not been widely studied (Arksey & O'Malley, 2005). The questions answered by a scoping review are broader than those of a systematic review (Tricco et al., 2016; Khalil et al., 2019). In contrast, systematic reviews are more suitable for summarizing all relevant evidence on a particular topic area to answer a specific research question using explicit, systematic methods (Munn et al., 2018). Given the nature of the field of LAC and considering the aims of the current research study, conducting an SR was thought to be the most suitable methodological approach than a systematic review in this study. To ensure reliability and rigour of results, the SR was guided by Arksey and O'Malley's (2005) methodological framework, which recommends a six-step process for conducting an SR, and which is shown in Table 3.1 below. The consultation stage (6) of the framework is considered as optional and was not carried out in the current work. To provide transparent and complete reporting, the Preferred Reporting of

Items for Systematic Reviews and Meta-Analyses (PRISMA) diagram was used as a reporting protocol (Moher et al., 2009). The next subsection will outline the main SR procedures and steps that the researcher followed.

Table 3.1: Scoping review framework (Arksey & O'Malley framework, pp.22, 23)

Step: 1. Identifying the research question
Step: 2. Identifying relevant studies
Step: 3. Study selection
Step: 4. Charting the data (extracting data)
Step: 5. Collating, summarising and reporting the results
Spep: 6. Consultation (optional)

3.4.1 Research questions (Step 1)

The methodological framework used for an SR suggests that the generation of review questions must include broad descriptions of concepts, study populations and outcomes in a style which agrees with the breadth and parameters of the search areas. The current SR was initially only intended to review the literature related to difficulties in LAC which accorded with a series of predefined questions. Nevertheless, the review allowed the researcher to gradually gain more knowledge in this area, ultimately leading to the conclusion that since specific empirical evidence regarding language difficulties in LAC was limited, it was necessary to widen the scope of the SR. It was judged necessary to include the topics of language difficulties, impairments delays, prevalence rates, as well as studies that postulated causes of difficulties in the LAC population. The literature suggests that LAC can benefit from early identification and intervention regarding their language needs (Byrne et al., 2018; Windsor et al., 2011, 2013; RCSLT-Factsheet, 2018; Bercow, 2019; Pears & Fisher, 2005). Consequently, an exploration of studies on intervention with LAC was also included. The SR questions outlined earlier were established in this way (section 3.3 for more information).

3.4.2 Identifying relevant studies (Step 2)

Prior to commencing the actual SR process, the inclusion and exclusion criteria were established based on the Population–Concept–Context (PCC) framework of the Joanna Briggs Institute (2015). The use of such a framework will enable the reader to understand how the eligible studies were identified and included in this review.

3.4.2.1 Inclusion criteria

The PCC framework provided guidance for the researher as to which resources were to be included in the SR. With regards to the population variable (P), the SR considered all studies that focus on LAC who fall under the characteristics described in Chapter 1, Section 1.2.1 and Appendix A. The core concept (C) of the SR related to language development, difficulties and delays in LAC and also related to studies on speech, language and communication needs in LAC. Eligible studies were restricted to studies defining original research data and written in English. The time-period used was of between December 1989 and July 2020. One reason for this choice was that following the United Nations Convention on the Rights of the Child, 1989, the UK Government formally established the Children Act 1989, which set out the local authorities' responsibilities in respect of children in care and officially introduced the term 'looked-after children' (DfE, 2018a, 2018c). Since the introduction of this policy, there have been more studies of LAC's outcomes. Lastly, concerning context (Cx) the review included all study designs and publications, and was not limited to a particular country, location or sources. Detailed inclusion criteria for the study are outlined in Table 3.2 below.

Table 3.2: Inclusion criteria - Population–Concept–Context (PCC) Framework, Joanna Briggs Institute (2015, pp.12, 13)

P-Population: All children and young people who were in care and/or under social welfare services (aka looked-after children and young people) and who were living in or accommodated in alternative/out of home care (OHC placements). See Appendix A for the definitions of OHC placements such as:
1- Maltreated children and young people were living in or accommodated in OHC placements 2- Children and young people were living/residing in residential care (schools and homes) 3- Children and young people were living/residing in foster care settings 4- Children and young people were living/residing in under special guardianship 5- Children and young people were living/residing in under kinship care 6- Children and young people in custody who were LAC under the legal guardianship of LAs 7- Children and young people were living/residing in institutions 8- Children and young people were living in or accommodated in secure accommodation (i.e., young/juvenile offenders or with a history of being in care
C—Concept: Any existing literature covered and investigated the area or aspects of language difficulties in LAC who fell under the characteristics described in Chapter 1, Sections 1.2.1 and

Appendix. Further, any studies explored the concepts of speech, language and communication needs/ impairments/disorders/ deficits /delays in LAC by addressing questions in 3.4.1. These studies included: 1- Studies with a specific focused on language difficulties, impairments and delays in children in care (or LAC) such as children in foster care, children in alternative care, children in out-of-home care, children who were under welfare/ social service/ or child protection systems, maltreated children and young people, looked-after children in criminal justice systems, young offenders, children living in secure accommodation/ children in residential settings and children living in institutions 2- Journal articles such as published and unpublished studies (grey literature) in the English language 3- Studies having a publication date of between December 1989 and July 2020 4- Studies published on LAC and young people aged under 18
Cx—Context: The current SR considered any study designs and methods that explored the language difficulties, impairments and delays in LAC in the following context: 1- Research articles (any methods) and reviews, i.e., scoping reviews, systematic reviews, meta-analyses, literature reviews, evidence syntheses, narrative reviews and critical reviews, mixed-method studies, qualitative and quantitative studies, randomised control trials and observational studies (cohort studies, descriptive studies, case studies, and cross-sectional studies) 2- All placement settings considered, which are described in chapter one- section 1.2.1 and Appendix A 3- Studies containing ideas or suggestions that can be implemented to support LAC language difficulties, impairmnets and delays 4- Reports 5- Data from interventions studies and innovation projects

3.4.2.2 Exclusion criteria

Studies that fell outside of the inclusion criteria were not reviewed. Reasons for their exclusion were: the outcomes assessed were not related to language development and difficulties or delays; studies were published without data; they were a professional performance review; they were commentaries, book chapters without data, or editorial reviews. In addition, studies which investigated language denvelopment or difficulties in adopted children were also excluded as

once the children are adopted, they no longer fall under the categories of LAC (Children Act 2002 cited in DfE, 2019a; NSPCC, 2022b).

3.4.2.3 Search strategy and information sources

The first part of this subsection will explain how the SR search areas and key search terms were established. The second part will take the reader through how the SR process was undertaken.

In order to establish and address the research questions broadly, parameters were needed to lead the research strategy. The search areas for this SR are broad due to the variation of terminology applied when defining the care status of LAC (O'Higgins et al., 2015). The SR, therefore, included those terms most commonly used to obtain all studies that were conducted in the field of language development, difficulties, impairments and delays in LAC. Another reason for keeping the search areas broad was because children were likely to live or be accommodated in a variety of OHC settings, which are usually dependent on children's care status (DfE, 2018a; McGrath-Lone et al., 2016). In addition, as children are taken into care and placed into OHC for a wide variety of reasons, e.g. maltreatment (DfE, 2018a; DfE, 2017a; Simkiss, 2012; Mathers et al., 2016), it was thus also crucial to look at studies explored language difficulties, impairments and delays in maltreated LAC. Lastly, the SR search also examined studies related to children with language difficulties, impairments and delays who were living in secure accommodation and were under the care of social services (Bryan et al., 2007; Snow & Powell, 2011; Schofield et al., 2015; HM Inspectorate of Prison Service, 2011).

To ensure that all relevant literature was accessed, and there was no bias, a comprehensive search strategy was developed. This was carried out in consultation with the School of Health and Psychological Sciences' (SHPS) specialist librarian, who supports PhD students in performing systematic and scoping reviews as part of their dissertations. Thus, during the search process the reviewer followed the three-step search strategy process recommended by the SHPS librarian and Joanna Briggs Institute (2015), involving (i) electronic database search, (ii) reference lists search and (iii) grey literature search. Firstly, a broad approach was taken to establish a list of main search terms (index) and keywords. In order to check the feasibility of the search terms and keywords, and inclusion criteria used in this SR, initial study searches were conducted on two key databases, namely: CINAHL and NICE (Joanna Briggs Institute, 2015). The procedure also involved hand-searching the relevant Parliamentary Acts (e.g., Children and Social Work Act 2017 and the Children and Families Act 2014), other legislation

and policy documents (e.g., Care matters: Time for Change, 2007). Any new index terms and keywords which were further identified were then incorporated into the search strategy across all relevant electronic databases used in this SR.

3.4.2.4 Search process

During the full database search, six electronic databases were explored for the published studies, namely: Communication Source, CINAHL Complete, MEDLINE Complete, PsycINFO were accessed via using the EBSCOhost search base; in addition, via the Ovid search platform, AMED (Allied and Complementary Medicine), Embase (1974-2019), Global Health 1973 to 2019, Ovid MEDLINE(R) and NICE evidence search platforms. Electronic database searches were undertaken in two stages: a) subject-heading search (MeSH) and b) key-word search. During the subject-heading search route, the reviewer searched the relevant terms separately and then combined them all together to see if there were any studies about the subject area. Further, to ensure that all relevant information was captured and to prevent omitting any of the published studies, the reviewer also carried out key-word searches which helped to ensure that the study field was searched thoroughly. The search terms and phrases established, and used in the current SR, are displayed in Appendix C in Table 3.3.

To increase sensitivity, the search incorporated all synonyms that were used to describe LAC and language difficulties. Nonetheless, it is worth noting that the concepts of 'prevalence' and 'occurrence' were not indexed well in applying MeSH terms for the aim of identification. Thus, there was a possibility that the electronic search strategy would not capture all relevant studies. Accordingly, the recommended three-steps research strategy became very useful as a guide for accessing any literature that was relevant to LAC language language difficulties, impairments and delays. In this respect, grey literature searches were conducted. In doing so, general and subject-related websites were checked, and existing networks were contacted. This process also involved Google Scholar, contacting experts in the field in order to request copies of relevant studies and/or other input. In addition, efforts were made to access the libraries of various organisations (e.g., NSPCC and Children's Commissioner for England) who support or provide services to LAC and download their published reports. Lastly, supplementary searches were carried out in the NHS, Barnardo's and Coram Evidence.

When the databases were searched, the search terms were modified as appropriate in line with the specific search platform for articles in English. The list of words and phrases used in all search platforms can be found in Appendix C in Table 3.3.

The following search strategy was used for the EBSCOhost platforms (Communication Source, CINAHL Complete, MEDLINE Complete, PsycINFO):

S1. AB Child* or AB children*or AB teenage* or AB adolescent* or AB Looked-after children* or AB children in care “language difficulties”

S2 Looked-after children* or children in care* or children in institutions* “language difficulties”

S3. S1 AND S2

S6. AB "maltreated child " or AB "abuse" or AB “neglect”

S7. AB "language disorder" or "language impairment" or “language delays”
S8. AB "care home" or "residential care" or "residential school" or "out of home care"child* adj3 (care or residential or foster* or looked after or secure accommodation) or children’s home). ab.

S9. S6 AND S7 AND S8

S10. S3 AND S9
S1. looked-after child "or infant +"or p + LAC OR MINOR

S2. (MH "child")

S3. S1 AND S2

S1 AB maltreated child AND S2 AB "language disorder" or "language impairment."
S3 (MH "Language Disorders") OR
S4 (MH "maltreated children")

S1 AND S3 AND S4

S1. (MH "language difficulties in LAC+ impairment") AND (language impairment in LAC+")
S2. (MA "AB maltreatment, language difficulties")
S3. DE "specific language impairment in children" or de "language disorders in children"
S4. DE " LANGUAGE disorders" or DE "COMMUNICATIVE disorders in looked after children or children in out of home care"
S.5 DE "SPECIFIC language impairment in looked after children " or DE "LANGUAGE disorders in looked after children or youth lives/living in care "
S.6 AB "youth" or "adolescents" or "young people" or "teenager" or "young adults" or AB (maltreatment or child abuse or neglect) OR AB (children or adolescents or youth or child or teenager)

S7. S1 AND S2 AND S3 AND S4 AND S5 AND S6

S1. AB ED "language difficulties in looked-after children"
S2. AB (ED "language difficulties in children secure accommodation") AND language impairment*
S3. AB ((ED "language difficulties in children criminal justice systems or young offenders") AND language impairment*) or ((ZP "male"))

S4. S1 AND S2 AND S3

The strategy for referencing sources on Ovid Online platform was similar to that used on EBSCOhost, with the exception that double quotation marks ("teenager" or "young adults" as shown below) were not necessary on Ovid Online. Below are some examples that demonstrate the search procedures using the Ovid Online platform:
1.(exp Looked after children, exp Language disorders/)
2.(exp Children in care, exp Language difficulties/)
3. 1 and 2

4. Langue difficulties in foster children*.mp. 5. Langue difficulties in children in care*.mp
6. Langue difficulties in children in institutions*.mp

7. 4 and 5 and 6

8. (Looked-after children* language difficulties* or impairments* or acquired language impairment).ab.
9. (Looked after children or care leavers or foster children or maltreated children or (language difficulties or DLD) or (Communication impairment or communication disorders or communication difficulties) or language deficits or Language delays * or (residential care or residential school or OCHqol) or secure accommodation* or kinships care).ab.

10. 8 and 9

The NICE platform was searched manually using short, sentence-based search terms as shown in the example below:
Looked-after children with communication needs
Language difficulties in looked after children
Language impairments in maltreated children
Language or communication needs of children in care
Langauge needs of children residention placements or homes

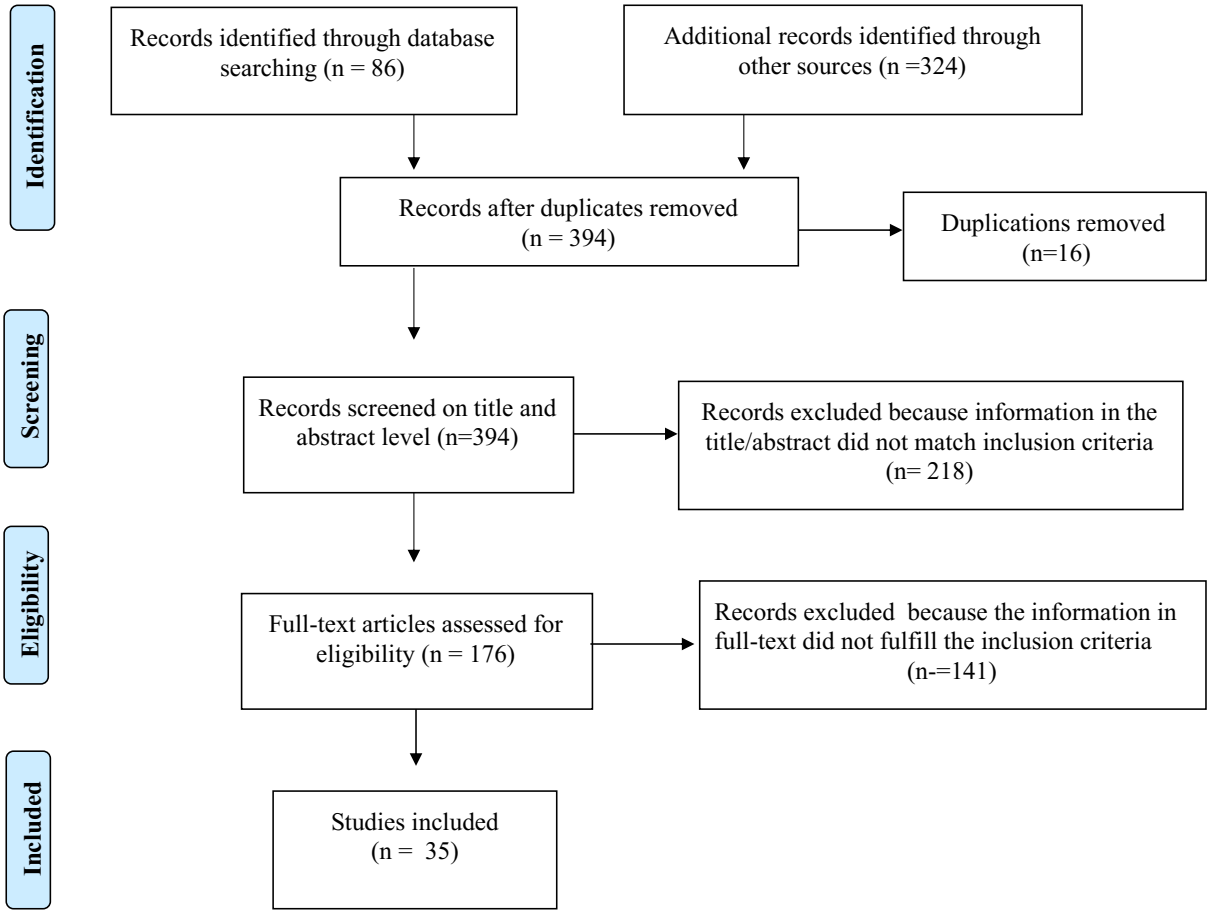
To summarise, this stage required the key search terms to be identified in order to enable the researcher to capture all available studies in this field. The keywords and search terms could then be utilized to explore relevant information sources. Specifically, three main data sources were explored, namely: electronic databases, reference lists, and grey literature. The following subsection explains the study selection process in more detail.

3.4.3 Study selection (Step 3)

The third stage involved the application of the previously defined inclusion and exclusion criteria to establish the list of potential articles and papers. Using the established search terms andafter removing duplicates, n=394 articles were identified. The study selection process was undertaken over two phases. The first phase involved scanning the title and abstract of each study and checking them against the inclusion and exclusion criteria by the researcher. This initial screening stage resulted in a significant number of unrelated studies. This also helped to prevent the wastage of sources in detecting articles that did not meet the inclusion criteria. In

addition, to enhance the rigour of the initial study selection process and minimize the risk of selection bias, we randomly selected 40/394 articles (10%) for independent screening by a secondary reviewer (R2, an academic) at the title/abstract stage. The screening results obtained by R2 were compared with those of the primary researcher (R1, primary researcher: PhD student). Of the 40 studies, only one study caused disagreement among the raters. However, the primary researcher excluded this study by the exclusion criteria. The study involved adopted children, and according to legal definitions, once a child is adopted, they are no longer considered to be in the category of 'LAC' (Children Act 2002 cited in DfE, 2019a; NSPCC, 2022b). Thus, the raters were able to resolve the issue by carefully reviewing the inclusion and exclusion criteria and the definition of 'LAC'. As a result, they unanimously agreed to exclude the study in question, ensuring that their agreement was at 100% regarding which studies should be included or excluded from the systematic scoping review. The primary reviewer completed the rest of the title/abstract screening phase independently. Following the title and abstract scanning process, duplicates of the identified studies were removed. The result of this process reduced the search to n=176 studies. To increase the reliability, 10% of the studies were screened by another researcher and inter-rater reliability was calculated (see section 3.4.5 for more information). Next, the researcher conducted subsequent full-text reviews. Further, to manage the retrieved data and keep track of articles, the eligible full-text studies were imported into the Refworks reference generator. Then, the screening results of selected studies were imported into a Microsoft Excel spreadsheet for the researcher to read and check thoroughly before commencement of the data extraction process. An overview of the reviewed studies, and reasons for article exclusions, are displayed using a PRISMA diagram, as shown in Figure 3.1 below.

Figure 3.1: PRISMA diagram for article selection



The figure above shows that n=86 studies were found through electronic database searches. An additional n=324 studies were located through checking references of the identified studies via electronic bibliographic databases and through grey literature searches. Subsequently, duplicates were removed (n=16), with n=394 studies yielded for the title and abstract screening. On completion of the title and abstract screening, n=176 studies were identified as potentially relevant, and thus a further n=218 studies were excluded (see section 3.4.5 for a reliability check). The full-text study screening then resulted in the exclusion of a further n=141. The remaining 35 articles met the eligibility criteria and were included for the data extraction. Following the study selection process, the total number of studies excluded was n=359. The reason was that these studies were not researching LAC's language difficulties, impairments and/or delays and not associating and providing actual data that directly related to the above-mentioned areas. In this subsection, the researcher has attempted to explain the study selection process by outlining the steps that have been taken. The next section will explain the data extraction process.

3.4.4 Extraction and data charting (Step 4)

The fourth step comprised of the careful reading and analysis of the final selection of papers in order to identify core themes that either verify or inform the original thesis or research questions. During the preliminary scoping stage, a data extraction form was established based on the recommended framework, so as to increase familiarity with the existing research which encapsulated the key features of the SR questions and objectives. In the case of the current research, the final data extraction process was completed in July 2020. Key pieces of information extracted included: authors, year of publication, country of origin, title of the study, study design, sample size, gender, types of OHC placement and results. An overview of the included studies is recorded systematically in Table 3.4. The following section discusses the quality appraisal process that was followed in this SR.

3.4.5 Risk-of-bias assessment and reliability of the scoping review

According to the literature, SRs do not include a quality appraisal of the evidence but, instead, it is preferable to include existing literature without considering the measure of weighing the evidence (Arksey & O'Malley, 2005). Adopting this perspective was consistent with the Joanna Briggs Institute scoping review process (Munn et al., 2018; Peters et al., 2015). As this was an SR that aimed to synthesize all existing evidence regarding language difficulties, impairments and/or delays in LAC, the reviewer did not conduct a quality appraisal or risk-of-bias evaluation of included studies. In addition, given the heterogeneity of study methods found in the included studies (e.g., case study, cross-sectional, randomized controlled trials, meta-analysis), it was not deemed pertinent to appraise the quality of these studies. However, despite these limitations, to ensure reliability and validity, eligible studies were screened according to the inclusion and exclusion criteria described earlier.

The reliability of the SR procedure was characterised by Arksey and O'Malley (2005) as being useful for other forms of review. To ensure and incorporate this transparency, this review used their six-stage framework which entailed: (1) identifying the research question, (2) identifying relevant studies, (3) study selection, (4) charting the data and (5) collating and summarising the results. An optional consultation stage was also proposed (stage 6). In this review, the researcher followed the first 5 stages and results were reported accordingly, the optional consultation was not included due to limited time resources. Further, to ensure inter-reviewer reliability throughout this process and contribute to the confidence in the consistency of the

study selection and charting of the data, the researcher (PhD student) consulted with the university's librarian and with the researcher's supervisors who had expertise in scoping reviews, speech, language and communication difficulties in children when required.

Further, to ensure the reliability of the SR results, an independent reviewer checked nearly 20% of the studies to ensure the reliability of the SR results. This involved reviewing 40 articles during the title/abstract (see above) and 35 articles during the full-text stages (n=75/410). As a result of this rigorous process, both the primary and independent reviewers reached 100% agreement on which studies should be included or excluded from the SR. Kappa were used statistics to calculate the inter-rater reliability of which final papers were included in the review (Cohen, 1960). A Kappa coefficient of .75 - 1.00 is excellent, .60 - .74 is good, .40 -.59 is fair, and below .40 is poor (Cicchetti, 1990; Cicchetti, 1994). To calibrate the eligibility of the included studies, the independent reviewer (R2) screened the full-text of a randomly selected sample of 35 out of the 176 papers (10%) using the same inclusion and exclusion criteria as the primary researcher (R1). The ratings of R2 were then compared to those of R1, who had rated all articles during the full-text review stage. The average Kappa was .79 ($p < .001$), indicating excellent inter-rater reliability. Of the 35 included studies, there was only 1 study that the raters had disagreement over. However, after reviewing the inclusion and exclusion criteria and clarifying the definition of 'LAC' and 'OHC placements', they agreed that the specific study should be excluded, and the disagreement was solved.

Table 3.4. Included studies

Study No	Author(s) and Year of publication	Location	Title of study	Study design	Sample size	Gender	Type of OHC placement	Results
1	Simms (1989)	USA	Foster Care: Community Program to Identify Treatment Needs of Children in Foster Care	Quantitative	144	NA	Foster care	52% demonstrated delayed language
2	Halfon et al. (1995)	USA	Health Status of Children in Foster Care: The Experience of the Centre for the Vulnerable Child	Cross-sectional analysis	213	NA	Foster care	84% had difficulties in expressive and receptive language
3	Cross (1998)	UK	Undetected Communication Problems in Children with Behavioural Problems	Quantitative	6	5 M /1 F	Foster care (confirmed by the author)	LAC had undetected communication difficulties

4	Reams (1999)	USA	Children Birth to Three Entering the State's Custody	Randomized Clinical Trial	144	NA	Foster care	8% of LAC impaired on receptive language and 15% impaired on expressive language
5	Evans et al. (2004)	USA	The Need for Educational Assessment of Children Entering Foster Care	Quantitative	3,483	1573 M / 1910 F	Foster care	88% of LAC impaired on language
6	Pears and Fisher (2005)	USA	Developmental, Cognitive, and Neuropsychological Functioning in Preschool-aged Foster Children: Associations with Prior Maltreatment and Placement History	Quantitative	99	51M /48 F	Foster care	Developmental delays on language
7	Bryan et al. (2007)	UK	Language and communication difficulties in juvenile offenders	Quantitative	19 of 58 Juvenile offenders were LAC	M	Secure accommodation	66–90% below-average language skills

8	Windsor et al. (2007)	Romania	Language Acquisition with Limited Input: Romanian Institution and Foster Care	Quantitative	40	NA	Orphanages	LAC language delays.
9	Nathanson and Tzioumi (2007)	Australia	Health needs of children living in out-of-home care	Quantitative	96	71 M/ 51F	Unspecified OHC placements	30% had communication difficulties.
10	Greig et al. (2008)	UK	Relationships and learning: a review and investigation of narrative coherence in looked-after children in primary school	Quantitative	17	7 M / 10 F	Foster care	LAC performed poorly on all narrative coherence tests
11	Moreno-Manso et al. (2009)	Spain	Social adaptation and communicative competence in children in care	Quantitative	74	41 M / 33 F	Residential placements	LAC presented difficulties in pragmatics and morphology
12	Hagaman et al. (2010)	USA	The Academic and Functional Academic Skills of Youth Who Are at Risk for Language	Quantitative	80	5 M / 30 F	Residential placements	54% identified at risk for impairment

			Impairment in Residential Care					
13	Moreno-Manso et al. (2010)	Spain	Pragmatic language development and educational style in neglected children	Quantitative	74	31 M / 33 F	Residential placements	Pragmatics below the national average
14	Berument and Eyupoglu (2011)	Turkey	Supporting language and cognitive development of infants and young children living in children's homes in Turkey	Quantitative	85	NA	Institutions	Gaps improved but intervention group had language delay
15	McCool and Stevens (2011)	UK	Identifying speech, language and communication needs among children and young people in residential care	Quantitative	30	15 M / 15 F	Residential placements	63% DLD profile

16	Stacks et al. (2011)	USA	Effects of Placement Type on the Language Developmental Trajectories of Maltreated Children from Infancy to Early Childhood	Quantitative	963	482 M /481 F	Various OHC placements (Children remained in the care of their birth parents, in non-kinship foster care and in non-parental kinship care)	Delays in auditory comprehension and expressive language
17	Trout et al. (2011)	USA	The Language Functioning of Youth at Entry to Residential Treatment	Quantitative	70	45 M / 25 F	Residential placements	45-75% of adolescents had severe delays in receptive language
18	Windsor et al. (2011)	Romania	Effect of Foster Care on Young Children's Language Learning	Randomized Clinical Trial	174	85 M/ 89 F	LAC in foster care and institutional care	LAC placed in foster care by 2 years improved language
19	Moreno-Manso et al. (2012)	Spain	Pragmatic-communicative intervention strategies for victims of child abuse	Quantitative	21	7 M / 14 F	Residential placements	Pragmatic intervention

20	Windsor et al. (2013	Romania	Effect of foster care on language learning at eight years: Findings from the Bucharest Early Intervention Project.	Randomized Clinical Trial	105	M	Foster care and institutional care	Better language of early placement
21	Bryan et al. (2015)	UK	Language difficulties and criminal justice: the need for earlier identification	Quantitative	118	M	Secure accommodation	30% language impaired
22	Moreno-Manso et al. (2015)	Spain	Semantic Disorders and Adaptation Problems in Children in Residential Care	Quantitative	74		Residential placements	Delays in semantics
23	Moreno-Manso et al. (2016)	Spain	Social Communication Disorders and Social Cognitive Strategies and Attitudes in Victims of Child Abuse	Quantitative	66	41 M/ 33 F	Residential placements	Difficulties in social communicatio n

24	Bernard et al. (2017)	USA	Effects of the ABC Intervention on Foster Children's Receptive Vocabulary: Follow-Up Results from a Randomized Clinical Trial	Randomized Clinical Trial	52	NA	Foster care	Intervention improved receptive language
25	Byrne (2017	Australia	Systematic review of speech and language therapy outcomes for children who are in Out of Home Care (OOHC)	Systematic review	LAC	SR	Unspecified OHC settings	Language delays
26	Asimina, Melpomeni and Alexandra, 2017	Greece	Language and Psychosocial Skills of Institutionalized Children in Greece	Quantitative	30 LAC	15 M / 15 F	LAC in institutional	Delays in expressive, receptive vocabulary,
27	Cobos-Cali et al. (2017)	Ecuador	Language disorders in victims of domestic violence in children's homes	Quantitative	52 LAC	52 M /52 F	LAC in institutional care	Language delays

28	Byrne et al. (2018)	Australia	Considering the impact of maltreatment on children in Out of Home Care when providing speech and language pathology intervention: case example	Case study	8	5 M / 3 F	Unspecified OHC settings	75% language deficits
29	Frederico et al. (2018)	Australia	Small Talk: Identifying communication problems in maltreated	Quantitative	65	34 M / 31 F	Various services (referred from out-of-home care services, family services, therapeutic services)	Diagnostic tool effective
20	Lum, Powell, and Snow (2018)	Australia	The influence of maltreatment history and out-of-home-care on children's language and social skills	Meta-analysis	82	42 M / 40 F	Unspecified OHC settings	Language delays linked to OHC placements.

31	Raby et al. (2018)	USA	Enhancing the language development of toddlers in foster care by promoting foster parents' sensitivity: Results from a randomized controlled trial	Randomized Clinical Trial	88	NA	Foster care	Intervention improved receptive vocabulary
32	Di Sante et al. (2019)	Canada	The Pragmatic Language Skills of Severely Neglected 42-Month-Old Children: Results of the ELLAN Study	Cross-sectional study	45	25 / 20 F	Various OHC placements (Children placed with birth parents, and foster care)	Pragmatic delays
33	Snow et al. (2019)	Australia	Narrative language skills of maltreated children living in out-of-home care	Quantitative	83	40 M / 43 F	Various OHC placements (e.g., foster care, kinship care and residential care)	42% delays in narrative ability

34	Zajac et al. (2019)	USA	Receptive Vocabulary Development of Children Placed in Foster Care and Children Who Remained with Birth Parents After Involvement with Child Protective Services	Quantitative	176 (and 144 children care of their birth parents)	46 M / 46 F	Foster care	Setting improved receptive vocabulary
35	Palazón-Carrión and Sala-Roca (2020)	Spain	Communication and language in abused and institutionalized minors. A scoping review	Scoping Review	LAC	SR	LAC in institutional care	Persistent delays in language and communicatio n abilities

3.4.6 Scoping review results (Step 5)

This section incorporates step five of Arksey and O'Malley's (2005) framework through discussing and summarising the key findings from the studies retrieved during the data extraction. Although the inclusion criteria covered broad research areas, the results of this SR produced only 35 studies, displayed in Table 3.4.

3.4.6.1 Presentation of study characteristics

The 35 research studies published in this field of study are spread over a thirty-year time period. It is notable that there has been a gradual increase in the number of publications regarding language ddifficulties in LAC since 1989. Furthermore, it is evident that the majority of the research was carried out between 2010 and 2020. The studies were conducted in nine countries; however, the majority were conducted in the United States (n=11). This is followed by Australia (n=6), Spain (n=6), and the United Kingdom (n=5). The remaining studies originated from Romania (n=3), Turkey (n=1), Canada (n=1), Greece (n=1) and Ecuador (n=1). Most articles used a quantitative study design (n=25), followed by randomised control trials (n=4), a cross-sectional study (n=2), a meta-analysis (n=1), a case study (n=1), a systematic review (n=1) and a scoping review (n=1).

Regarding the targeted OHC placements, of the 35 studies, n=10 targeted LAC who lived in foster care; n=8 focused on children residing in residential care; n=4 focused on LAC children in institutional care (orphanages); n=4 addressed those who were accommodated in unspecified OHC settings and n=3 studies targeted LAC resided in various OHC settings (e.g., children who remained in the care of their birth parents, in non-kinship foster care and in non-parental kinship care). Of the remaining, n=2 studies assessed children in secure accommodations; n=2 studies looked at children in both institutions and foster care; n=1 targeted children referred from various services (e.g., out-of-home care services, family services); and n=1 focused on children in orphanages (see Table 3.5 for more details). For more information about the difference between each placement, see the definitions of OHC placements in Appendix A.

3.4.6.2 Scope of the papers

The sample sizes for the included studies are shown in Table 3.4 above, which, over the course of three decades, researchers have investigated or assessed language difficulties in only 6,737 LACs. The studies involved a range of age groups, from very early childhood to late

adolescence (aged 1 month to 18 years old), though most studies were conducted with younger children (e.g., ≤12 years). All of the studies provided demographic information including gender and age which were clearly outlined in each study, with there being more male subjects in most of the research than female (see Table 3.4 for the number of male and female participants in each study). However, information about some of the specific demographics involving pre-care histories were inconsistent such as reasons for entry in care, SEN and/or learning disabilities status, age of first placement, previous SaLT diagnosis (see Appendix C Table 3.6 for more information). Further, in a majority of the studies, children's IQ scores were not obtained or provided. In addition, the included studies were conducted by different disciplines (e.g., health, education, psychology). Although the primary purpose or objectives of each article were varied, for a variety of reasons, the motivation for each was to study LAC's language. Notably, studies that have been conducted in the domain of language development and/or difficulties in LAC predominantly rely on single research studies that have not been replicated. The majority of the studies included within this SR were within-subject design.

3.4.6.3. Assessment measures used in each study

The type of language assessment used varied across studies. Some used well-known assessments and others used less-known measures that had different diagnostic scores or thresholds (see Appendix C Table 3.7). A majority of studies used a limited number of assessment tools and, in some cases the result of the language assessment was based on a single measure (see Appendix C Table 3.7). In addition, few studies used standardized tests to diagnose language impairments. The use of standardized test measures would have improved the robustness of the studies and enhanced the generalisability of the findings for a wider LAC population**.**

3.4.6.4 Analysis methods used in each study

The methodologies used varied across the studies, which are listed in Table 3.7 in Appendix C. For instance, data analysis techniques used in the quantitative studies (31/35) were either descriptive analyses (e.g., means, standard deviation), or parametric and nonparametric (e.g., means, standard deviation), or parametric and nonparametric (ANOVA/ANCOVA, independent samples t-test). The information about methodologies and study designed used in each study can be found in Table 3.7 Appendix C. In these articles the findings were reported as either percentages or as standard scores. This indicates that LAC were either defined as having more than one standard deviation below the normative data (e.g., M = 100, SD = 15),

or as being developmentally delayed based on the ratios that have been reported (see Appendix C Table 3.7 for more details).

Based on these different methodologies the studies are now grouped and discussed under 4 headings: 1) using general developmental screening to explore speech, language and communication needs of LAC; 2) using standardized language measures to compare LAC to normative data; 3) making comparisons with a control sample; and 4) SaLT interventions studies. The findings of each study are represented in Table 3.4 above.

Table 3.5. Study characteristic

Characteristics	Number	Percentages
Year published		
1989 - 1999	4	11
2000 - 2010	6	17
2011 - 2020	25	72
Methods		
Quantitative	27	71
Randomised CT	4	11
Cross-sectional	2	6
Case study	1	3
Systematic review	1	3
Scoping review	1	3
Meta-Analysis	1	3
Source of OHC Placement		
Foster care	10	31
Residential	8	24
Unspecified OHC placements	4	12
Various OHC placements	4	12
Institutions	3	9
Secure accommodation	2	7
Orphanages	1	3
Various services	1	3
Studies published in each country		
USA	11	31
Australia	6	17
Spain	6	17
UK	5	14
Romania	3	9
Turkey	1	3
Canada	1	3
Greece	1	3
Ecuador	1	3

3.4.6.5 Results from studies using general developmental screening

Nine studies (9/35) evaluated LAC's development by using a language assessment as part of a broader evaluation. While most studies discussed that children had multiple reasons for coming into care, with maltreatment (e.g., abuse, neglect) and exposure to parental substance abuse being the most common (Halfon et al., 1995; Moreno-Manso et al., 2009, 2010, 2015, 2016; Nathanson & Tzioumi, 2007; Stacks et al., 2011; Frederico et al., 2018), one study did not provide such information (Simms, 1989). The topics investigated in these articles were generally broad in nature, such as developmental problems; cognitive, emotional, and behavioural difficulties; language or communication difficulties and educational outcomes in LAC. The analysis was conducted through both formal and informal methods of assessments.

Based on the findings of nine studies, it was found that a significant portion of LAC, ranging from 30-85%, presented language difficulties. These difficulties were encountered across various OHC settings and were manifested as difficulties in all aspects of language, including pragmatics (social uses of language). In particular, four studies by the same authors revealed that pragmatic language difficulties were the most common among LAC. These difficulties included understanding and using non-verbal cues, following social norms and rules, developing meaningful relationships with peers, and initiating and maintaining meaningful conversations (Moreno-Manso et al., 2009, 2010, 2015, 2016). Some of these studies' results indicated that maltreated young LAC were at a higher risk of experiencing language difficulties than their demographically similar non-maltreated peers (e.g., Stacks et al., 2011; Frederico et al., 2018). This finding suggests that their adverse experiences can interfere with the communicative interactions and activities between the child and their parents/caregivers, which are essential for language development. These interactions provide children with the necessary skills and tools to acquire formal language skills (see Chapter 2, section 2.5 for more information). Additionally, the combined results of these studies (n=9) suggest that LAC who have experienced maltreatment face significant difficulties in both pragmatic and social language use, regardless of their age when entering into care. One study suggested that early placements in foster care may be a protective factor for LAC's language skills, even for LAC who faced earlier maltreatment (Stacks et al., 2011). The reviewed literature also highlighted a robust association between LAC's language difficulties and other areas of development, such as academic, social, and emotional difficulties (e.g., Halfon et al., 1995). Overall, the studies evaluated in this section provided compelling evidence on the degree and nature of language difficulties experienced by LAC. These findings highlight the importance of early

identification, targeted interventions, and ongoing support to promote positive outcomes for LAC with language difficulties.

3.4.6.6 Results from studies using standardised tests and comparison with test norms

Of the 35 articles in the SR, 11 employed standardized test measures to compare LAC to normative data (Cross, 1998; Hagaman et al., 2010; Trout et al., 2011; Lum et al., 2018; Snow et al., 2019; Bryan et al., 2015; Bryan et al., 2007; McCool & Stevens, 2011; Reams, 1999; Evans et al., 2004; Zajac et al., 2019). In these studies, a wide range of placement types and spectrum of age groups (1 month to 17 years old) were targeted. The aspects of language that were measured in these studies were diverse. Receiving considerably lower scores can suggest a language impairment, despite the fact that being LAC in the past would have ruled out this diagnosis. Even though clinical cut-offs were being reached, diagnosed language impairment was not reported in most studies. This could be explained by the risk factors that LAC have faced, as the majority of the population suffers from social disadvantage, and there was previously no language profile associated to social disadvantage (Bishop et al., 2016). Six of these studies used versions of the Clinical Evaluation of Language Fundamentals (CELF: Semel et al., 1987), and the remaining five studies used other standardized test measures (see Appendix C Table 4.8).

These 11 studies reviewed here compared the language skills of LAC by considering age-expected norms. To this end, all these studies utilized standardized language assessments. As a result, the studies found that between 30% and 73% of LAC exhibited language difficulties. Some of these studies also highlighted that the language needs of LAC are less likely to be recognized and, in the majority of the case remain undetected (e.g., Cross, 1998; Bryan et al., 2015). The studies that reported difficulties in terms of a diagnosed language impairment reported incidence as 15-37% of this population. Although this is significantly higher than the prevalence observed in non-LAC children, it is similar to the language difficulties noted for children from socially disadvantage backgrounds. As in the previous section, in many studies that employed broad developmental assessments, difficulties and delays were found in all sub-aspects of language, particularly those concerning social issues and pragmatics. In addition, the studies reviewed in this section focused on the language skills of LAC across a range of OHC settings and highlighted their heightened risk of experiencing language difficulties. The findings of these studies stressed the complex interplay of factors (e.g., in adequate OHC settings) that contribute to LAC's language difficulties and highlighted the importance of early

intervention and targeted support to promote positive language outcomes. However, as previously mentioned in another study, one of the studies included in this section proposed that early exposure to foster care could be a protective factor for LAC's language skills; this included maltreated children placed in foster care compared to those who remained with their birth families (e.g., Lum et al., 2018). Additionally, residing in a custodial placement was identified as a risk factor for LAC's language. The evidence presented in this section suggested that the difficulties with language experienced by LAC are likely to have a negative impact on their ability to achieve positive life outcomes.

3.4.6.7 Results from studies comparing LAC and a matched control group

There were 9 out of 35 papers that compared LAC with a matched control sample. Two studies focused on foster care children (Pears & Fisher, 2005; Greig et al., 2008), three studies from the same authors focused on Romanian orphanages and children in both institutions and foster care (Windsor et al., 2007, 2011, 2013), three focused on LAC children in institutional care (Palazon-Carrion & Sala-Roca, 2020; Cobos-Cali et al., 2017; Asimina et al., 2017), finally one paper focused on children who lived in various placements (Di Sante et al., 2019). These studies compared LAC's developmental skills including their language with their age- and SES-matched non-LAC peers.

Each of the 9 included studies in this section of the SR identified lower language scores in LAC compared to their age- and SES-matched groups. This is significant because it controls for experiences of social disadvantage and highlights the consequences of being maltreated or removed from a family home. These studies further reported that LAC experienced language delays in all areas, including language processing (Windsor et al., 2007, 2013). For instance, it was found that LAC were 10 times (44%) more likely to experience difficulties in their early pragmatic development compared to their counterparts from the non-LAC group (e.g., Di Sante et al., 2019). Following the previous two sections the positive and protective impact of early placement in foster care was also evident in a number of studies reviewed in this section. Conversely, a recent scoping review of 22 studies on LAC who had suffered from maltreatment (e.g., abuse) and been institutionalized demonstrated persistent delays in their language and communication abilities which are likely to be unidentified or unrecognized (Palazon-Carrion & Sala-Roca, 2020). Furthermore, one study found a close link between LAC's early traumatic experiences (e.g., domestic violence) and poor performance on their narrative coherence tests

because of the impact of their traumatic experiences on their cognitive and emotional development (Greig et al., 2008).

3.4.6.8 Results from Intervention studies

This final section provides an overview of studies (n=6) that focused on the types of intervention strategies relevant to LAC's language. These studies targeted LAC living in various OHC settings such as institutions (Berument & Eyupoglu, 2011), foster care (Bernard et al., 2017; Raby et al., 2018), unspecified OHC placements (Byrne et al., 2018; Byrne, 2017) and residential care (Moreno-Manso et al., 2012).

The six intervention studies reviewed here, one of which was a systematic review of 45 studies, agree that interventions can favourably influence language development in LAC, particularly those who have suffered from maltreatment and social disadvantages. The systematic review concluded that research in these subject areas remains insufficient (Byrne, 2017). However, while there is limited evidence on language interventions for LAC, the studies reviewed in this section provide valuable insights into a range of language intervention methods, including those aimed at improving parent-child interactions (e.g., Attachment and Bio-behavioural Catch-up for Toddlers - ABC-T: Dozier & Bernard, 2017), as well as LAC's social uses of language (e.g., Bernard et al., 2017; Raby et al., 2018). As recommended for all areas of developmental difficulties, the included studies in this section have also emphasized the importance of early detection and intervention for language problems in LAC. Furthermore, two out of the six studies also agreed with literature in the previous sections on the positive effects of foster care placements, where they observed positive influence of foster carers on LAC language skills (e.g., Byrne et al., 2018; Berument & Eyupoglu, 2011). While the literature on language interventions for LAC is relatively small, the studies reviewed here provide valuable insights into the potential benefits of various intervention methods for LAC with language difficulties.

3.4.6.9 Section summary

The 35 studies reviewed in this SR were mainly conducted during the last decade and investigated language difficulties in LAC. Despite the relatively small number of studies conducted, and the inadequacy of the current literature, the SR was able to detect patterns of language difficulties in LAC which involved both structural and pragmatic language. The reviewed studies reported that LAC with language difficulties often experience difficulties in

academic performance, social interaction, and wider life outcomes. The included studies further indicate that many LAC with language difficulties may go undiagnosed or may not receive appropriate support and intervention. Additionally, there was a lack of consensus regarding language assessment tools used in each study, making it difficult to compare results across studies. Furthermore, the studies' findings revealed that various forms of maltreatment and social disadvantages were depicted as unique risk factors for this population's language development. Despite these limitations, these studies suggest that early detection and intervention can lead to significant benefits for children with language difficulties. Beyond this, while providing useful information regarding LAC's language difficulties, the reviewed studies also reported numerous limitations in the identification of this group's language difficulties. The following section will discuss the overall results in greater detail.

3.4.6.10 Overall fidings

This SR has identified a small body of literature that clearly indicates language and communication as issues for LAC, with higher prevalence of difficulties reported compared to onn-LAC peers. The overall appraisal of the included studies' results highlights several main areas: (i) although the inclusion criteria in this SR covered broad research areas, this SR highlighted that despite the increasing prevalence of language difficulties in LAC, there is a relative paucity of studies examining this group's language difficulties and its impact on LAC's other developmental need. Only 35 studies were identified, and a majority of them were published recently, within the past 14 years. In addition, the results of this SR identified a significant disparity amongst the included research studies in terms of methodologies, language areas, OHC types and language assessments measure used. Further, most studies were conducted in the USA (n=11), and this was followed by Australia, Spain and UK. See Table 3.5 in section 3.4.6.4 for more information about the number of studies published during a 30-years span and geographical areas of the included studies. The included studies were grouped and discussed based on the topic areas investigated by the studies. All of the evaluated studies were based on a single study without a replication. In the future, prospective, large-scale longitudinal designs may help to better capture the language difficulties experienced by LAC. (ii) LAC are at an increased risk of poor language development; in some cases, this is diagnosed as difficulties and/or disorders (e.g., Bryan et al., 2015; Snow et al., 2019). When it comes to aspects of language difficulties, some studies only are concerned with social pragmatic specifically, whereas others talk of LAC expressive and receptive skills or difficulties in a wider sense. The studies further provide some information on how the difficulties have been

impacting LAC's life, regardless of whether the studies took a narrow methodology. The incidence rate of language difficulties differs substantially, which will be discussed in detail later in this section. (iii) The review of research which compares LAC with non-LAC provided a wider but at the same time mixed picture. For instance, compared to their TD peers from low-SES backgrounds, school-aged LAC exhibited delays in several developmental domains and poor narrative coherence skills. Further, some studies compared the language skills of LAC residing in institutions with LAC who were residing in foster care and age-matched TD children. These findings indicated that young children raised in severely deprived settings (e.g., institutions) exhibited substantially lower language skills compared to their age-matched and foster peers.

However, despite that the results indicated foster care children's language is more developed than of those in deprived settings, as a group, the language of LAC generally reported to be poorer than their non-LAC peers. These results were consistent with the literature on other language risk groups (Hodges et al., 2016; Sylvestre & Mérette, 2010). (iv) The included studies in this SR, generally agree that the type of OHC settings and ACEs are correlated with LAC's language skills, of which this finding will be discussed in more detail later in this section. (v) Further, some of these studies have drawn a valuable conclusion that there is a positive association between foster care placements and LAC's language skills, suggesting that the younger a child is placed in foster care, the better their language skills improve. (vi) Lastly, the use of different intervention methods is also an under-researched theme in the LAC study field. However, a very small literature indicated that it was an important topic area for possibly changing the language outcomes of LAC.

The following section will summarise the main findings by considering the SR questions.

3.5 Main findings of the SR

3.5.1 RQ1: What is the percentage of language difficulties in LAC?

When attempting to make sense of current SR findings, the first thing that needs to be taken into consideration is the fact that LAC are a very diverse group, with some of them achieving positive outcomes in a variety of domains, such as educational attainment (Jackson & Cameron, 2012; Biehal et al., 2014; Martin & Jackson, 2002). Indeed, the literature has reported that the majority of LAC state that their experiences in care are positive and that they are happy in their

placements (Biehal et al., 2014; del Valle, 2007). On the other hand, as discussed in section 2.11.1 in Chapter 2, being placed in care can also have a negative effect on LAC's developmental outcomes. For example, being in foster care placements can be significant relief and feel like a great alternative, but at the same time, it can be disturbing and unsettling for some children. Such circumstances may affect LAC's social and emotional well-being, including distress, anxiety, a sense of loss, guilt and abandonment. This suggests that the language difficulties experienced by LAC may be closely linked with their unique experiences. The research studies reviewed in this SR paint a concerning picture in terms of language abilities. This highlights that language difficulties are pervasive and not only linked to negative placement experiences. Thus, the possible consequences of both pre-care experiences, removal from the family home and placements in an OHC setting, even if it is a family-like placement such as foster care, should not be disregarded when looking at LAC's poor language skills (e.g., Healey et al., 2011; Jones et al., 2011; Berridge, 2017).

3.5.2 RQ2: What aspects of language development are affected in LAC?

The current SR also reported similar results in that, as a group, LAC had experienced difficulties across all aspects of language and communication. The result of the SR thus showed that LAC's language profile is no different than those of children with DLD or other language risk groups. However, caution should be taken here. Although aspects of language difficulties experienced by LAC are similar to that of other language risk groups, it is important to recognize that the underlying reasons for the development of language difficulties by LAC can differ significantly from those of other groups. For instance, as a group, LAC are often known to face unique and disturbing life circumstances, which are discussed in Chapter 2. These differences can influence how language skills are developed by LAC and can have a negative impact on their language skills. In other words, in non-LAC or atypically developing populations, the reasons for language difficulties may be more intrinsic to the child, and some of these are discussed in Chapter 2. In LAC, there are more extrinsic reasons, such as facing ACEs, disadvantages, and drug and alcohol use by their parents during pregnancy and/or growing up in care. Thus, extrinsic reasons may amplify the LAC's risk of developing language difficulties.

At the same time, social pragmatic skills were also highlighted in several studies as being at particular risk for LAC. These difficulties are linked to both simple and complex social pragmatics, such as requesting information, responding appropriately to words or comments,

sustaining the topic of the discussion (Miller et al., 2015; Matthews, 2014; Papafragou, 2018). Again, LAC's profile with social pragmatics might not be different from other non-LAC or language risk groups, but the causes or routes their difficulties may stem from are different, such as experiences of ACEs, which could amplify their difficulties with social pragmatics. Furthermore, pragmatic skills are linked to other developmental domains e.g., educational attainment. Social pragmatic delays and other developmental domains are also apparent in other high-risk populations (Coster et al., 1989; Culp et al., 1991; Cocquyt et al., 2015; Sylvestre et al., 2016; Levin et al., 2015; Petranovich et al., 2017). Aside from the language and pragmatic/social difficulties, there is a small amount of evidence that LAC have difficulties with wider cognition. Studies that explored outcomes including cognitive functioning found LAC had lower scores compared to the age-matched peers. Again, this is in line with other at-risk groups (Culp et al., 1991; Westby, 2007; Hwa-Froelich, 2012; Pears et al., 2008; Raaska et al., 2013).

3.5.3 RQ3: What protective and risk factors for language difficulties are connected to OHC settings or the circumstances leading to becoming LAC?

Knowing whether out-of-home care placements affect the developmental risk for LAC is highlighted in the literature as crucial for assessing the impact of child protection policies and interventions. In turn, this knowledge aids in determining the likelihood of risks and advantages of substantial interruptions in LAC's care process (Berger et al., 2009; Rubin et al., 2007).

Two studies (Windsor et al., 2011, 2013) reported that LAC who were placed in foster care before the age of two years made better progress in their language compared to their counterparts who were placed in care at a later age. Another study found that placements in various OHC settings facilitated improvements in the children's communication and vocabulary skills within six months of entry in care (Byrne, 2018). However, because LAC enter into foster care at various ages and under various unique circumstances, it is difficult to generalise outcome patterns related to OHC settings. According to the findings of the 35 studies evaluated, there was also some evidence that institutional care is a risk factor. Proposed reasons for the risk are that some institutional care environments have few continuous caregivers and crowded conditions which could result in infants or toddlers not having their physical, social, and/or emotional as well as language needs met (DfE, 2015a; Maclean et al., 2017; Rock et al., 2015; McGrath-Lone et al., 2016; Mathers et al., 2016).

The second part of this SR took into account the various circumstances that result in children being taken into care. Children are usually placed in care when they can no longer live with their birth parents or must be removed from their homes due to various reasons, such as the death of the parents, maltreatment, or poverty (DfE, 2017a, b; Kim & Chun, 2016; Jones et al., 2011; Rock et al., 2013; Stacks et al., 2011). It is complicated to separate the effects on a child's overall development (i.e., health, education and emotional stability) from the child's language development (Westby, 2007; Culp et al., 1991; Fox et al., 1988; Eigsti & Cicchetti, 2004; Spratt et al., 2012; Perry, 2002). Nonetheless, the SR indicated that maltreatment - particularly neglect and abuse - significantly affected LAC's language development and abilities. Specifically, the SR highlights the environment as being the major driver of language delay. Maltreating caregivers engage in fewer interactions with their children, ignore their children more, react infrequently when their children talk, and utilize less diverse vocabulary and syntactic structures during communicative activities (Eigsti & Cicchetti, 2004; Wasserman et al., 1983; Kavanagh et al., 1988; Coster & Cicchetti, 1993; Culp et al., 1991). Finally, maltreatment could result in young children becoming mistrustful and disengaging from social interactions (Snow & Powell, 2005, 2008; Moreno-Manso et al., 2010).

Previous literature reports similar results that children exposed to ACEs and/or social disadvantages usually present difficulties in one or multiple aspects of language which also includes social pragmatics (Lum et al., 2015; Sylvestre & Mérette, 2010; Coster et al., 1989; Westby, 2007). This includes the ability to make inferences in various contexts, hold conversations, and develop storytelling (Coster et al., 1989; Sylvestre et al., 2016; Westby, 2007; Hwa-Froelich, 2012; Pears et al., 2008; Raaska et al., 2013; Cocquyt et al., 2015), over and above SES factors (Eigsti & Cicchetti, 2004; Sylvestre & Mérette, 2010; Levin et al., 2015; Robinson et al., 2012; Petranovich et al., 2016; Hoff, 2003, 2006: Locke et al., 2002; Law et al., 2017). For instance, Coster et al. (1989) and Cocquyt et al. (2015) both found that maltreated children's social pragmatic skills remained below the national norms, and children's use of language for different purposes - particularly in social-communication contexts - remained notably limited. In this respect, previous research has emphasized the importance of positive interactions between parents and children, which serve to assist in communication in the first few years of the child's life (Tomasello, 2008; Olson & Masur, 2015). In turn, this lays the social-communication foundation for later language development. Further, social pragmatic difficulties may have the most detrimental impacts on LAC's ability to function

effectively in a variety of domains, such as using language in different contexts and/or for different purposes.

3.6 General discussion

The aim of this SR was to evaluate the research into language difficulties in the LAC population in terms of (a) percentages, (b) aspects of language development which are delayed, and (c) risk factors relevant to their language dfaculties.

Across the 35 investigations reviewed, an elevated number of LAC are described as having language difficulties and in a smaller number of studies this was labelled as DLD. Some studies did not consider LAC's difficulties as DLD, even though standardized test scores surpassed clinical cut-off thresholds. In the majority of the reviewed studies all areas of language domains (e.g., comprehension, expression, vocabulary and grammar) were noted as being delayed, including the use of social pragmatics in both early childhood and adolescence. Although not all studies noted OHC placements systematically, a general finding is an early placement of LAC into caring, sensitive, and supportive foster care positively affects language skills. Thus, placement with foster carers represented a protective factor. Conversely, institutional and custodial placements were found to pose risks for LAC's language development. Furthermore, maltreatment and deprivation are risk factors for this population's language development.

3.7 Strengths of the SR

The SR has revealed further information about language difficulties among LAC. It has synthesized risk and protective factors for LAC's language development. It may support the future development of appropriate language assessment tools and interventions. Lastly, it includes findings from studies across many countries, which supports the generalised conclusions.

3.8 Limitations of the SR

An area for further consideration relates to the various terms used to define LAC across studies and how this influenced the identification of search terms (e.g., children in out-of-home care and children in care). Also, across studies it has been inconsistent how researchers label language difficulties and/or impairment. Some studies use 'delay', 'disorder', 'poor' or 'low' language skills. It is not clear if there is a quantifiable difference between 'poor' language and DLD, for example. A third area concerns differences in methodology across studies. The

heterogeneity of methods made it difficult to produce generalised findings. Several studies used general health and education screens rather than a test of language abilities. Future research and practice need to select more focussed and unified language measures in order to best identify those with language difficulties in LAC. Another aspect that emerged from this SR is that many LAC studies only included individuals with already identified language delays in their sample. Indeed, language delay might be one factor contributing to a child being taken into care. This means the SR cannot reveal with certainty how many LAC do not have language difficulties and, importantly, what factors are associated with that positive outcome.

To summarise, this chapter discussed the SR results which indicate that LAC are at a high risk of having language difficulties. Placements in foster care can be beneficial for language abilities. Maltreatment leads to high risk in language difficulties including social pragmatic difficulties. These findings have implications for policy and practice and suggest that raised awareness of language difficulties among professionals, especially in maltreated, institutionalised children would be useful. This might in turn lead to routine language assessments to monitor progress and risk in LAC. The findings from this chapter have also informed the analysis in the next study which used a large existing dataset of LAC. This study explores the use of language screens to estimate how many children in a sample of LAC have language difficulties, and how those difficulties relate to their educational, emotional and behavioural outcomes.

CHAPTER 4: Language difficulties in LAC: Quantitative study

4.1 Design and research questions

In the current thesis, a mixed methodological approach was used, involving two research phases (study 1 and 2), to address five research questions. A mixed methodological design (quantitative and qualitative) was utilized because the aim was not just to collect two different datasets, it was instead necessary to link or embed the results and interpretation of the datasets involving two phases (Creswell, 2014) to provide a better understanding of language difficulties in LAC. Study 1 is reported in this chapter. It sets out the research design, ethical considerations, recruitment of participants, data collection, and data analysis. Methodology and results for the qualitative study 2 will be discussed in the following Chapter 5.

The current study aims to answer the following research questions:

- RQ1: How many LAC have language difficulties?
- RQ2: In groups of LAC with identified language difficulties what aspects of language are affected?
- RQ3: Which demographic and environmental factors are associated with language difficulties in LAC?
- RQ4: How does language difficulty associate with educational achievement/progress and behavioural strengths and difficulties

Answering these questions involved the secondary analysis of an LAC database complied by a London local authority (LA-X). The database included demographic variables, language scores from a bespoke screening tool developed within the LA, educational attainment using school data, and Strengths and Difficulties Questionnaire (SDQ) scores. These measures were routinely collected by a team of professionals working with LAC in the LA-X. The analysis carried out in this study involved using comparative, correlational and regression techniques to explore prevalence and type of language difficulty in LAC, as well as a preliminary investigation of associated factors. The process also involved exploring the links between LAC's language difficulties and their educational, social and emotional difficulties outcomes (SDQs). Using such methods helped refine the researcher's understanding and knowledge of the language difficulties and composition of this sample who were residing in various OHC settings.

4.2 Ethical considerations

The study was granted full ethical approval from the School of Health Sciences Research Ethics Committee of City, University of London (Reference: ETH1819-1958, 7 October 2019). Due to COVID-19 restrictions, the original design which involved direct data collection from LAC was amended to a secondary analysis of a large LA database (Reference: ETH1819-1958, 20 October 2020). The study also received approval from the ethics committee of Children and Families Service of LA-X on 17 December 2019. Thus, the researcher adhered to the guidelines of ethics committees (see Appendix F).

4.3 Extracting a study database

The process of obtaining the data for the study was completed in two phases.

4.3.1 Phase 1

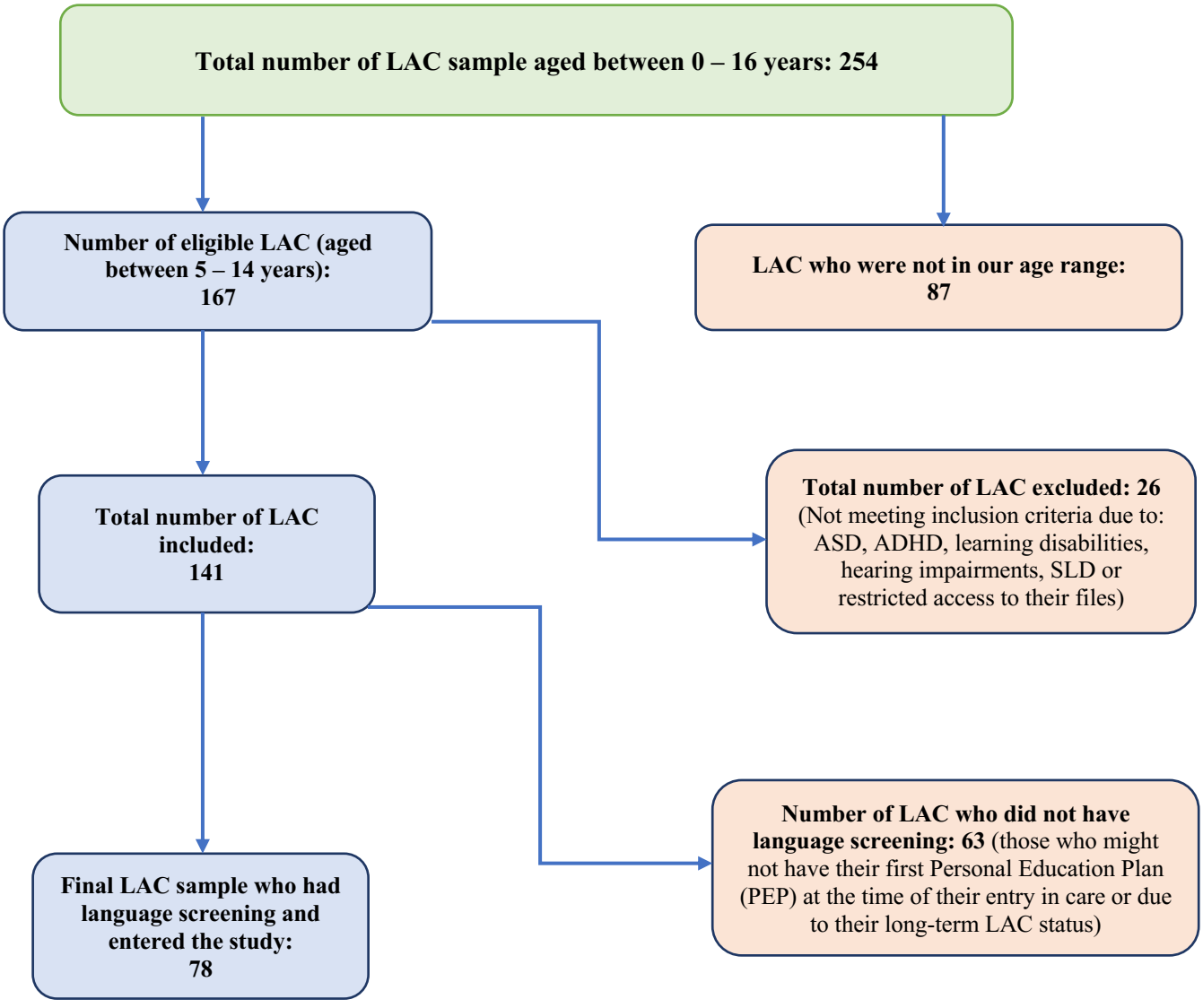
4.3.1.1 Recruitment of data from Local Authority-X

A dataset including information from seventy-eight LAC aged between 5 to 14 years old who were under legal guardianship of the LA-X was obtained. Due to COVID-19, the planned original recruitment (which would have involved direct testing by the researcher) was replaced by the usage of this LA database. Before COVID-19 arrived, the original recruitment process was already commenced, which involved recruiting potential local authorities and their virtual school heads (VSHs) for the study. The researcher emailed different local authorities' VSHs and requested their coordination during this process. The reason behind targeting VSHs was that they held the corporate parenting responsibilities for each LAC, and so they would decide on who would be suitable for the research while ensuring consideration of the LAC's vulnerabilities. LA-X was one of these authorities who agreed and granted full ethical approval for children under their care to participate in study 1.

Before the arrival of COVID-19, ethical approval from the LA-X Children and Families Service Ethics Committee was gained in order to access the local authority's database-related secondary data and face-to-face data collection related to direct testing. This gave the researcher opportunities to work with the VSH and its health teams closely when gathering children's background information based on the inclusion and exclusion criteria. To be able to access children's files and work alongside the VSH and its health teams, the researcher was given an honorary staff position with LA-X and went through their trainings and the DBS

clearance procedures. Following the completion of these, LA-X gave the researcher access to the database of LAC from which the researcher then extracted a cleaned and anonymised dataset which was subsequently used as secondary data. The entire dataset covered a population of 254 children, representing all children up to 16 years old for the academic years 2019 to 2020 who were under LA-X's care. The selection of the final 78 children included in the analysis is described later and set out below in Figure 4.1.

Figure 4.1: The database sample



4.3.1.2 A note about LA-X's data gathering and recording systems

To ensure consistency, LA-X uses a standardized data gathering system which is maintained across the staff team. The LA-X's database comprises files containing personal information about each LAC. This information gathering is usually commenced from the moment a child is known to the 'children in need team', including their admission to care (see section 1.2.1 for the definition of 'children in need').

The information about LAC's language abilities, educational attainment and SDQ scores is usually obtained through working in collaboration with schools. The data involving LAC's language abilities is gathered by specialist Speech and Language Therapists (SaLTs) who collect a language screening questionnaire for each LAC which is completed by their teachers or school SaLTs. For educational attainment, each school is required to provide LAC's progress records on a quarterly basis. Lastly, the data relevant to LAC's SDQ results is completed by teachers and collected by VSH staff teams on a yearly basis. The VSH staff teams report that their data systems maintain a complete record of each LAC to allow them to acquire broad-brush knowledge concerning the LAC and their language, educational and emotional needs. Descriptions of the variables available in the dataset are given in more detail below in section 4.5.

4.3.2. Phase 2

4.3.2.1 Selecting study sample from the provided dataset

Following discussions with the LA-X's virtual school head, potential data was selected through accessing the LA-X core database. The inclusion criteria for the study were designed to include as much suitable data as possible. Specifically, these inclusion criteria were: (a) LAC who had been under legal guardianship of LA-X's care for at least six months; (b) LAC had to be between 5 to 14 years of age. This specific age range was chosen because: (i) as the original plan was to test children's language via using standardized test measures, it thus was vital for children to be in an age range that would have allowed them to have sufficient English language, skills and abilities to understand the tasks; (ii) they begin their pathways or transition out of care to independence plans at the age of 15 (NICE, 2021) and leave care aged 16 or 17, at which point they fall under the care leavers category even though some of those young people are still supported by local authorities (DfE, 2020; Neil et al., 2019).

The exclusion criteria for the final sample (n=78) selection were: (a) children who did not receive language screening for a variety of reasons (e.g., either due to their long-term LAC status or because they did not have their first Personal Education Plan which forms an essential part of their care plan including their language needs [DfE, 2018c]), or did not have the ability to complete the test at the time of entry into care due to various reasons (e.g., a trauma caused by being removed from the family home or maltreatment); (b) children who had been diagnosed with learning disabilities or difficulties, Attention Deficit Hyperactivity Disorder (ADHD), and/or Autism Spectrum Disorder (ASD); (c) severe and complex mental health problems. Thus, 26 children were excluded from the study due to these reasons (for more details see Table 4.7 below for the exclusion categories).

Table 4.7: Proportion of children in each exclusion category

Exclusion categories	Numbers
Visually impairment and learning disability	1
ASD	2
SEND School	1
Learning disability	1
Learning disability and ASD	1
Down Syndrome	1
Severe Behavioural Difficulties	2
Hearing Impairment	1
ADHD	1
Behavioural Difficulties and Specific LD	1
Restricted access to personal info/na	14

As the section above shows, some LAC have been excluded from the current study for various reasons which also highlights the importance of a cautious approach, as the area is complex, and many other factors can influence children's language development. herefore, in order to minimize these confounding factors, the researcher's decision on exclusion criteria was guided and established through extensive discussions with clinicians from the LA-X, including VSH, SaLT and OTs, as well as the findings from the literature in the scoping review. In particular, the majority of the studies in the scoping review set out in Chapter 3 did not address language difficulties in children with additional needs, such as ADHD and learning difficulties, except for one study which explored language difficulties of LAC with and without learning difficulties (Hagaman et al., 2010). In addition, one study found that 19 out of 30 children identified with language impairments, eight were diagnosed with indicative ASD, while the remaining 11 exhibited difficulties across other speech, language and communication domains

(McCool & Stevens, 2010). This finding indicates that some LAC with additional needs might go unnoticed unless they undergo assessment, subsequently revealing additional impairments. Thus, recognizing the complexity of the field, the researcher's decision was informed by the existing literature, leading her to concentrate exclusively on language within the current sample. This focus on language-related aspects provides a valuable lens through which to explore LAC's development, but it should be understood as just one facet of their overall well-being. Thus, it is crucial to acknowledge that children may have other disabilities that initially go unnoticed.

Further, acknowledging the complex interplay between language difficulties and diagnoses/assessments is also crucial. In this study, the researcher specifically focused on children with language difficulties and or delays, deliberately excluding obvious cases of ASD or hearing impairment to simplify the scope of the current research. However, it is worth noting that in similar studies, some children with undiagnosed conditions may have inadvertently become part of the sample (e.g., McCool & Stevens, 2010). This highlights the nuanced nature of the research decisions, guided by existing literature, while also recognizing the complexities and potential for variations in the composition of the study sample.

A total of n=254 children aged of 0 to 16 years old were living under the legal guardianship of LA-X and, of those, children between the ages of 5 to 14 were identified as potentially providing data for the current study. The database sample in Figure 4.1 above illustrates the selection process (see section 4.3.1.1). As shown in Figure 4.1, the final eligible sample identified was 78/141. The mean age of this wider group of samples was 134.86 months (SD = 25.328). There were data from 60/141 children in foster care (42.6%), and data from 71/141 placed in other OHC settings (50.4%), and 10/141 children whose information was either not available or accessible (7%) due to safeguarding reasons. Average time spent in care was between 6 to 176 months. In total, n=40 children entered in care due to (suspected) physical or sexual abuse and n=50 entered due to emotional abuse. For the remaining n= 51 LAC, such data were not recorded or could not be accessed for safeguarding reasons. The ethnicities of the study sample can be seen in Table 4.8 below. Due to safety and confidentiality reasons, the demographic information of some children could not be accessed (34/141), so some data is missing. Demographic information of the whole sample is provided in detail in Table 4.8.

Table 4.8: The demographic profiles of the whole eligible sample including those without language data (n=141)

Groups	Subgroups	Proportion	Percentage%
Gender	M	71	50.4
	F	67	47.5
	Information not available	3	2.1
Ethnicities	White	38	26.2
	Black / African / Caribbean / Black British	47	32.6
	Other ethnicities (Mixed, Asian / Asian British, unspecified or other ethnic groups / Vietnamese)	37	26.2
	Information not available	19	13.5
Placement types	Foster care Placements	60	42.6
	Other placements (e.g., Home/hostels/ Placement with own Family or family member or friend / All types of temporary placements)	71	50.4
	Information not available	10	7
Reasons entering care	(Suspected) physical or sexual abuse	40	28.4
	Emotional Abuse	50	35.5
	Information not available	51	36.2
Language history	English is first language	114	80.9
	English is second language	10	7.09
	Information not provided	17	12.06

4.3.2.2 Characteristics of the final LAC sample

Although Figure 4.1 in section 4.4.1 shows a wider eligible sample, the current study focused only on n=78/141 LAC due to the reasons explained in detail in section. The actual data selection process took place between 7 October 2019 and 17 December 2020. As explained in section 4.4.1 and the sample tree of Figure 4.1, 141 children were recruited through LA-X and of those, n=78 children had received their language screening which the current study focused on. They were from an inner London Borough where over 30% of primary- and secondary-age children are eligible for free school meals. Data pertaining to those with language screening

came from both males (43) and females (35) with the mean ages of 10.62 years; months (SD = 2.440). The time spent in care ranged between 6 to 162 months. Table 4.9 presents the demographics of the participants who entered the final study sample.

The language sample group was very similar to those in the broader eligible sample (n=141) in all of these demographic factors, which strengthens the study's rigour and enhances its ability to inform future research and clinical practice in the field of language difficulties in LAC (see Table 4.8 above and 4.9 below). For instance, the majority of the eligible sample were of white British and Black / African / Caribbean / Black British backgrounds and spoke English as their native language. Most of them attended mainstream primary schools across London (KS1, KS2 and KS3). Table 4.9 shows that a majority of the children were placed in foster care, while only a small number of LAC were placed with their own families and friends, as well as placements with hostels (other placements). Based on the language screening results, only n=17 LAC were recorded as having an Education Health Care Plan whilst only n=6 participants had access to local SaLT support prior to receiving their language screening from LA-X. In terms of languages, 2 out of 78 children recorded English as their second language. Of those 48 LAC received their SDQ assessment and 58 had had their quarterly educational attainment records completed by schools. The remaining data relating to LAC's education attainments (n=20) and SDQ (n=30) results were not provided by schools and health teams. These demographic details can be seen in Table 4.8 above and Table 4.9 below.

Table 4.9: The demographic profiles of the final study sample of children with language data (n=78)

Groups	Subgroups	Proportion	Percentage%
Gender	M	43	55.1
	F	35	44.9
Ethnicity	White	25	32
	Black / African / Caribbean / Black British	27	35
	Other ethnicities	19	24
	Information not available	7	9
Placement type	Foster care Placements	49	50

	Other placements (e.g., Home/hostels/ Placement with own Family or family member or friend / All types of temporary placements)	21	35
	Information not available	8	15
Reasons for entering care	(Suspected) physical or sexual abuse	36	46
	Emotional Abuse	37	48
	Information not available	5	6
Language history	English is first language	71	91.2
	English is second language	6	7.6
	Information not provided	1	1.28

4.4 Data processing and variables available

4.4.1 Demographics

The demographic variables chosen for extraction included, a) gender, b) reasons for entering care, c) accommodation or placement types that children lived in, d) race/ethnicity, e) time spent in care. These variables were chosen based on the scoping and literature review results (see Chapter 2 and Chapter 3). With regards to placement types, nationally and globally, high proportions of children in the care of the social care services (i.e., LAC in the UK) are placed and/or accommodated in different out-of-home care (OHC) settings. See Chapter 1 for OHC placement types of definitions and Appendix A for defination (DfE, 2018a; McGrath-Lone et al., 2017). After checking how many participants had been placed in foster care or other placements, the researcher identified that the majority (n=49) had indeed been placed in foster care settings, while the remaining participants were in various other OHC placements (n=21). In order to establish the association between children's language difficulties and these other OHC placement types (e.g., home/hostels, placement with own family/ family member or friend and all types of temporary placements), the researcher collapsed all these small OHC placement types under one category with the term 'other placements'. This process allowed the researcher to examine the link between LAC's language difficulties and placement types as a binomial factor, namely 'foster care' and 'other placements'.

The same process was followed when establishing the 'reasons for entering care' variable. The database listed many similar and combinatory reasons as to why children were placed into care (e.g., neglect and/or abuse; emotional abuse and/or neglect) making categorisation difficult. For the purposes of this analysis these categories were collapsed into the two subgroups of '(suspected) physical or sexual abuse' and 'emotional abuse'. If the reason was recorded as 'abuse and/or neglect', or 'any other reason' along with the 'abuse' options, children were put into the '(suspected) physical or sexual abuse' category. If the reasons were recorded explicitly as emotional abuse along with other options (e.g., emotional abuse and neglect), they were put into the 'emotional abuse' category. This method allowed the number of children in each category to be established and linked to 'reasons for entering care'. For analysis purposes, five main variables were created based on the selected demographic factors (see Table 4.10).

Table 4.10: Variables based on demographic factors

Variables	**Levels**
Gender	Female Male
Reasons for entering care	(Suspected) physical or sexual abuse Emotional Abuse
Placement type	Foster care Placements Other placements (e.g., Home/hostels/ Placement with own Family or family member or friend / All types of temporary placements)
Ethnicity	White Black / African / Caribbean / Black British Other ethnicities
Time spent in care	

4.4.2 Language data

The secondary data source comprised the responses to a clinical screening questionnaire developed by LA-X's SaLT service, consisting of 19 items (see Appendix H). As explained in Section 4.3.1.1, the COVID-19 restrictions hindered the researcher from conducting

standardized language assessments involving a range of language domains, including phonology, semantics, and grammar (morphology and syntax). Consequently, the researcher had to adjust her original plan and use a secondary dataset provided by an inner London local authority (LA-X). Nonetheless, this data was initially collected via a non-standardized language screening test for clinical reasons created by a highly specialist SaLT team. The purpose was to enable clinicians and the LA-X to identify children at risk of language difficulties and implement necessary interventions. Therefore, the primary focus of the screening tool did not explicitly focus on language development difficulties in the above-mentioned core language domains and their associated difficulties in LAC. These reasons, in a way, served as some kind of limitation for the language screening test used in the current study as it was non-standardised and relatively cured. The researcher explicitly acknowledged and discussed the limitations of the non-standardized language screening questionnaire employed in the current study in Section 6.4 in 6 Chapter. However, even though the language screening was not standardised, it had some unique advantages. For instance, it was relatively quick, saving a significant amount of time to assist the SaLT team in identifying language concerns in LAC who might require full SaLT assessments and or interventions soon after they enter care.

The responses to each questionnaire item provided by the schools' staff (e.g., SENCO, teachers and/or SaLTs) who worked with LAC were coded using a 3-point Likert-type scale, where 0 = 'No', 1 = 'Sometimes', and 2 = 'Yes'. The scores for these 19 questionnaire items were summed to create a score ranging from 1 to 32. The internal consistency reliability of the scores for the 19 items in the language screen was acceptable (Cronbach's alpha = .68). Based on the 3-point Likert-type scale, higher scores equate to poorer language skills or difficulties, while lower scores represented better language skills.

4.4.3 Grouping strategies for the language groups and subscales

The LA-X Speech and Language Therapy SaLT team categorised the LAC sample using a Traffic Light System. The 'Green' category represented children with no language difficulties, the 'Amber' category represented those with moderate language difficulties, and the 'Red' category represented those with severe language difficulties. Decisions around the category thresholds were not formalised based on normative data but were based on clinical judgments by the SaLT team. This helped the SaLT team to prioritise children's immediate needs and individualise intervention plans. The language screening used by LA-X's SaLT team was

developed as an initial problem identification tool to be completed for each child as soon as they became LAC. This screening questionnaire was informed by the SaLT team's clinical practices and knowledge. It aimed to identify possible or actual language difficulties that could otherwise go unnoticed. It concentrated on LAC in that particular LA as opposed to the general population.

Regarding the three language groups involving cognitive, language, pragmatic or social issues, the researcher recognized that there are overlaps in the areas assessed by this language screening questionnaire. The researcher is also aware that these categories are not always clearly separable. However, she used the literature as her guide to differentiate between these three forms of language (Mathews et al., 2018; Yamashiro & Vouloumanos, 2019; Fitch et al., 2010). The researcher was aware that several items in the test appeared to be overlapping other areas. This was one of the limitations, as it blurred the exploration and explanation of specific language and cognitive abilities. However, this overlap became essential during the COVID-19 pandemic, enabling the researcher to access crucial secondary data. The researcher thus carefully examined the primary focus of each question on the screening questionnaire. Subsequently, she explored the literature to determine whether they fell under categories and definitions of cognitive, linguistic, or social and then grouped them accordingly. The main principle of such grouping was to provide a comprehensive understanding of language development within the current study sample. This systematic approach facilitated the researcher's decision-making. Thus, the researcher divided the screening questionnaire into three subscales based on the question types using the literature mainly, as well as using her knowledge of aspects of language difficulties and how they are grouped clinically. This resulted in the subscales Verbal Cognition, Expressive/receptive language, and Pragmatic/Social issues (see Table 4.2). Verbal cognition can be usually conceptualised in the clinical literature as processing and remembering verbal information, paying attention, processing speed, working memory, reasoning and problem-solving (Mitchell & Ziegler, 2013; Rao et al., 2014; Brown, 2008; Jordan et al., 2013). Receptive language refers to how children understand and/or interpret language (Asmussen et al., 2018; Thuresson, 2011; Kennison, 2014). Expressive language defines as ways in which children use words to express their needs and feelings (Lisa et al., 2019; Asmussen et al., 2018). Pragmatic or social issues refer to how children use language within a social context, such as understanding what is to be said to whom and how much should be said within the specific social context (Matthews, 2014; Cummings, 2014).

Table 4.2: RQ2 Classification of the questionnaire items using three development areas

1.Verbal Cognition	Paying attention to spoken information
	Paying attention and following an adult led activity
	Remembering things people say
	Following spoken instructions or only follow part of them
	Regular repetition of information
	Imaginative or pretend play
	Concept of time
2.Expressive/Receptive Language	Thinking of the word that they want to say
	Understanding a range of word
	Explaining their ideas or describing events
	Understanding a range of questions
	Answering a range of questions
	Their speech difficult to understand
	Using language to express their emotions
3.Pragmatic/Social issues	Interacting with peers
	Frustrated or anxious when there is an unexpected change or transition
	Understanding or using non-verbal communication
	Misinterpret information you have said

4.4.4 Educational attainment and Strengths and Difficulties (SDQ) data

LA-X's dataset included: 1) Educational achievement (scores for English, Maths and Science) and 2) SDQ outcomes (social, emotional and behavioural needs). Children's educational progress and attainment data were collected by schools and passed onto LA-X according to their guidance. There were data for 58 (74%) participants on educational achievement. For the total educational achievement scores, the researcher utilized LAC attainment and progress results to obtain each LAC's total educational achievement scores by adding their progress and attainment results in each subject for each child. For example, for total English scores, the researcher summed children's reading attainment and reading progress results to obtain their total attainment scores (e.g., reading attainment results + reading progress results = total

attainment scores). In order to be more consistent, the researcher followed the sampe process for each child's maths and sciences attainment and progress results to gather their total attainments scores for these competencies. Data for 48 (62%) participants' SDQ scores was available. The strengths and difficulties questionnaire (SDQ) is a brief emotional and behavioural screening instrument for children and young people (Cameron et al., 2003; McCrae & Brown, 2017).

4.5 Analysis plan

All analyses were completed using SPSS statistical package (versions 26 and 28; IBM, 2021).

4.5.1 RQ1: How many LAC children have language difficulties?

4.5.1.1 RQ1a: To what extent do the observed proportions of LAC with language difficulties in the sample differ from the expected proportion of children with language difficulties in the general population?

Chi-square tests were conducted on the 78 LAC with language screenings to determine the degree to which the observed proportion of language difficulties in the red and amber categories differed from the expected proportion of language difficulties in the general population. This analysis was repeated with the wider samples of 141 LAC to provide more cautious results (see Section 4.6.1.1.1 for more details). We used a statistical cut off of -1SD as a generous estimate of prevalence to ensure that our results were conservative. A statistically significant difference between the observed and expected proportions was indicated if $p < .05$ for the Chi-Square (χ^2) statistic.

For this analysis, a broad 'expected' rate of language difficulties of 16% (statistically expected proportion falling below -1SD on any normally distributed measure) was applied to capture wider language concerns as opposed to following the narrower diagnosis prevalence for DLD (9%). The reason for that was to provide a conservative analysis since the language measure here was relatively crude, that is we cannot be sure that all children in the red and amber groups actually have DLD, rather that they have been identified as having low language by a clinical team. Furthermore, a majority of the LAC sample came from deprived or socio-economically disadvantaged backgrounds and/or had experienced maltreatment (Krier et al., 2018; Pinto &

Woolgar, 2015; Jones, et al., 2011; DfE, 2022), and a well-established literature confirms the increased risk of language developmental difficulties amongst children growing up in such conditions (Hart & Risley, 1995; Law et al., 2011; Locke et al., 2002; Westby, 2007; Snow, 2009; Sylvestre & Mérette, 2010; Stacks et al., 2011).

4.5.2 RQ2: In groups of LAC with identified language difficulties what aspects of language are affected?

4.5.2.1 RQ2a) What specific difficulties do the language risks groups (red and amber) have compared to the group who screened typical for language (green)?

In order to understand the traffic light scores further, the extent to which the language screening scores differed between the three language groups ('Green', 'Amber' and 'Red') was examined with univariate one-way Analysis of Variance (ANOVA) and post-hoc tests. Scheffe's post-hoc test was chosen because it can be used to make all possible comparisons between pairs of means, and unlike other post-hoc tests (e.g., Tukey's HSD) it can be used with unequal sample sizes and inequality of variance between groups (Field, 2018). Before the ANOVA and post-hoc pairwise comparisons analyses were conducted, the assumptions of standard ANOVAs were checked based on the following criteria. The homogeneity of variances assumption was met in 12 cases, as assessed by Levene's test (see Table 4.4 in Appendix D). Where homogeneity of variances was not met, Welch's correction was applied (see Table 4.5 in Appendix C).

Skewness was checked for all variables and for most variables, skewness was within ±1 (see Table 4.6 in Appendix D), so parametric tests were ideal (Kim, 2013; Tabachnick & Fidell, 2013). For the remaining analyses, parametric tests were used even though some of the variables exceeded this skewness. This is because, due to a large sample size (n=78), the central limit theorem (CLT) applied and suggested that parametric tests were sufficiently robust (Sullivan, 2008). A Bonferroni correction was used to correct for the elevation in Type I error rate when multiple comparisons of the same type are performed using one set of data (Armstrong, 2014). The results of ANOVAs were therefore interpreted assuming an adjusted alpha threshold of $p < .0026$ to indicate statistically significant difference between the groups on mean scores.

4.5.3 Subscales of the screening questionnaire

As described earlier, the questions on the language screening tool were divided into 3 subscales based on the researcher's clinical knowledge of aspects of language difficulty. With regards to these subscales, similar principles were followed in section 4.4.2 and based on the 3-point Likert-type scale approach. For instance, the scores for the seven questionnaire items that measured cognition were summated to create a scale ranging from 1 to 14. The scores for the eight questionnaire items that measured expressive/receptive language were summated to create a scale ranging from 1 to 16. The scores for the four questionnaire items that measured pragmatic language were summated to create a scale ranging from 1 to 8.

The extent to which the mean scores for the screening subscales of Cognition, Expressive/receptive and Pragmatic/Social issues differed between the three language groups (Green, Amber and Red) was examined with univariate ANOVA and Scheffe's post-hoc pairwise comparisons. As three ANOVA tests were used to analyse one set of data, the Bonferroni correction was applied to avoid elevation of Type I errors. The F-test statistics were statistically significant if $p < .0166$ (see section 4.7.2.1 for the results below).

4.5.4 RQ3: Which demographic and environmental factors are associated with language difficulties in LAC?

In order to explore the specific factors relevant to children's language difficulties, analysis was conducted in two phases. Phase one (RQ3a) focused on simple univariate analyses to identify potential factors associated with language difficulties in LAC. Phase two (RQ3b) used these and the SR to inform multiple regression analyses to explore the role of these potential predictors in LAC's language in combination. These phases are now described in detail.

4.5.4.1 RQ3a: Preliminary univariate analyses to identify potential factors associated with language difficulties in LAC

As with RQ2, central limit theorem (CLT) applied, although normality of data was checked using the Kolmogorov-Smirnov test. Again, parametric tests (e.g., t-tests, ANOVA and Pearson's correlation) were considered to be the most appropriate when addressing RQ3 (Tabachnick & Fidell, 2013; Pallant, 2010, 2016). The results for normality and skewness for each level of the independent variables can be found in Table 4.11 in Appendix D. For t-tests and ANOVA (categorical IVs), the assumption of homogeneity of variance was evaluated through the Levene's test. The results of this can be seen in Table 4.12 in the result section 4.6.1.3.1 below. Effect sizes for each of the factors was calculated and reported alongside

significance. For time spent in care (continuous variable), a Pearson's correlation was performed (see Table 4.13 in Appendix D) with language scores. Visual examination revealed no outliers across any of the variables. The breakdowns of the Kolmogorov-Smirnov normality for total language scores for each level of the five demographic variables are provided in Table 4.11 in Appendix D. The results demonstrate that the majority of the variables showed normal distributions, except for foster care placements. Parametric tests (t-tests and one-way ANOVAs) were therefore applied to the results to ascertain whether any differences existed between children's total language scores and the five demographic factors.

4.5.4.2 RQ3b: To what extent do different demographic factors predict the language and developmental difficulties among the looked-after children?

A multiple linear regression (MLR) approach was used to investigate which combination of factors best predicted LAC's language total score. An 'enter' method was used as the investigation is exploratory. None of the demographic factors showed significant association with children's total language scores using univariate analyses in RQ3a, however the literature reviewed in Chapter 2 and the SR results in Chapter 3 predicted that they may be important in combination (see below). Therefore, 3 key demographic factors were entered in MLR. Based on the literature reviewed in Chapter 2 and the SR results in Chapter 3, 'foster care placements', 'emotional abuse' and 'time spent in care' were thus selected as independent variables, which confirmed they are sometimes strongly related to the language difficulties of vulnerable populations. Dummy variables were created for the first two of these factors through the use of SPSS. This process involved recoding the original variables into new variables (0/1). The results of this process resulted with 2 new variables (e.g., foster care placements (1) vs other placements (0); Emotional abuse (1) no emotional abuse (0). Time spent in care was entered as a continuous variable. Analysis was undertaken via using the SPSS statistical package v28 (IBM, 2021).

The selected three independent variables (IVs) mentioned above were entered into 4 multiple linear regression analyses – one for each of the four dependent variables (DVs): total language scores, verbal cognition scores, expressive/receptive and pragmatic/social scores. Predictors were then evaluated individually in terms of how much unique variance in the dependent variables they explained. The researcher also examined how much of the DVs' ranges could be explained by the IVs when taken in combination. Considering the current study's sample size, the regression models were run for the whole cohort with DVs as a continuous variable

(rather than in separate Traffic Light System groups). All the selected IVs entered in the equation were subject to scrutiny against multiple regression assumptions (see below).

4.5.5 Multiple linear regression assumptions

In order to run MLR, certain assumptions need to be considered (Tabachnick & Fidell, 2014; Field, 2018; Pallant, 2020; Berry, 2011).

The main assumption of MLR was that the empirical data should fit the linear model: $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + ... \beta_k X_k$. Where: Y is the predicted value of the dependent variable (i.e., the total language scores); β_0 is a constant, representing the value of Y when all the predictor variables are zero, and β_1, β_2... β_k are the standardized partial regression coefficients for k = 3 predictor variables [specifically foster care, emotional abuse, and time spent in care]. The value of each standardized ß coefficient, which could range from -1 to +1, was automatically adjusted to take into account the confounding effect of all the other predictor variables in the model, assuming that they were constant (Berry, 2011). The overall goodness of fit of the models to the empirical data was indicated by the R^2 value. The smallest value recommended by Cohen's d (1988) to indicate the practical significance of an MLR model was $R^2 = 0.02$.

The assumptions also involved checking multicollinearity (VIF); the normality, linearity, and homoscedasticity of residuals; error independence; diagnosis of any standardized residual (as its needs to be greater than ±3); standard deviations; and the examination of any outliers (Field, 2018; Tabachnick & Fidell, 2014; Berry, 2011; Cohen et al., 2003). The potential influential cases were checked with Cook's distance and leverage values. The results revealed that none of the leverage values were greater than 0.2, and the values for Cook's distance were greater than '1' (Field, 2016; Field, 2014; Cook, 1997). In addition, the assumptions of independence of errors are usually checked with the Durbin-Watson test, which indicates that prediction errors (residuals) are unrelated for any two observations. The Durbin-Watson test was thus used in the current study to determine if there was any rapid correlation between errors. Its values range between 0 and 4, with 2.5 indicating that no data was autocorrelated (Schreiber-Gregory & Foundation, 2018). The examination of the assumptions for the current data met the independence of residuals as assessed by the Durbin-Watson statistic for all DVs (range of 0 to 4). In the four models, the VIF values were well below the cut-off value of 10, indicating no possibility of multicollinearity (see Tables 4.15 and 4.16 in section 4.7.4).

In exploring the predictive value of IVs and the DVs, some guidance was needed. The literature suggests that there should be a limit to the number of variables that can be usefully entered into a linear regression model in order to ensure that the predictive use of a resulting model is not compromised (Tabachnick & Fidell, 2001). The guidance broadly used states that no more than one predictor variable should be used for every eight participants + 50 (n = 50 + 8m IVs) which was suggested by literature (Tabachnick & Fidell, 2007; Green, 1991). The literature indicates that entering too many variables for the size of the sample risks exaggerating any inconsequential fluctuations in the data (Knofczynski & Mundfrom, 2008; Green, 1991). Thus, univariate analyses were first performed between each IV and DV as defined above in order to limit the number of variables in the regression models (see Tables 4.17, 4.18, 4.19, 4.20 and 4.21 in Appendix D for more details). In addition, these assumptions were tested by checking the normal probability plots (P-P) of the standard residual (see Figures 4.3, 4.4, 4.5 and 4.6 in Appendix E).

In summary, following the parametric tests results, linear regression analyses were used to assess the relative influence of a set of IVs on LAC's total language scores and scores of cognitive, expressive/receptive and pragmatic languages. The assumptions of regression models were assessed via using a variety of procedures and diagnostic tests based on the above assumptions' criteria for which the findings are provided in section 4.7.4 below.

4.5.6 RQ4: How does children's language associate with their educational achievement and SDQ outcomes?

4.5.6.1 Correlation analysis

As with the previous sections, descriptive statistics for the study sample were utilized to establish normality of distribution. The test results revealed that total language scores were normally distributed for children's educational attainment (e.g., English, maths and science scores) and SDQ results as assessed by Kolmogorov-Smirnov test and Q-Q plots. Central limit theorem was also applied for RQ4 due to a large study sample. The skewness results were also checked to determine if they were within ±1. Distribution was assumed to be sufficiently normal to qualify the data for a parametric test (Kim, 2013; Pallant, 2010). See Table 4.16 in Appendix D for normality and skewness results. Pearson's correlation tests were conducted to

determine the association between children's language scores, educational attainment and SDQ outcomes. R square was used as an effect size.

4.5.7 Effect size calculation for ANOVAs, t-tests and Pearson correlation coefficient guidelines

The effect sizes were calculated via comparison analysis. Partial eta squared (ηp2) was used for the ANOVAs via SPSS. The value required for partial eta squared usually ranges from 0 to 1. The current study used the following rules of thumb to interpret values for partial eta squared: $\eta^2 = 0.01$ indicates a small effect, $\eta^2 = 0.06$ indicates a medium effect, and $\eta^2 = 0.14$ indicates a large effect. Cohen's (1988) guidelines were followed for each t-test. This means a d of 0.20 indicates a small effect, 0.50 indicates a medium effect, and 0.80 indicates a large effect. Pearson's correlations were interpreted based on Cohen's (1988) guidance where an r = 0.10 indicates a small effect (the effect explains 1% of the total variance), an r = 0.30 indicates a medium effect (the effect explains 9% of the total variance), and an r = 0.50 indicates a large effect (the effect explains 25% of the total variance).

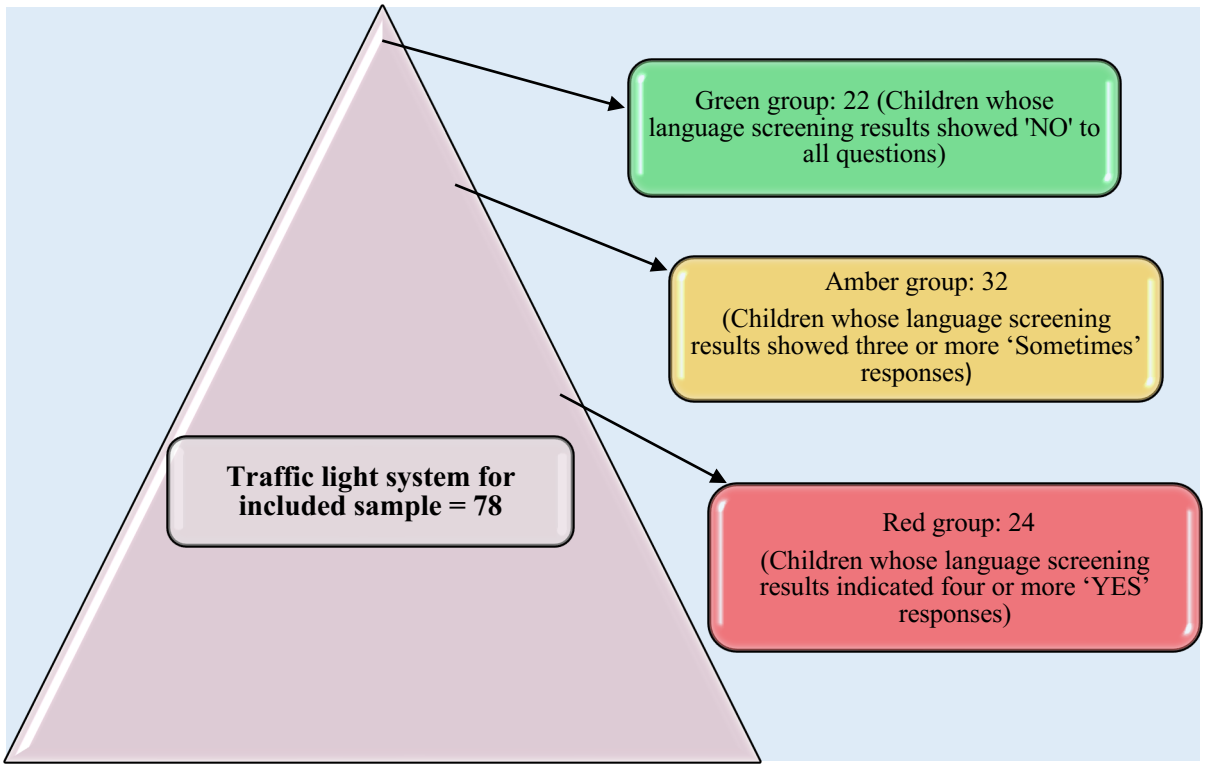
4.6 Results

4.6.1 Participants

4.6.1.1 RQ1: How many looked-after children in the sample have language difficulties, and how does this compare to the general population?

The language skills of the 78 participants who met the inclusion criteria (see methods) were screened by the SaLT team for clinical purposes, and the numbers of children in each language group were categorised using the Traffic Light System described earlier (and shown in Figure 4.2 below). Among the 78 participants, n=22 (28.2%) were classified in the green category (no reported difficulties), n=32 (41.0%) were classified in the amber category (reported as moderate to boaderline concerns for language difficulties), and n=24 (30.8%) were classified in the red category (reported as clear concerning for language difficulties) . The majority of the LAC sample (n=56, 71.8%) fell under the amber or red categories, which are analysed further for RQ2 and RQ3 in sections 4.7.2 and 4.7.3.

Figure 4.2: Traffic Light System showing groups



4.6.1.1.1 RQ1a: To what extent do the observed proportions of LAC with language difficulties in the sample differ from the expected proportion of children with language difficulties in the general population?

For the 78 LAC who had LS Scores, the difference between the proportion of looked-after children with amber or red language difficulties (56/78; 71.8%) was significantly larger than the expected proportion (16%) in the general population ($\chi 2$ (1, n = 78) = 180.67, p = .001). However, given that the 78 LAC in this subgroup had already been categorised with language impairment by the SaLT team, this large difference was predictable. The analysis was therefore repeated using the whole of the eligible LAC sample prior to classification by the SaLT team (n=141). Among the children with language difficulties, 24/141 (17%) children were classified in the red category and 32/141 (22.69%) were classified in the amber category. Therefore, the observed number of children with language difficulties was 56/141 (41.1%) when considering the total number of eligible children in the LAC sample. This represents a statistically significant difference between the observed and expected proportions ($\chi 2$(1, n = 141) = 59.008, p < .001), even using a very generous expectation of difficulties in the general population (16% cut-off) and an assumption that none of the 63 unscreened children had unidentified language problems. The effect size was calculated based on Cohen's W guidelines (see section 4.6.5),

and the medium effect size (.43) indicated that this difference also had practical, as well as statistical significance. The results here indicate that as a group, LAC are at least 2.5 times at greater risk of having language difficulties/impairments than the general population.

4.6.1.2 RQ2: In groups of LAC with identified language difficulties what aspects of language are affected?

4.6.1.2.1 RQ2a: What specific difficulties do the language risks groups (red and amber) have compared to the group who screened typical for language (green)?

As expected, total language scores were highest for the red group (M = 25.27, SD = 4.8) compared to the amber (M = 20.03, SD = 3.18) and green (M = 16.33, SD = 1.63) groups, and there was a significant difference between the mean scores ($F(2,75) = 40.054$, $p = 0.001$). Post-hoc testing analysis revealed significant differences between all language groups ($p < 0.001$).

There were also significant differences between groups for most of the individual screening items when unadjusted p values were used ($p < 0.05$), (exceptions are questions 12, 13 and 19). Most of these differences remained significant after adjustment for multiple comparisons, but questions 15 and 17 did not reach significance using the adjusted threshold ($p < 0.0026$). All results are provided in Table 4.1 below.

Table 4.1: RQ2 ANOVA and Scheffe's Post Hoc Tests to Compare Mean Questionnaire Item Scores between Green, Amber, and Red Groups

	Questions	Groups	Mean	SD	df	F	p	η_p^2	Post hoc statistics	p
Q1	Has difficulty listening to spoken information?	Green	0.53	0.64	15	F (2,33) = 14.391	<0.001	0.466	Green and red	< 0.001
		Amber	1.27	0.46	11				Amber and green	= 0.007
		Red	1.70	0.48	10				Red and amber	= 0.222
Q2	Has difficulty paying attention to spoken information?	Green	0.33	0.50	9	F (2,38) = 7.905	<0.001	0.294	Green and red	= 0.002
		Amber	0.86	0.79	21				Amber and green	= 0.024
		Red	1.64	0.81	11				Red and amber	= 0.028
Q3	Has difficulty paying attention and following an adult led activity?	Green	0.22	0.44	9	F (2,40) = 38.782	<0.001	0.665	Green and red	< 0.001
		Amber	1.05	0.48	22				Amber and green	< 0.001
		Red	1.83	0.38	12				Red and amber	< 0.001
Q4	Has difficulty remembering things people say?	Green	0.50	0.51	24	F (2,75) = 31.944	<0.001	0.460	Green and red	< 0.001
		Amber	1.31	0.64	32				Amber and green	< 0.001
		Red	1.82	0.50	22				Red and amber	= 0.008
Q5	Has difficulty following spoken instructions or only follow part of them?	Green	0.33	0.70	24	F (2,74) = 27.174	<0.001	0.423	Green and red	< 0.001
		Amber	1.19	0.69	32				Amber and green	< 0.001
		Red	1.76	0.53	21				Red and amber	= 0.011
Q6	Has difficulty understanding a range of word?	Green	0.87	0.74	15	F (2,35) = 21.942	<0.001	0.543	Green and red	< 0.001
		Amber	1.67	0.49	12				Amber and green	< 0.004
		Red	1.91	0.30	11				Red and amber	= 0.598
Q7	Needs regular repetition of information	Green	0.33	0.48	15	F (2.35) =13.040	<0.001	0.427	Green and red	< 0.001
		Amber	1.25	0.75	12				Amber and green	= 0.003
		Red	1.55	0.68	11				Red and amber	= 0.548

Q8	Has difficulty thinking of the words s/he wants to say or use very simple/non-specific words?	Green Amber Red	0.97 1.38 1.67	0.77 0.75 0.65	24 32 21	F (2,74) = 8.435	<0.001	0.186	Green and red Amber and green Red and amber	< 0.001 = 0.017 = 0.375
Q9	Has difficulty explaining their ideas or describing events?	Green Amber Red	0.63 1.09 1.82	0.57 0.73 0.50	24 32 22	F (2,75) = 0.939	<0.001	0.358	Green and red Amber and green Red and amber	< 0.000 = 0.026 < 0.001
Q10	Has difficulty understanding a range of questions?	Green Amber Red	0.53 1.68 1.82	0.57 0.73 0.40	8 20 11	F (2,36) = 12.656	<0.001	0.413	Green and red Amber and green Red and amber	< 0.001 < 0.001 = 0.489
Q11	Has difficulty answering a range of questions?	Green Amber Red	0.58 1.42 1.92	0.76 0.66 0.27	19 12 13	F (2,41) = 18.280	<0.001	0.471	Green and red Amber and green Red and amber	< 0.000 < 0.001 = 0.149
Q12	Is their speech difficult to understand?	Green Amber Red	1.71 1.78 1.95	0.55 0.55 0.21	24 32 22	F (2,75) = 1.583	= 0.065	0.041		
Q13	Has no/limited imaginative or pretend play? (Up to age 10)	Green Amber Red	1.29 1.50 1.88	0.95 0.67 0.35	7 12 8	F (2,24) = 1.447	= 0.441	0.108		
Q14	Has difficulty interacting with peers?	Green Amber Red	0.67 0.84 1.55	0.81 0.72 0.73	24 32 22	F (2,75) = 8.703	<0.001	0.188	Green and red Amber and green Red and amber	< 0.001 = 0.689 = 0.005

Q15	Appears frustrated or anxious when there is an unexpected change or transition?	Green Amber Red	0.82 1.18 1.73	0.87 1.85 0.64	11 22 11	F (2,41) = 3,508	<0.039	0.153	Green and red Amber and green Red and amber	= 0.041 = 0.415 = 0.243
Q16	Has difficulty understanding or using non-verbal communication?	Green Amber Red	0.64 1.50 1.71	0.72 0.67 0.56	22 32 21	F (2,72) = 16.717	<0.001	0.317	Green and red Amber and green Red and amber	< 0.001 < 0.001 = 0.516
Q17	Has difficulties using language to express their emotions?	Green Amber Red	0.90 1.40 1.60	0.56 0.63 0.73	10 15 15	F (2,37) = 3.447	<0.042	0.254	Green and red Amber and green Red and amber	= 0.045 = 0.192 = 0.711
Q18	Often misinterprets information you have said?	Green Amber Red	0.75 1.00 1.73	0.63 0.73 0.55	20 31 22	F (2,70) = 13.051	<0.001	0.272	Green and red Amber and green Red and amber	< 0.001 = 0.418 < 0.001
Q19	Has difficulties with time concepts?	Green Amber Red	1.42 1.53 1.86	0.77 0.71 0.47	24 32 21	F (2,74) = 2.506	= 0.089	0.070		

Note: * Statistically significant difference between mean scores ($p < .0026$, applying Bonferroni correction); $\eta_p^2 = .02$ is the "recommended minimum effect size representing a practically significant effect"; .0 to 0.2 = none-small effect size; .2 to .0.5 = small-moderate effect size, and ≥ 0.5 to 0.8 = medium-strong effect size (Vandekar, Tao and Blume, 2020, p. 240). **Lower mean represents better performance and higher mean represents poor performances. If all the language screening answers showed 'NO', the children go under the green category; if the language screening showed 3 or more 'SOMETIMES', the children go under the amber category; if all the language screening answers showed 4 of more 'YES', the children go under the red category.

The post-hoc analysis showed that for five questionnaire items the mean scores were significantly different across ALL groups (coloured yellow on Table 4.1). The mean scores for seven items were significantly higher in the "Red" and "Amber" groups compared to the "Green" group (coloured blue on Table 4.1). The mean scores for two items were significantly lower in the "Amber" and "Green" groups than in the "Red" group (coloured green on Table 4.1). The mean scores for the "Amber" group were not significantly different from the "Red" or "Green" groups for two of the items, but the "Red" and "Green" groups differed (coloured orange in Table 4.1). All of the significant comparisons had large effect sizes (Vandekar et al, 2020, p. 240). All of the significant comparisons had large effect sizes (Vandekar et al., 2020).

4.6.1.2.2 RQ2b: To what extent do the cognition, expressive/receptive and pragmatic language subscales differ between the three language groups among the looked-after children (green, amber and red)?

As stated previously, the 19 items in the questionnaire were categorised into three subscales, to define three developmental areas: verbal cognition, expressive/receptive language, and pragmatic/social issues. Table 4.3 indicates that the verbal cognition and expressive/receptive language subscales different significantly across the three groups (using $p < .0166$, applying Bonferroni correction). There was no difference for pragmatic/social issues. For the verbal cognition scale, the post-hoc tests indicated that the "Red" group ($M = 8.58$, $SD = 1.998$) had more language difficulties than both the "Amber" group ($M = 6.94$, $SD = 1.585$) and the "Green" group ($M = 6.73$, $SD = 1.609$). With regards to expressive/receptive language the same pattern occurred, that is the "Red" group ($M = 7.88$, $SD = 1.702$) had more difficulties than both the "Amber" group ($M = 6.47$, SD 1.367) and the "Green" group ($M = 6.23$, $SD = 1.378$).

Table 4.3: RQ2 ANOVA and Post Hoc Tests to Compare Developmental Areas between Green, Amber, and Red Groups

Developmental areas	Groups	Mean	SD	df	F	p	η_p^2	Post hoc statistics	p
Total verbal cognition scores	Green	6.73	1.609	22	F (2,77) = 8.433	<0.001	0.184	Green and red	= 0.002
	Amber	6.94	1.585	30				Amber and green	= 0.908
	Red	8.58	1.998	24				Red and amber	= 0.003
Total expressive/ receptive language scores	Green	6.23	1.378	22	F (2,77) = 8.751	<0.001	0.189	Green and red	< 0.001
	Amber	6.47	1.367	32				Amber and green	= 0.841
	Red	7.88	1.702	24				Red and amber	= 0.003
Total pragmatic/social issues scores	Green	3.77	1.602	22	F (2,77) = 0.010	<0.990	0.001	Green and red	< 0.001
	Amber	3.72	1.397	32				Amber and green	< 0.001
	Red	3.75	1.189	24				Red and amber	< 0.001

Note: * Statistically significant ($p < .0166$ applying the Bonferroni correction); $\eta_p^2 = .02$ is the "recommended minimum effect size representing a practically significant effect" (Armstrong, 2014; Cohen, 1988 cited in Lakens, 2013, p.3). If all the language screening answers showed 'NO', the children go under the green category; if the language screening showed 3 or more 'SOMETIMES', the children go under the amber category; if all the language screening answers showed 4 of more 'YES', the children go under the red category. **Lower mean represents better performance and higher mean represents poor performances.

4.6.1.3 RQ3: Which demographic and environmental factors are associated with language difficulties in LAC?

4.6.1.3.1 RQ3a: Univariate analyses to identify potential factors associated with language difficulties in LAC

Univariate analyses were run to explore any connections between demographic factors and language screening score, before running regression analyses. The results of these are presented in Table 4.12 below. None of the potential risk factors showed significant effects for total language score. The effect sizes were small in all of the cases (see Table 4.12).

Table 4.12: RQ3 T-tests and ANOVA – Potential factors associated with language difficulties in LAC (total language scores of 19 questions and demographic factors)

Questions	Groups	Mean	SD	df	F	p	Effect sizes	Leven's
Total language scores and gender	Female	20.14	3.615	35	t (76) = -.678	0.500	d=0.15	0.912
	Male	20.74	4.106	43				
Total language scores and reasons for entering in care	(Suspected) physical or sexual abuse	20.22	3.563	36	t (71) =-.267	0.791	d= 0.062	0.310
	Emotional Abuse	20.46	4.018	37				
Total language scores and placement types	Foster care Placements	20.12	3.919	49	t (68) =-.315	0.754	d= 0.086	0.195
	Other placements (e.g., Home/hostels/ Placement with own Family or family member or friend / All types of temporary placements)	20.43	3.234	21				

Total language scores and ethnicities	White	21.00	3.401	24	F (2,66) =0.852	0.431	ηp2= 0.025	0.902
	Black / African / Caribbean / Black British	19.63	3.814	27				
	Other ethnicities	20.28	4.056	18				

Time spent in care was negatively correlated with the total language scores. Although the association fell just short of significance (r = -0.170, p = 0.137), the negative direction shows that the more time spent in care, the worse the language scores were which may warrant further investigation (see Table 4.13. in Appendix D).

4.6.1.3.2 Regression analyses

Initially, the plan was to include variables that showed significant univariate differences in the regression analysis. Despite the non-significant univariate test results found here, selected variables were chosen as informed by the literature reviewed in Chapter 2 and the SR to see whether together these variables might explain a significant amount of variance in total language scores and language subscales. Table 4.14 presents the results of the MLR models with the correlation coefficients, adjusted R^2 and the R^2 change, B and β (unstandardized and standard regression coefficients), t-statistic probabilities and VIF values.

Table 4.14: RQ3 Multiple Linear Regression Model 1

Model 1: Total Language Scores and predictors	**Adjusted R2**	**R2 Change**	**B**	**Beta**	**t**	**Sig**	**VIF**
(Constant)	0.133*	0.098*	17.449		20.254	0.001	
Foster care			2.178	0.311	2.849	0.086	1.016
Emotional abuse			-.488	-.072	-.664	0.509	1.003
Time spent in care			-.013	.010	-1.262	0.211	1.019

Table 4.15: RQ3 Multiple Linear Regression Models 2, 3, and 4

Model 2: Verbal Cognition scores and predictors	Adjusted R2	R2 Change	B	Beta	t	Sig	VIF
(Constant)	0.086	0.049	7.475		15.379		0.001
Foster care			0.687	0.179	1.594	0.115	1.016
Emotional abuse			-.761	-.204	-1.836	0.070	1.003
Time spent in care			-.004	-.080	-.712	0.478	1.019

Model 3: Expressive/receptive scores and predictors	Adjusted R2	R2 Change	B	Beta	t	Sig	VIF
(Constant)	0.073	0.036	6.311		13.273	0.001	
Foster care			0.926	0.248	2.196	0.104	1.016
Emotional abuse			-.238	-.066	-.586	0.560	1.003
Time spent in care			.006	.125	1.109	0.271	1.019

Model 4: Pragmatic scores and Predictors	Adjusted R2	R2 Change	B	Beta	t	Sig	VIF
(Constant)	0.043	0.004	3.268		9.459	0.001	
Foster care			0.415	0.155	1.353	0.180	1.016
Emotional abuse			.360	.139	1.222	0.226	1.003
Time spent in care			.001	.003	.030	0.977	1.019

4.6.1.3.2.1 Model 1: Do demographic factors at entry to the model predict children's total language scores?

The overall model accounted for 13.3% (adjusted R^2=.098 of the variance in the total language scores. R for regression was not significant (F (3, 74), 3.971, p = 0.067). Looking at the unique individual contributions of the predictors, none of the regression coefficients were statistically significant: foster care placements (β = 2.178, t (78) = 2.849, p = 0.089 emotional abuse (β = -488, t = -.664, p = 0.509) and time spent in care (β = -.013, t = -1.262 p = 0.211) did not contribute to the model.

4.6.1.3.2.2 Model 2: Do demographic factors at entry to the model predict children's verbal cognition scores?

The overall model accounted for 8.6% (adjusted R^2=.049) of the variance in verbal cognition scores (F (3, 74) = 2.329, p =.081.

4.6.1.3.2.3 Model 3: Do demographic factors at entry to the model predict children's expressive/receptive language scores?

The model accounted for 7.3% (adj. R^2 = .036 of the variance verbal cognition scores (F (3, 74) = 1.946, p = .130).

4.6.1.3.2.4 Model 4: Do demographic factors at entry to the model predict children's pragmatic scores?

With regards to pragmatic language, the model accounted for 4.3 % (adjusted R^2 = .004) of the variance in the verbal cognition scores (F (3, 74) = 1.103, p = .353).

In summary, there were no significant differences between key demographic factors on total language scores, which contradicts the literature. However, collectively, demographic factors accounted for 13.3% of the variance in total language scores, 8.6% of the variance in verbal cognition scores and 7.3% of the expressive/receptive language. For the pragmatic subscale, the overall model was not significant.

4.7 Exploring the links between LAC's language difficulties and wider developments

4.7.1 RQ4: How does children's language associate with their educational achievement and SDQ outcomes

The correlational analysis indicated a positive correlation between children's total language scores and educational results. More specifically, LAC's English results (r =.383, p = 0.003), as well as Maths results (r =.292, p = 0.026) were associated with their language skills. There was no correlation between children's language scores and their science attainment results (r = .355, p = 0.212). However, this final analysis only included 14/78 children and has a moderate effect size.

There was a positive correlation observed between total language scores and SDQ scores (r = .296, p = 0.041) for both scales; higher scores indicate more problems.

In summary, this was the first correlational analysis to present whether language associates with wider issues in LAC. The results from the analysis indicate that LAC's language is associated with their English language, and Maths and SDQ outcomes. The current study's finding offers support to the empirical evidence in other groups (Cohen, 2010; Roulstone et al.,

2011; Eisenberg et al., 2005). The analysis of the science attainment results was found to not reach significance but had a moderate effect size. Overall, these preliminary findings suggest that LAC with language difficulties are at risk of having poor educational, social, emotional and behavioural outcomes.

4.8 Chapter summary

Chapter 4 presented the results of the quantitative study, which was designed to explore the language difficulties in a sample of LAC. Further, the study sought to identify the association between LAC's language; educational achievement; and social, emotional and behavioural outcomes. The study uncovered the following significant findings from the LA-X database.

LAC were found to exhibit significantly higher rates of language difficulties than those observed in both the general population and other disadvantaged groups. The language screening questionnaire was split into 3 areas: cognitive, expressive/receptive and pragmatic. A comparison of groups with more or less affected language was made. Despite some differences related to severity of language delays, all LAC had difficulty across all three domains equally. LAC present difficulties in all areas of language. The univariate analyses were carried out in order to explore which demographic factors predicted LAC language scores in this dataset. There were no significant predictors of total language score when considered individually. Nevertheless, when combined in a multiple regression model, significant amounts of variance in total language and expressive/receptive scales were explained. The correlational analyses revealed that LAC's total language scores were related to their educational attainment and emotional and behavioural scores. The following chapter will begin by outlining the qualitative study's research aims and the methodology used to explore professionals' views on the nature of language difficulties in LAC.

CHAPTER 5: Qualitative Study 2 - Professionals' views about language difficulties in LAC

5.1 Introduction

The objective of the present chapter is to present the results of a qualitative analysis of perspectives of professionals who work with LAC regarding language difficulties. The chapter will discuss the methodological approach adopted, the research sample, data collection and analysis. It also covers the procedure for storing data, ethical issues, methods used to avoid personal bias and limitations associated with this study. The main part of the chapter describes a thematic analysis and the findings of the study.

5.2 Introduction to the methodology used

A qualitative approach was chosen which involved conducting semi-structured interviews with professionals who were working with LAC. A thematic analysis searched for common themes across the interviews. Through qualitative research, it is possible to understand how the world makes sense of individuals, their thinking, behaviour, experiences in the world and their daily lives (Merriam, 2009; Taylor et al., 2016; Denzin & Lincoln, 2008; Creswell, 2009). Qualitative research is descriptive and inductive in nature, focusing on the content of the study from the perspective of those who participate in the research within their cultural environment (Merriam, 2009; Denzin & Lincoln, 2008). It offers researchers rich data that allows them to make participants' personal experiences, beliefs, traditions, and practices explicit (Creswell, 2009; Flick, 2018; Busetto et al., 2020). A qualitative approach was considered relevant in this PhD research since it allows researchers to gain in-depth insight and understanding into the opinions of the professionals on language difficulties experienced by the LAC. The findings from this study will complement other chapters that looked at the same topic in different ways.

5.3 Aims of the research

The interview focussed on the opinions of professionals about the language difficulties of LAC. It also covered the impact for LAC of having language difficulties. The study attempts to answer the following question:

- RQ1: What are the views and opinions of professionals concerning language development, difficulties or DLD in the LAC population?

5.4 Ethical considerations

The study was granted full ethical approval from the School of Health Sciences Research Ethics Committee of City, University of London (Reference: ETH1819-1958 7 October 2019). The original plan for the data collection methods was for face-to-face interviews. However, due to COVID-19 restrictions, it was not feasible to conduct face-to-face interaction for data collection with all the interviews. Thus, both the recruitment process and face-to-face data collection were amended to online interviews with professionals via Zoom (Reference: ETH1819-1958, 20 October 2020). The researcher adhered to the guidelines of ethics committees throughout the study (see Appendix F for ethical approval).

5.5 Recruitment of the interview participants

The recruitment of 31 participants was carried out through a selective purposive sampling procedure. To assure representativeness, the researcher targeted professional participants due to their unique knowledge and expertise in the field of LAC and their needs (see Table 5.1 Participants' characteristics fro more information). They thus were selected from several localities and backgrounds throughout the UK.

In her original study plan, the researcher intended to conduct face-to-face data collection from both children and professional participants across the UK for both the quantitative and qualitative studies. Before the pandemic, she had already established connections with various LAs across the UK. However, with the emergence of COVID-19, the researcher had to adopt new approaches and decided to focus on a single London LA (LA-X) where she could utilize existing secondary data related to LAC's language.

During the qualitative phase of the study, the researcher was able to obtain a more diverse sample by using an online platform. This allowed her to gather data from different regions throughout the UK, which aligned with her initial plan of obtaining a representative sample from various regions to gain a broader understanding of language difficulties in the LAC population. While this was challenging for the quantitative aspect due to COVID-19, the online interviews, as set out in Chapter 5, overcame these limitations. As a result, the participants in the qualitative study came from various regions across the UK, providing a more representative sample. It is worth noting that the focus on only one inner London local authority for the quantitative data may have led to differences in the characteristics of the LAC sample utilized in this study in comparison to those from other regions throughout the UK. These differences

could be valuable insights for future studies into the nuances of language difficulties in LAC from different regions or areas of the UK.

The specific inclusion criterion was that participants should be already working with LAC in various fields and capacities for at least six months. These included: social work, SaLT, education (Virtual School Heads [VSHs], teachers, early years) and foster care, NHS (educational psychologist and occupational therapists), LAs (e.g., social workers, service managers, foster parents), LAC support field (e.g., participation officers and support workers) and lastly LAC services (residential and respite care homes/schools). The idea behind the purposive sample was to provide more coherent insights into the nature of difficulties encountered by the LAC population. To maintain their anonymity, the participants were given identity numbers. Of the professionals, twelve were speech and language therapists, five were social workers, three were virtual school heads (teachers), and three were foster carers. The remaining participants came from a variety of professional backgrounds and were working with LAC directly. The participants' characteristics are provided in Table 5.1 below.

This type of sampling is termed strategic as it requires substantial effort to establish a strong association between the research questions and the sample of participants interviewed (Vasileiou et al., 2018; Bryman, 2012). Within qualitative research, estimating the number of participants required, depends on reaching data saturation through various factors, such as the data quality, research scope, topic nature and the quantity of desired information attained from every respondent (Morse, 1995, 2000; O'Reilly & Parker, 2013). Reaching data saturation is a critical component as it helps to ensure that there is valid and robust data collection. This is because at data saturation point, no new themes or valuable information are expected to emerge from the collected data (Morse, 2015; Hennink & Kaiser, 2022; Brod et al., 2009). Data saturation is the most prevalent guiding principle for evaluating the sufficiency of data for a purposive sample with it referring to the point in data collection where problems begin to recur and additional data collection becomes redundant (Hennink et al., 2019; Hennink & Kaiser, 2022). In other words, data saturation references to a point at which the researcher has gathered the required data and there is no more new meaningful information that can be collected from the participants or new themes that could arise (Mwita, 2022; Hennink et al., 2019). This means that decisions about when additional data collection is inappropriate are based mainly on the researcher's sense of what they are hearing within interviews and additional insights are provided by new datasets (O'Reilly & Parker, 2012; Walker, 2012; Fusch & Ness, 2015).

Within the present research, professionals were continuously recruited until the saturation point was reached where the professionals did not provide any new information or data on language difficulties faced by LAC.

Table 5.1: Participants' characteristics

Speech and Language Therapists (SaLTs)	12
Social Workers (SWs)	5
Virtual School Heads (VSHs)	3
Foster Parents (FPs)	3
Educational Psychologist (EPs)	2
Primary School Teacher (PST)	1
Occupational Therapist (OT)	1
Early Years Coordinator (EYC)	1
Participation officer (PO)	1
Senior support worker (SSW)	1
LAC's Service manager/ Strategic lead (SM)	1

Due to COVID-19 disruption, the alternative mode of online data collection involved providing new participant information sheets for Zoom interviews which were hosted on Qualtrics via a link. This was sent via email to professionals who worked with LAC, including foster parents, and their consents were received via Qualtrics. It also involved recording the interviewees' responses via using Zoom which has a secure recording facility. In accordance with the ethical guidelines, informed consent was obtained from all participants before they participated in the study. The consent form included an overview of the research project, data storage, protection, confidentiality, and how the findings were to be presented to them. The participants were also informed about their right to withdraw from the research at any point. In line with the ethical guidelines, their demographic information, such as workplace or names, were anonymised. The electronic data (interview transcripts) were stored on City University's secure OneDrive system, which could only be accessed through a username and password and two-step verification.

Once participants gave their consent, they were then asked about their availability in order to schedule the interviews. Once their availabilities were confirmed, emails were sent out to all

the professionals, providing a unique Zoom meeting ID, strong password entry and waiting rooms. During each scheduled interview, the researcher then took their time to run through the information sheet and consent forms again via using Zoom to ensure that the participants were happy, whilst giving an opportunity to ask any questions. This process allowed the researcher to ensure to revisit the purpose of the study rather than just be introductory, and so double-check the understanding of participants of the research procedure and obtain their verbal consent also to participate in the research (Willig, 2008).

5.6 Topic guide and justification for semi-structured interviews

Considerable thought was put into selecting the most suitable interview format to obtain comprehensive insights and experiences from study participants regarding LAC's language difficulties. This was necessary due to the sensitive nature of the field, which required the researcher to exercise caution and adhere to a rigorous safeguarding process. The decision to use semi-structured interviews in the study thus was based on several factors. Firstly, they provided the opportunity to ask open-ended questions and conduct probing follow-up questions, enabling participants to offer comprehensive and nuanced responses. As a result, the rich data obtained from these interviews offered a deeper understanding of the research topic in question (Braun & Clarke, 2006). They also allowed participants to speak freely about their lived experiences and perspectives, which also provided valuable insights into this complex subject area (Braun & Clarke, 2006; Galletta, 2013; Willing, 2008). In addition, the semi-structured interviews proved to be a flexible approach as they allowed professionals to elaborate, discuss, and respond to questions in their own terms, which is not always possible with standardized interviews. This approach facilitated a more personalized and natural interaction between the participants and the interviewer, leading to a deeper and more meaningful exploration of the research topic (Galletta, 2013; Willing, 2008; Busetto, Wick & Gumbinger, 2020). While there were several benefits to using semi-structured interviews, it is worth acknowledging that conducting such interviews with professionals who worked with vulnerable children presented its own set of challenges. As some of these professionals have emotional connections with the LAC under their care, discussing their perspectives on the language needs and barriers faced by these children during the interviews appeared to be distressing for some of them. Thus, the researcher had to exercise extreme caution while listening to such participants and had to provide support by demonstrating empathy without violating the research's ethical guidelines.

Given the sensitive nature of the subject area, selecting the most appropriate interview questions also required careful consideration. The research questions were formulated based on the limited literature available on LAC's language difficulties, as well as the informal conversations that the researcher had with various LA teams (e.g., VSHs, SaLTs and psychologists), working with this group during the initial stages of the current thesis. Therefore, the researcher selected questions that specifically addressed LAC's language skills and their relationship with their life outcomes (e.g., education, employment). To ensure that participants were fully informed of the study's objectives and the sensitive nature of the topic area, the researcher made a point to communicate this information through both written and verbal means. Specifically, the research information sheet sent to participants included detailed information about the study's goals and procedures. At the same time, as mentioned above, the researcher also discussed these points verbally with participants just before conducting the interviews. By doing so, the researcher aimed to establish a transparent and comfortable environment that encouraged participants to share their thoughts and experiences openly. For instance, the researcher was interested in whether LAC received a regular language assessment before or upon entering care. This was because, based on the literature and her knowledge in the field, this aspect seemed to be overlooked and required attention. Thus, the researcher posed interview question three for example (IQ3 - In your experience, are language skills assessed routinely in LAC?). This was to shed more-light on the practices and challenges associated with routine language assessment, as well as to inform future interventions and policies that can better support LAC's language needs.

Further, the researcher was aware of the potential sensitivities around discussing the LAC's care experiences and how they may have affected their language development. Since some of the professionals involved in the study may have had direct experience with the children's initial care process - which could be a sensitive and complex topic - the researcher thus made a conscious decision to avoid potentially leading or inappropriate questions. Instead, the researcher focused on broader language difficulty topics, which allowed the researcher to take care in creating a safe and comfortable environment for all participants.

Lastly, the researcher's intention behind developing and asking current research questions was to gather professionals' views on LAC's language difficulties and synthesize the results of the three studies (study 1, SR; study 2, quantitative; and study 3, qualitative) with the ultimate aim

to make recommendations for improving policies and practices related to the early identification of language difficulties in LAC.

5.6.1 Reflexivity

My background is in teaching. In my practice, I have worked with LAC and children with SEND for over 22 years and have had a particular interest in children aged between 5 to 14 years old for a number of reasons. Whilst every effort has been made to reduce biases and maintain objectivity, having worked in this field for many years may have brought certain biases to the current research. This means that my personal and professional experiences might have some impact on my chosen research methodology and interpretation of the collected data. For instance, I have always been interested in looked-after children's language needs and psychological well-being. Perhaps this is why I have insisted on using semi-structured interviews and thematic analysis in my research methodology that offered avenues to hear personal experiences and beliefs and invoke the voices of participants, thus embracing subjectivity.

Further, I began to make some inquiries and studied the literature to research how LAC develop language, in what situations, and what happens if they have language difficulties. It quickly became apparent that little information about LAC's language difficulties was available, which I found shocking and confusing given the abundance of literature about LAC's mental health, educational and attachment needs. Questions came to my mind: if we do not prioritise and support LAC's language needs, how can we expect them to perform well in school or in general? How can we expect them to reach their full potential in life compared to their non-LAC peers? These potential consequences act against the literature, that states good language skills are crucial for school readiness and success, as well as social and emotional functioning and gaining employment (Maguire et al., 2021; Pace et al., 2017; Lewicki et al., 2014; Norbury et al., 2017; Conti-Ramsden & Durkin, 2016; Taylor et al., 2013).

I then became more and more passionate about this research field over time, and emotionally attached to this population due to the challenges these vulnerable children face. Indeed, during the semi-structured interviews, listening to professionals' experiences while analysing the data and my working knowledge of LAC made me feel that the field is more profound and complicated than I had ever anticipated. The interviewed professionals provided very open and emotional accounts of LAC's language difficulties, their barriers to accessing language

assessments and how their difficulties affect their lives profoundly. All these made me feel more upset and helpless, and such feelings are more likely to influence data analysis. However, I was aware that my feelings, attitudes, beliefs and knowledge about the subject area should not impact the research process or its results. At the same time, listening to professionals' comments and experiences made me feel strongly empowered to do something meaningful. I felt that the information they shared and the time they spared on the current study should not be wasted. Overall, the experience of conducting semi-structured interviews with professionals was very positive and insightful, and helped me to advance my qualitative research analysis skills and knowledge.

5.7 Procedures

In accordance with the several alterations in consent processes and ethical approvals (e.g., amendments due to COVID-19), the data collection process took place over a period of seven months (during 2019-2020). Each interview took place in a single session and the duration of each interview was approximately 25 to 50 minutes, with each being audio-recorded. The recordings were transcribed verbatim by the researcher and 10% of the transcriptions were checked by a senior researcher (see section 5.7 for more information).

Participants were recruited by contacting different local authorities' virtual school headteacher (VSHs: see Glossary in Appendix A for definition) teams, SaLT teams, schools and personal contacts of the PhD researcher, as well as through social media and various networking platforms (e.g., Twitter group contacts). After the identification of the possible participants through the purposive sampling method (see section 5.5.2 above), a short introductory email describing the PhD study was sent along with the (1) participant information sheets and a consent form link (Qualtrics link), and (2) instructions for setting up the Zoom (online video calling platform) interviews (see section 4.4 below for ethical considerations). The professionals then filled out an online consent form to agree to participate in the research and for audio recording to take place (see appendix F for the participant information letter and consent form).

5.8 Data analysis

A thematic analysis was applied for the analysis of the participants' interview transcripts by following the guidelines set out by Braun and Clarke (2006). Through a thematic analysis, it is possible to extract, analyse and report the data themes (patterns) within the data (Braun &

Clarke, 2006). This research technique allowed a sensitive, insightful, and detailed exploration of participants' perspectives on children's language difficulties. The thematic analysis can be utilized to either deductive (top-down) or inductive (bottom-up) manner. The deductive approach related the process by which existing research and theory use as the platform or window through which researchers analyse and interpret data. In contrast, in an inductive approach, the data is coded without fitting it into a coding frame that pre-exists or in respect of the analytic pre-conceptions of the researcher (Braun & Clarke, 2021; Braun & Clarke, 2006).

In this study, the themes and sub-themes were identified via applying an inductive or 'bottom-up' approach as it is an accessible and theoretically flexible approach to analysing qualitative data (e.g., Braun et al., 2016). Thus, within the present research, the themes identified are based on the data and not the theoretical interest of the researcher regarding the research area (Braun & Clarke, 2006; Patton, 1990). However, it is critical to say that there is a high probability that a 'bottom-up' approach means that researchers cannot detach themselves from their theoretical and epistemological commitments. This means that data might not be coded without researcher bias (Braun & Clarke, 2006). The literature consequently suggests that researchers should be aware of the possibility of bias in data analysis and advised to take appropriate measures (Braun & Clarke, 2021; Mackieson et al., 2019). In this study, the researcher has taken multiple steps to reduce potential biases and increase the validity of their findings. Firstly, the themes identified in the research were triangulated with both SR (scoping review) and quantitative data analysis, which helped to strengthen the reliability of the results. Further, the researcher worked closely with a senior qualitative researcher throughout the thematic analysis process, seeking advice and feedback on the results to reduce any potential biases. This helped to ensure that the codes and themes identified in the study were not influenced by any preconceptions or assumptions held by the researcher. Furthermore, the researcher took an extra step to ensure the validity of the findings by having 10% of the data (3 interview transcripts) analysed independently by a senior qualitative researcher (see section 5.9 for more details). This helped to identify any inconsistencies or biases in the thematic analysis and provided an additional layer of validation for the results. Themes were identified by using the six steps that are provided by the Braun and Clarke (2006) guidelines (see Table 5.2). See Appendix E for examples of how the codes were organized using NVivo 12 software to identify patterns and themes within the current study.

Table 5.2 Phases of Thematic Analysis (adapted from Braun & Clarke, 2006)

Phase 1: Familiarising yourself with the data	The researcher transcribes data (reading and re-reading the data) and notes down initial ideas
Phase 2: Generating initial codes	The researcher identifies a list of initial codes and organises them into relevant code.
Phase 3: Searching for themes	The researcher organises them into initial themes and gathers all data relevant to each potential theme.
Phase 4: Reviewing themes	The researcher carries out several revisions involving checking if the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic 'map' of the analysis
Phase 5: Defining and naming themes	The researcher refines and names each theme so that they reflect the essence of the data and fit the overall narrative the analysis tells
Phase 6: Producing the report	Producing the report: The researcher interprets the findings within the context of the research question and literature

The first part of the analysis process involved transcribing the data. The researcher familiarised themselves with the interview concepts by immersing themselves into the transcripts. Through repeatedly listening to and reading the transcribed interviews, the researcher was able to gain better understanding of the subject area. The coding procedure was the second step. The transcribed notes were reviewed to extract and code common themes or explicit meaning (specific phenomena) that was mentioned within the responses of the professionals. Emergent themes were repeatedly checked by the researcher and NVivo 12 was used in the organisation and analysis of data. The coded themes had not been predetermined but developed through particular phenomena that emerged when transcripts were reviewed. The analysis in stage three refocused on extracting broader themes which involved dividing the different codes into potential themes and collating all the appropriate coded data extracts within the identified themes. The themes were identified based on the re-occurrence amongst the data strands. The frequency of emerging themes was considered an indicator of their significance, and they were arranged and categorised into five main themes and further sub-themes that emerged through the coding process.

Stage four involved rereading and checking the validity of individual themes. It also required assessing whether the thematic map 'accurately' reflected the meanings presented within the entire dataset. Through the use of a thematic map, the researcher was able to gain significant insight regarding key themes and sub-themes. The fifth stage of the analysis entailed

developing and naming themes, which included defining and further refining the primary themes and sub-themes. This meant, determining the 'essence' of what each theme was about (along with the overall themes), identifying what aspects from each theme were captured (Braun & Clarke, 2006). As part of the final stage, a report was produced. As stressed in the literature, the report provided was consistent, logical, non-repetitive and interesting which aimed at presenting the developed story regarding the dataset within and across themes (Braun & Clarke, 2006). This was established by the selection of realistic and compelling extract examples, as well as arguments pertinent to the research question. The themes and sub-themes are presented in Figure 5.1 in the result section below.

5.9 Risk of self-selection bias and reliability check

To reduce the risk of bias, enhance the trustworthiness and validity levels of the research, a number of specific procedures were carried out.

Firstly, in respect of the present study, themes were triangulated with other methods used in this study (scoping review and quantitative data analysis). According to the literature, triangulation refers to a procedure of integrating several data sources so that research credibility can be enhanced (Suter, 2012). Secondly, Braun and Clarke (2006) six steps thematic analysis guidelines were followed throughout (see Table 5.2). Thirdly, to reduce the risk of bias and in an endeavour to be transparent about the process of research, the PhD researcher worked closely with a more senior qualitative researcher and sought her advice and guidance throughout the thematic analysis process. The qualitative researcher reviewed the main codes and themes and provided feedback about the interview results. Her inputs then helped generate more themes which were incorporated into the main and final themes. Furthermore, 10% of the data (3 interview transcripts) was analysed independently by the qualitative researcher to see if the PhD researcher had missed out any data or themes. This process established that everything was captured both thematically and systematically, and that there was no new information that emerged from the interviews that she analysed, therefore achieving 100% agreement.

5.10 Results

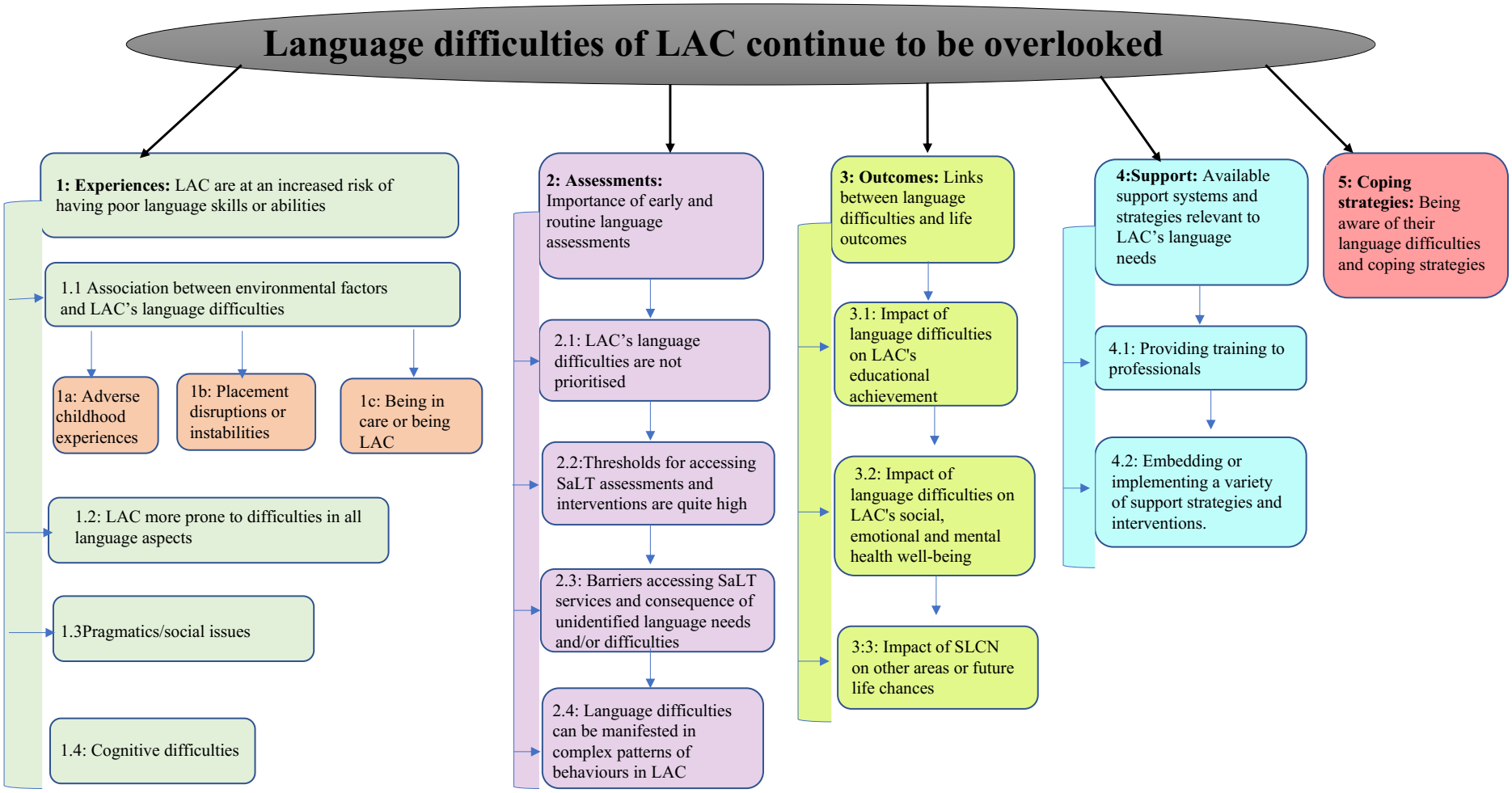
This section describes the themes that emerged from analysis of the 12 open-ended questions. The objective of the open-ended questions was to extract the opinions of the professionals regarding the language difficulties of LAC. Professionals' perspectives were organized into the

five main themes and each theme was then arranged into sub-themes. The section starts with a thematic map, which sums together all of the themes and sub-themes that arose throughout the qualitative analysis. A detailed description is then provided for the themes, as well as sub-themes.

5.10.1 Main themes that emerged

At the time of the preliminary data analysis, five main themes emerged which were interconnected. These themes centred on areas of language difficulties in LAC and gaps in identification of their language difficulties. Each main theme is comprised of a number of sub-themes. Thus, to fully capture the perspective of the individual participants, verbatim quotes are presented throughout the section. The five main themes are as follows: 1. Experiences: LAC are at an increased risk of poor language skills or abilities; 2. Assessments: the importance of early and routine language assessments; 3. Outcomes: links between language difficulties and life outcomes; 4. Support: available support systems and strategies relevant to LAC's language;and 5. Coping strategies: being aware of their language difficulties and developing coping strategies. Thirteen sub-themes extend the depth of the language development, illustrating the complexities relevant to LAC's difficulties (see Figure 5.1: Thematic map for more information.

Figure 5.1: Thematic map



5.10.1.1 Theme 1 - Experiences: LAC are at an increased risk of having poor abilities

This reoccurring theme reflected participants' main concern that LAC are at high risk of having poor language abilities. It highlighted participants' views that removal from one's family and placement in care, in whatever context, would impact the children's capacity to develop better language skills. The further theme provided insight into the opinions of professionals regarding the factors that contributed to LAC's language difficulties, as well as the specific aspects of language difficulties that were frequently encountered by this population.

Four associated sub-themes also emerged after analysis: 1) Association between environmental factors and LAC's language difficulties; 2) Tendency for LAC to have difficulties across all structural language areas; 3) social pragmatic difficulties; and 4) verbal cognitive difficulties.

5.10.1.1.1: Sub-theme 1 - Association between environmental factors and LAC's language difficulties

The majority of the interviewees reported that they thought environmental factors have detrimental impacts on LAC's language development and abilities through their childhood to adulthood. This sub-theme consists of three areas: the impact of adverse childhood experiences, placement disruptions or instabilities, and being in care.

5.10.1.1.1.1: Sub-theme 1a - Adverse childhood experiences

The foremost risk factor reported was adverse childhood experiences: ACEs. Professionals reflected on neglect and abuse, trauma and pre- and in-care experiences. The participants believed that these factors restrict children's opportunities to access environments (e.g., parents/caregiver-interactions) that actively facilitate positive parent-child interactions and communicative activities that could enhance their language skills. They further highlighted that besides being potential triggers for LAC's language difficulties, adversities such as abuse and neglect are likely associated with their poor developmental skills or delays.

Participants added that LAC's adverse childhood experiences are often associated with aspects such as social pragmatics and articulation, and have attention to the working memory to hold and process the information. They believed that the origins of the latter reduced the likelihood of children sufficiently developing their language skills and reducing their opportunities in using their skills in different contexts (e.g., in social surroundings or in schools). For example,

some participants said that they felt early experiences of poor caregiving and child interactions, and which were associated with attachment and trauma, profoundly affect children's skills in processing and acting on what someone says.

> *"I think it is to do with their initial childhood, early childhood experiences and the impact that has on their processing. So, therefore, that impacts their speech and language, not in a physical way necessarily, but more in a processing way. So, trying to process what someone says and then put that into action is very difficult because of the trauma that they have gone through at an earlier stage in their life." (P13-VSH)*

> *"I think the fact is that, like, neglect is a bit of a projector for language difficulties. So, they will have often had...poorer caregiver and child interactions and so they won't always have the same modelling. There's often associated attachment and trauma difficulties or associated kind of medical diagnoses that might not be picked up until later, things like fetal alcohol syndrome or developmental delay." (P15-SaLT)*

Furthermore, some participants argued that LAC's communication skills are affected by their 'pre-care experiences' which often lack consideration of their language difficulties. They noted that LAC usually come from environments in which they are deprived of high levels of early language input and support from their parents. Participants particularly reflected on poor 'social interactions, not accessing appropriate language' or 'little exposure to language. Participants also mentioned that children in care potentially lack sufficient exposure to play skills as they often miss out on opportunities to be taken to nurseries when they are young to meet other children, as well as adults. It was further remarked that LAC might not benefit from foundational positive parent-child interactions such as reading or singing times. The professionals believed that children's pre-care experiences sometimes prevent opportunities to receive support for their communication skills before becoming LAC and profoundly affect their language skills. It was reported by one participant as follows:

> *"The fact that they have not been supported with their communication skills earlier in life... before coming into care ... or not as much as other children often, but also, I think they have not often been exposed to ... play skills and that social interaction... and the skills that are needed around that... things like turn taking or ... how to get on with friends and play appropriately in the playground in a positive way. They have not necessarily had sufficient exposure to that or support with it from their parents." (P11- EYC)*

Other participants stressed that instead of recognizing that LAC are a complex population that often have multiple layers of difficulties or needs, local authorities usually have been focusing on issues that were more visible or practical. They felt that when a child comes into care, local authorities mainly focus on issues such as keeping them safe and dealing with their physical health, school attendance, emotional and behavioural difficulties or attachment difficulties. These participants are thus of the belief that due to these headline or more visible issues, children's language needs are usually suppressed to the 'bottom of the list'. For example, a former VSH said:

> *"I think sometimes a lot of the other issues dominate, so it is, like, sometimes in the world of social work and in the world of virtual schools everything is fuelled by sort of danger. So, it is like, let's solve the beds, let's sort out this, there are emotional and behavioural difficulties. All of these other issues and communication difficulties, hugely come at the bottom of that pile of priorities." (P1-VSH)*

5.10.1.1.1.2: Sub-theme 1b: Placement disruptions or instabilities

Participants particularly stressed that disruptions in placements put LAC at risk of having poor or impaired language skills. They referred to multiple changes in placements or homes, change of schools, seeing different professionals, change of social workers and/or change of caregivers. It was stated that distractions caused by these changes often result in LAC's language needs being unnoticed by professionals, and which was attributed to the fact that the professionals had to first address the most obvious issues, as mentioned in the previous section. One participant particularly stated that social workers are mostly interested in finding them a home.

Further it was reported that, in some cases, children who are LAC are more likely to be placed in residential homes with peers of a different age range which prevent them initiating conversations with them or forming relationships. Participants further stated placement changes often result in LAC having difficulties engaging or interacting with the staff team in communicative manners. It was further highlighted that each change across, or disjointed journeys between services or boroughs has cumulative negative effects on LAC's language and communication skills/development. They also stressed that some children had to live in one borough and go to school in a different one. They emphasised that due to these changes in their lives, LAC's language needs either become too complicated to handle or seem mild and thus not prioritised for assessment.

> *"Often for children who are looked after, they can kind of fall between services quite a bit, they might move around quite a bit, or sometimes they might live in one borough, and go to school in a different borough. And the borough that their social worker is from is another different borough, then there's always the question of, like, well, who provides the service and who funds it. Then it becomes quite complicated, or maybe that child's difficulties seem quite mild with their communication compared to some of their other difficulties, so that speech and language wouldn't be prioritised, but then actually it could have quite an impact on the other difficulties as well. You know, a small amount of input could greatly impact the child." (P19-SaLT)*

Other participants similarly indicated that due to multiple changes, some of these children often fall through the gaps between different services, which also affects their language. Participants stated that this issue is caused by not living in the same placements for long enough to receive referrals, language screenings, or speech and language therapy (SaLT) services for their needs. These participants thus believed that the ideal situation for children is to have a stable placement that could promote or generate opportunities to support their language development; otherwise, children will continue to not receive support for their needs and to fall through the gaps between services. This was clearly illustrated in the following quotes:

> *"I think often then they're not already known to services, so sometimes they are often getting later intervention than we would like and that may*

be just because they have kind of fallen through the gaps or it may be that their caregiver or parent for a number of reasons has not been able to access the service or has not recognized that there is a difficulty (P15-SaLT)

"I think that because at times of their disjointed journey that some of the children and young people will have that, they can often fall through the gaps in services. And sometimes they aren't in the same place for long enough to get a referral and to get a communication screening, or as a service. So, I think that is a real challenge, and I also think that particularly because of austerity, that there aren't always the services around speech and language needs, particularly for adolescents. I think the services are there more for the younger children may be an assumption that, if things need to be picked, they can be picked then, but our experience in (name of a project) is that we get significantly high percentages of adolescents who have got previously undiagnosed speech and language needs. So, we think, well we know from our evidence base that they're falling through the gaps somewhere along the line. Um, and then that can have such an impact on their future life opportunities as well." (P8-SM)

5.10.1.1.1.3: Sub-theme 1c - Being in care or being looked after

With respect to being looked after, it was noted by some participants that when a child comes into care, they may begin living with foster carers who may lack the knowledge, understanding, or recognition of their language difficulties. They stressed that children struggle with their communication as they enter new environments and with new people, which will significantly impact their language skills.

"Being removed from one's family, in whatever context you think about it, will have an impact on your ability to communicate about experiences, sometimes more significantly than others." (P23-EP)

Further, it was reported that in some residential children's homes, the majority of children who are LAC are often placed together in the same environments due to safeguarding reasons and

keeping them safe. Hence, prioritising and recognizing their needs become difficult which pose risks to LAC's language.

> *"In some residential children's homes, what you have found in the past, and maybe in lots of areas still, of course, a lot of children who are looked after are all put together in the same environments. Safeguarding is a huge issue, it takes precedence in lots of cases and many of our children, they go missing... you don't know where they are…so prioritising their needs is really difficult, isn't it? Because you just want to keep them safe at the end of the day." (P17-SaLT)*

> *One SaLT said: "I can think of a young person who was 14, and he was new to coming into care…and the school picked up, they had some concerns around his understanding of language, but the residential home, they were like, no, everything's fine, he understands everything. He just chooses not to do it. Like chooses not to follow instructions and then I met with him and did some assessment that he had really severe difficulties with understanding explanations and instructions." (P19-SaLT)*

Emphasis was also afforded to the issue that unless professionals recognize the problem and intervene, children's language difficulties are 'unnoticed in a new environment' since some children are known to be quiet about their difficulties and not request help. They thus believed that as a consequence, this population will continue to experience difficulties with their language. For example, one OT said:

> *"When children are in care, the whole thing around them changes, to be honest their whole world changes, primary caregivers are different, so their way of parenting could be totally different for a child who struggles with communication needs. Just imagine following all the instructions and all the things from another caregiver and they are the primary caregiver. So, they already had difficulty expressing and receiving communication from their own caregiver, add onto that now from a*

different person, it is gonna be really difficult, they are significant issues that the child would be facing." (P22-OT)

Further, some participants stressed that being labelled as 'looked-after children' or 'children in care' has stigma attached to it, which may prevent those children from participating in communicative activities with others around them and consequently prevents developing their language skills further. One foster carer said during the interview:

"This whole thing about them being in care, it is…such a big thing. It kind of impacts everything, so everything is a black hole; that's it. Everything is terrible… There is no element of life, there is no positivity, nothing." (P30-FC)

5.10.1.1.2: Sub-theme 2 - LAC are more prone to difficulties in all language aspects

The interview results showed that a majority of the participants agreed that as a population, LAC are at a higher risk of presenting with difficulties in all language domains. When these difficulties were further explored with the professionals, a number of concerning patterns emerged such as LAC reported to have limited vocabulary, being unable to use complex grammatical sentences and following instructions and answering questions. The participants particularly referenced children's receptive and expressive language, as well as social pragmatic difficulties and commented that children's difficulties in these domains are greater than expected. They stressed that LAC have many gaps in their vocabulary knowledge and that the information that they attempt to provide is sometimes limited. Participants emphasised that due to their poor vocabulary skills, children often have difficulties with finding the language to communicate and having the vocabulary to support their communication skills. Furthermore, they stressed that if children have low levels of vocabulary, they are more likely to use terms that may be vague or do not make sense, such as 'that thing' or 'something like' due to not having adequate language to put what they want to say into words.

"Many of them have a very poor receptive vocabulary. They have lots of gaps and vocabulary knowledge. Um, so the information that they can provide is sometimes limited because they don't have the right words to

use or, you know, they cannot be descriptive enough in what they're saying." (P17-SaLT)

For example, one SaLT said, *"a lot of our children will have quite empty language like... 'the thingy'... or often they'll say... 'don't know'... 'don't know'" (P-25-SaLT)*. Interviewees additionally reported that LAC also have difficulties with following instructions and processing information in different situations and environments (e.g., classroom settings or homes). Further, several participants were forthcoming on the point that LAC have lower emotional vocabulary which notably impacts their day-to-day life such as regulating their emotions or explaining how they feel in different contexts. One teacher said:

"I would say their language, their emotional vocabulary is a really big issue, so for example, if they experience a challenging scenario in, let's say with their teacher, rather than saying 'I am really frustrated, this work is really difficult for me, I don't understand what you are saying or I am afraid that I am not going to be able to complete this', that might be communicated in a less constructive fashion; for example, they might kick a table, or there might be another abrasive response that can be misunderstood by teachers, and so for me, their emotional vocabulary is a very big issue." (P2-PST)

They don't have the vocabulary and the language to talk about their emotions, and they cannot self-regulate, you know, they can't access the interventions, so even if they actually do, which they very rarely do, engage in any kind of mental health programme or with a psychologist or anything like that, they don't understand what's being said to them, they can't think through, and they can't express… how they're feeling, what their thoughts are, that sort of thing. So, I think it has a huge impact on them. Yeah. I mean, some of ours, they are sort of heading towards 18 and transitioning into adult services, they've got no idea about what lies ahead and what is going to happen …. They don't have the numerous skills. They don't have the language skills to be able to cope with things like budgeting and tenancy agreements and, you know, so yeah, it all has a huge impact." (P12-SaLT)

Participants similarly noted that the difficulties included LAC's grammar, where problems were identified in comparison to their peers. They particularly referred to children's grammatical difficulties, such as being unable to use correct sentence structure or to explain things correctly. One SaLT reported that in terms of their grammar and vocabulary, LAC often fall below the average levels, and this was due to the degree of trauma that they had suffered:

> *"Vocabulary wise, they're just falling further and further behind because at key stage two and onwards, they're just not in the classrooms experiencing that language and developing those skills. They have just about…the bottom end of average levels, in terms of… vocabulary and grammar, because of the level of the trauma, because of the lack of education." (P12-SaLT)*

Lastly, one participant discussed the effect of language difficulties on LAC involved in crime. The participant stressed that language or vocabulary used in police interviews, courts, or LAC reviews is high level, and people often assume that these children understand what is said to them. The participant thus suggested that criminal justice language used in LAC's presence should be more accessible to facilitate and support their understanding:

> *"For those young people where they are having court orders, or they are having these big LAC reviews about where they are going to live, or maybe they're missing, they are running away. And then they are getting picked up by the police, and then they're having…police interviews, and the vocabulary that is often being used is so high level and it's just assumed that these young people understand what is being said to them. Um, and they're already vulnerable. Yeah. I think that is so important for everyone to understand sometimes. I mean, I have worked with like a 16-year-old, who has never had speech and language therapy, and she has never had anything, but I did an assessment, and her vocabulary was the equivalent age of a 10-year-old." (P21-SaLT)*

5.10.1.1.3: Sub-theme 3 - Pragmatics/social issues

Another major area that professionals thought LAC had significant difficulties with was social pragmatic skills. Some participants attributed social pragmatic difficulties to the adversities experienced by children and referenced these experiences as trauma, neglect and attachment difficulties. The interviewees described these issues as misreading or misinterpreting people's cues, unable to engage in reciprocal conversation, make eye contact, recognize different emotions and have simple narratives. In particular, one SaLT reported that she usually observed patterns of difficulties regarding LAC's ability *in "processing spoken language, when it increases in length." (P21-SaLT).*

> *"The social communication difficulties that a lot of children have... they just become huge when they're teenagers... and that's something that we don't necessarily deal with very well." (P14-SaLT)*

Furthermore, most participants highlighted that LAC's social pragmatic difficulties cause major hindrances to having social interactions with others in various contexts. For example, participants defined these hindrances as being unable to form relationships or friendships, and regulating their emotions in school settings. They particularly reported that children's difficulties lead them to experience problems with establishing long-term relationships or friendships with their peers, as they often fall out with friends. It was further reported that LAC cannot articulate their feelings and navigate their social relationships with peers. Participants remarked that LAC's adverse experiences exacerbate their social difficulties and consequently prevent LAC's opportunities for better and positive relationships.

> *"There is quite often a lot of isolation felt by some of the young people who don't have those communication skills and therefore cannot make those strong peer group friendships in the same way as we would hope that they would be able to." (P5-VSH)*

A few interviewees also expressed that a majority of LAC are very lonely and do not have a lot of friends, especially in school environments, where they are unable to keep pace with their peers in terms of effective communication. The effects of their reported pragmatic and social difficulties become significant or apparent especially when they become teenagers. One SaLT specifically stressed that this is an area that SaLTs and other professionals do not necessarily

handle well. Thus, the participants highlighted that that teenagers' social pragmatic difficulties perpetuate their vulnerability in social situations.

> *"...a lot of them are very isolated and don't have a lot of friends...in a school environment, they certainly aren't able to keep up with their peers in terms of the communication, the social communication that's developing in teenagers, and the banter, the jokes, and things like that. Then again, they mask it, so when everyone laughs, they laugh, everyone does X, they do X, they don't always really understand it. They're very vulnerable because they're pretending all the time to be trying to fit in." (P12-SaLT)*

Lastly, some of the participants reported that LAC tend to form more successful friendships with peers who are younger than their age or who are also LAC like themselves. One participant specifically attributed to this children's feelings of either taking *"a nurturing role, as in, I am going to look after you, or feelings of this is my level therefore you can understand me more" (P13-SaLT).* Other participant reported that:

> *"There's a boy that I'm working with in school at the moment who is...telling me about a really good friend he has got who is also in care, and he finds it really nice they have got some of that in common. So even just things like...when it gets to Mother's Day or stuff like that...there's someone else who is not in the same typical boat, and he is able to kind of relate a little bit about what that is like." (P15-SaLT)*

5.10.1.1.4: Sub-theme 4 - Cognition difficulties

Further areas of difficulties that professionals observed in the LAC population relate to their cognitive skills. For some participants, LAC's verbal cognitive difficulties are quite heightened in skills involving attention, listening, and the concept of time, focusing on tasks, listening or attuning to other person's communicative interactions. They believed that difficulties in such skills cause significant disruption and problems for these children. Participants emphasised that children's poor cognitive abilities in these areas require careful considerations when supporting or working with them in different contexts (e.g., in different LAC meetings, homes, as well as

schools). As they felt that difficulties in LAC's cognition cause significant disruption and problems for this group's life.

Some interviewees particularly discussed children's difficulties in executive function skills, those particularly involving their thinking, sequencing and verbal reasoning skills, as well as working memory skills. They reported that these difficulties in such aspects were preventing children from processing instructions, organizing themselves and accessing the language to ask for help and explain themselves, or their situation. The participants thus stressed that difficulties in executive function cause children to feel frustrated in different circumstances:

> *"They'll be asked for their opinion, or whatever, and they will literally just sit there and tell everyone to 'f off' because they do not understand what is being asked and then not be able to think it through, and they are not able to formulate an answer. So... that is just the most important thing...In terms of...actual skills, a lot of it can be...the verbal reasoning, the thinking skills...working memory, attention skills are a huge issue for them." (P12-SaLT)*

5.10.1.2: Theme 2 - Assessments: importance of early and routine language assessments

The second theme to emerge was the early identification of LAC's language difficulties through performing routine assessments. Each participant discussed and stated the usefulness of carrying out language screening or assessment. This theme is separated into four sub-themes relevant to the importance of conducting routine assessments for the identification of children's language needs: 1) LAC's language difficulties are not prioritised; 2) Thresholds for accessing speech and language assessment and interventions are quite high; 3) Barriers in accessing SaLT services and the consequence of unidentified language difficulties; and 4) Language difficulties can manifest in complex patterns of behaviours in LAC.

5.10.1.2.1: Sub-theme 1 - LAC's language difficulties are not prioritised

This theme was dominant throughout the accounts of the interviewees. Most participants reported that the language difficulties or SLCN of LAC are less likely to be prioritised and assessed since they are often overshadowed by their other needs. They referenced LAC's medical or physical, mental health, social, emotional and behavioural or school needs. A majority of the participants mentioned that LAC often receive routine assessments for these other

needs on a regular basis. However, they felt that the language assessment of this population does not receive the same level of attention. Participants stressed that children's language needs should be given equal weight as to their other needs and assessed before entering care, at the time of their entering in care, or soon after being placed in care. One participant further stated that unless a child shows obvious signs of speech or sound disorder, their communication needs are rarely in the forefront of people's minds:

> *"Initial focus is the child's physical health and their school attendance, and their behaviour. And often, only when those things settle down do then people perhaps start to notice that there is a language problem." (P9-SaLT)*

Further, several participants suggested that local authorities should make children's language assessments a routine practice or statutory requirement, meaning that children's language needs can be assessed either before or upon entering into care. Other participants recommended embedding language assessment in social work visits and training (in higher education) or within the child welfare approach would be a correct approach. Most of these participants believed that such approaches would facilitate recognizing the children's needs early and generate the required support or interventions to enhance their language skills from the moment that they are known by the care systems. They thus emphasised that incorporating or implementing relevant language assessments in early stages of children's lives would be a crucial step to meet this LAC's language difficulties.

> *"It could be made like a statutory requirement as part of their overall care planning package. I think that would go a long way to giving some early information, and ...particularly for the younger children, where we are looking at early interventions that happen, quickly create the best outcomes in the long run." (P5-VSH)*

Further, there was an acknowledgement among most participants that the initial process for taking a child into care is complex, and it was felt that noticing and conducting language assessment can be difficult for an extended period of time until a child settles in care or due to a complexity of their cases. However, they noted the significance of prioritising early language assessments. For these reasons, the participants suggested that LAC's language needs can even

be detected using simple language screening questionnaires which could be completed by someone who knows the children. Participants deemed that this could be an effective method of detecting children's difficulties in language before their LAC status begins. They consequently cited early assessment as an important consideration in determining LAC's language difficulties and the level of support that each child requires for their needs.

> *"I guess, like, identifying difficulties early on, as early as possible. So usually before a child comes into care, they don't really just come into care from nowhere. They're often known to, like, children in need teams prior to that. So, it's like picking things up before they actually become a looked-after child." (P19-SaLT)*

> *"It would help practitioners in the early years' settings, to be able to tailor their approach to make sure that any barriers or need that has been identified could be overcome, essentially the children get the specific support that they need rather than having to wait for someone else to pick it up down the line." (P11-EYCP)*

The participants were not talking about a large lengthy standardized language screening, they were talking about the type of language screening tools that are exactly the sort used by LA-X, as mentioned in Chapter 4.

> *"I guess, like, with children coming into care and knowing how vulnerable they are to having previously unidentified language and communication needs and knowing that we need to try and pick it up and explore it and find these children that have been missed. At the same time, there's a constant balance of 'is this the right time for this child?' And 'how helpful is this for this individual child, having another adult come into their lives for a short period and then leave again?' So... relying on the screeners is really helpful, because that is without affecting that child directly… you just talk to people around them." (P21-SaLT)*

Furthermore, two foster parents shared the same views and experiences during the interviews regarding the scarcity of available routine language assessment related to their foster children's language needs. They recounted that there were no routine language assessments conducted for LAC unless they raised the concerns, or someone identifies those needs. They highlighted the need to ask professionals to complete language screening questionnaires as frequently as possible to ensure that children's language needs are identified earlier.

> *"I'm pretty sure it's not routine... Like it's not highlighted and ... it's not like we have to take them to the dentist every six months. There isn't even a that kind of thing...that box has to be ticked, we wanted boxes to be ticked for speech therapy." (P29-FC)*

Participants further spoke about the benefits of incorporating children's language needs into their Personal Education Plans (PEPs); Education, Health and Care Plans (EHCPs), and/or the discussion of multi-agency educational meetings. They also asserted the necessity of LAC's language or SLNC assessments to be incorporated into their medicalor health assessments which are conducted every year. Because, in the NHS sector, conducting language assessments for each LAC would not be possible. This was attributed to the fact that *"things were getting more and more stretched within the NHS" (P18-SaLT).* The participants therefore felt that the inclusion of children's language assessments into these processes would be an optimal method to recognize or detect their language difficulties and meet their needs accordingly.

> *"If it could be incorporated into health assessments every year, just more of a focus on it every year would be really helpful actually." (P25-SW)*

> *"I think it would bring up any issues early on." (P29-FC)*

5.10.1.2.2: Sub-theme 2 - Thresholds for accessing SaLT assessments and interventions are quite high

This sub-theme captured the participants' views regarding reasons that this population has language difficulties. Most participants reported that the thresholds and criteria for language assessments and SaLT services were quite high, which pose significant barriers and risk leaving LAC with unidentified language needs. They referenced LAC not meeting the referral and

assessment criteria of SaLT services. Participants felt that to receive language assessments for children under their care, they had to constantly push the systems or fight for it, because the children's language skills were not poor enough to meet the threshold and to receive SaLT assessments or other services. This is attributed to a lack of funding, a shortage of SaLTs, the timing of their care status and other emerging issues that need to be addressed first. Additionally, professionals either presumed that LAC can use and understand the language well or noticed their behaviours before their difficulties. LAC were skilled at concealing their language difficulties, preventing them from getting early SaLT assessments. Professionals further suggested that providing appropriate resources, screening tools, and intervention strategies to support LAC with language difficulties is necessary. A former VHS explained such barriers by stating that:

> *"So, you have got the child who comes in, I, as a virtual school head, not a speech and language specialist but I suspected somethings ... then you kind of flag it up. And then as soon as you get into the local authority... the thresholds for service are usually quite high. So, it is like there is me pushing for my child to get in and… speech and language service basically says sorry, they are not bad enough to get this support... I think, it's different in every context and in every locality or in some of the localities that I have worked with, there are LAC not meeting the threshold. If we have got a corporate parenting responsibility, we should not be expecting them (LAC) to be fitting in with our criteria, we should be fitting in with their (LAC's) criteria. And if they are our children, this is what I would say as a virtual head, they have got to be number one on the list, no excuses…I'm very sorry about criteria, do not theorise, do not tell me there is not a speech and language therapist, I don't care. This is my child, who needs to be prioritised, his needs to be first." (P1-VSH)*

A few of the participants reported that the duration between gaining access to SaLT screenings/assessments and the necessary intervention occurring was lengthy, which poses significant challenges for children. They also stated that assessments or SaLT services usually depend on the children's school age (e.g., primary or secondary school aged children) and where they live, which also poses a challenge for LAC. One SaLT mentioned that, "*speech*

therapy services tend to get even more stretched or maybe there's not a service at all" (P18-SaLT), especially for older children. Other participants reported that there are large proportions of teenagers who have historically unidentified speech and language needs. These participants indicated that SaLT services seem to be more for the younger children, and that there were assumptions that their language difficulties would be noticed when they were young. They consequently stressed that such assumptions often lead LAC to have ongoing language and communication difficulties with lasting effects observed in their life outcomes.

> *"Speech and language communication needs do not just happen in isolation; they happen throughout the child's life and surroundings. So, in terms of attainment in school, if you have a language impairment and a language disorder, it massively can impact on your ability to access the curriculum and without it being identified… the children, I think, have been seen as being naughty or rude or having behavioural challenge… the crucial thing actually is trying to avoid them being excluded from school. Because often …there is a chain reaction… series of exclusions and missing out on education. I have actually had a young boy recently who has just turned 18. It was quite an emotional conversation with him because he, himself talked about the failures that he felt he had had throughout secondary education and that he had missed out on so many things." (P18-SaLT)*

One SaLT reported that she started working with LAC in recent months in her borough, and she firstly wanted to compare the LAC with their peers to identify how many received SaLT support and were then discharged. The SaLT remarked:

> *"It was shocking, it was utterly shocking, I think 6.8% of them were known to speech therapy, that was it, 6% of our looked-after children and that is just not okay. I think what's happening with us as well, we're getting children who will come in at 16. Well, for example, I've got two younger offenders who come at 16 and 17, just been referred, never been known to speech therapy, they committed quite a serious offence. They have both got a significant language disorder... really significant, easily led, nodders, yes I'll do it, yes I will do it...I think they have been coerced*

or something. But now, they've done this serious crime, but it stopped at that level before any support has been put in place. And both mums have said we have tried for years to get support, but nobody would do anything." (P13-SaLT)

5.10.1.2.3: Sub-theme 3 - Barriers to accessing SaLT services and consequence of unidentified language needs and/or difficulties

The interviewees expressed that LAC often face many barriers related to their language needs. They referred to limited availabilities of SaLT services, funding issues, shortages of SaLTs and SaLT services, lack of information sharing, and terminology used by professionals. Some expressed concerns that not every local authority would prioritise or provide language services for the LAC population, which poses significant barriers to accessing early SaLT screenings and interventions. The participants felt that there is always a lack of clarity regarding available resources attached to this population's language assessments and interventions. For example, they expressed concerns that LAC are often moved between local services, boroughs or schools, which always raises the question about who provides the service and who pays for it. In this respect, one participant reported that they use children's pupil premium funding for the commission of or paying for LAC's SaLT support. Additionally, it was reported that there is a lack of cohesion/unity about who, or whose umbrella LAC's language difficulties or SLCN sits under, which also poses barriers for LAC's language needs.

"I use the funding services pretty well for screenings and... signposting youngsters in them." (P12-SaLT)

Furthermore, a few participants reported shortages of speech and language therapists across the country, which prevents allocating SaLT services that could meet the LAC's language needs. They stressed that it is often impossible to see a speech and language therapist associated with virtual schools or with a looked-after children team. Some participants consequently expressed concerns and frustrations regarding this shortage and how it prevents addressing LAC's language needs timely and efficiently.

"More speech and language therapists… more awareness generally that this could be an issue, and... it just needs to be part of the conversation, because people were already thinking very much about their (LAC's)

past and their mental health, but they are not necessarily thinking about language and communication and the impact that has." (P6-SaLT)

Whilst acknowledging the importance of correctly diagnosing children's language difficulties, some interviewees indicated that some frontline staff (e.g., school staff, social workers, as well as foster parents) act as barriers towards identifying this LAC's language difficulties. The interviewees attributed this issue to a lack of understanding amongst the frontline staff about what speech and communciation language difficulties mean, and who this population was, which was shown in the following extract:

"SLCN generally, probably is not very well understood amongst other professionals and I would say that that's definitely the case with professionals who work with looked-after children. So, it not just that lack of understanding and even just that knowledge. But still you have got lots of social workers who probably have never even heard of speech, language and communication needs." (P16-SaLT)

In addition, it was also reported that due to their limited knowledge of LAC's difficulties with language, frontline staff expect children to understand everything that they say or ask; however, if children demonstrate inadequate understanding, frontline staff reportedly become frustrated with them, which was demonstrated also in the following extract:

'If they are demonstrating… challenging behaviour or attachment difficulties...people might think that it is nothing to do with speech and language. So, I think sometimes... it is about a lack of awareness from adults around about what the role of speech and language therapy is with this client group and how we can be supporting alongside other professionals." (P15-SaLT)

Furthermore, some participants stated that professionals do not consider the type of language (e.g., metaphors and idioms) that they use around LAC. They stressed that professionals use too much jargon or legal language and labels attached to this population (e.g., LAC, children in need, care leavers) which not every child will have the ability to understand or ask for clarification. They therefore suggested that professionals who work with this group need to

consider the language that they use around children and appreciate this population's specific language needs.

Lastly, another important barrier was inconsistency around information sharing related to LAC's needs. One participant raised the point about children moving between various services and that these services usually have their own information sharing systems and working on or using different databases. The participant stated that the use of different information sharing systems causes significant challenges in accessing children's previous records relating to their background information including their language difficulties.

5.10.1.2.4: Sub-theme 4 - Language difficulties can be manifested in complex patterns of behaviours in LAC

The interviewees highlighted that the language difficulties observed in LAC can manifest in secondary or other difficulties which they referred to as behavioural difficulties. They stated that LAC are often judged by professionals who work with them as having difficulties in this aspect and that the latter caused the former to be overlooked. Mutual experience and shared insights of interviewees also showed that professionals are unable to recognize that LAC's behavioural difficulties are often linked to not being able to communicate their needs.

> *"If they are demonstrating, like, challenging behaviour or attachment difficulties, people might think that it is not to do with speech and language difficulties." (P15-SaLT)*

Moreover, some interviewees stated that behaviours are the communication and that there is always a reason for these behaviours. However, they felt that the links between behaviours and language and communication difficulties are not always considered or are often at risk of being misinterpreted. In their experiences, interviewees observed that professionals typically concentrate on the behaviours of the child rather than seeking the main reasons causing these behaviours, consequently mislabelling children as having disabilities. They therefore suggested that individuals working with these children should consider the underlying causes of their behavioural difficulties as there is a possibility the children's language and communication difficulties are being hidden/masked by their behaviours. Participants said:

> *"Often teenagers and adults will be so good at masking their difficulties in understanding what people are saying to them or understanding vocabulary that's age-appropriate." (P21-SaLT)*

> *"Often children are given a, quite a strong label of… having a disability by professionals, although not diagnosed and then there is this expectation that looked-after children have autism and they do not."* (P25-SW)

Other participants noted that school staff often view children's behaviours as problems rather than considering possibilities that their language and/or developmental difficulties are hidden by their behaviours. They therefore emphasised that schools need support on how to address this population's language difficulties.

> *"In fact, even there still is sometimes a tendency for schools to identify the behaviours as bad behaviours that might come from not understanding an instruction or not interpreting a non-verbal signal in an appropriate way, and not linking that to the fact that it is a communication difficulty or something that really could be built upon and improved for the child rather than just directing...as a bad behaviour." (P5-VSH)*

Further, a few participants mentioned children's frustrations when they do not understand theories, concepts, the information given to them, or when others do not understand them. One SaLT specifically reported that underlying frustrations related to their language difficulties likely accumulate because children do not develop metacognition about themselves early enough. Participants felt that the children's experiences of not being able to use language or be understood undermine their self-perceptions; for example, they mentioned that children often show their frustrations by saying negative things about themselves, getting angry or upset, or saying 'I'm thick'.

> *"I was working with a boy the other day and trying to help him to understand his language, and he's like, oh yeah, I think it's just that I'm*

dumb, and I've always felt dumb; I've always felt stupid in class." (P16-SaLT)

Further concerns were expressed regarding unidentified or misinterpreted language difficulties which often led children to displaying and/or presenting destructive behaviours, going down the kind of destructive or very isolated routes or choosing not to talk. Thus, it was proposed that when assessing children's language needs, a holistic approach should be performed by specialists who work with or support LAC in a range of contexts (e.g., schools). Another important aspect reported by a few interviewees was that professionals had insufficient knowledge and understanding about LAC's language needs, which has led to children receiving wrong diagnoses. Reference was made to misinterpreting children's language needs and that individuals working with this population commonly fail to comprehend and appreciate these needs. They felt that, for LAC, living with misinterpreted and wrongly diagnosed lanage and/or communication needs have detrimental impacts on their lives. For example, a speech and language therapist remarked that:

"I think people don't always realise when young people don't understand language. I hear lots of other interpretations. I just assessed a young woman who I think has DLD, but she'd been seen by a psychologist, you know; I was told that there is dyslexia and processing problems and I think there's a lot of misinterpretation around social communication where people say 'this is due to trauma'." (P6-SaLT)

Lastly, a small number of the interviewees reported that knowing that they have language difficulties is a significant issue for many LAC. At the same time, some children are relieved to know that they have language difficulties as they can label what those difficulties are and where they stem from.

"Until I explain it to them, they just think they were thick, or it was their fault because they weren't paying attention. Those were the messages they've been given… for some of them it has been a huge… jaw-dropping, eye-opening relief… moments of… wow it was not my fault." (P12-SaLT)

5.10.1.3: Theme 3 - Outcomes: Links between language difficulties and life outcomes

This theme was prevalent in most of the interviews, with participants indicating that communication difficulties were significant indicators for LAC's poor life outcomes. The theme was separated into three sub-themes: 1) Impact of language difficulties on LAC's educational achievement; 2) Impact of language difficulties on LAC's social, emotional and mental health well-being; 3) Impact of SLCN on other areas or future life chances.

5.10.1.3.1: Sub-theme 1 - Impact of language difficulties on LAC's educational achievement

A key message in this theme was that due to their language difficulties, most LAC were reported to have poor educational or academic successes which pose significant challenges for them in schools and further affect their life outcomes subsequently. These challenges referred to being unable to access the curriculum, facing exclusions from school and not going to universities.

A majority of the participants highlighted that the complexities which come with having language difficulties pose a significant risk for LAC to access curriculum and learning. They suggested that it is essential that professionals explore LAC's needs holistically so as to prevent these children from having disruptive educational lives. Statements from some participants reveal that LAC's difficulties with language have a knock-on effect on their education and make it challenging for them to engage in learning and school tasks. In particular, the influence of language difficulties is seen in the areas of their numeracy and literacy abilities. Participants observed that LAC usually are less likely to partake in classroom discussions and contribute to group work in the classroom compared to their non-LAC peers. They noted, however, that the reason why LAC are reluctant to engage in education is because they either do not want their peers to know they were having language difficulties or because they did not want to be perceived as different.

Several participants stated that most LAC are statistically unlikely to make it to the universities and/or access to further education due to their poor language skills. One participant particularly stressed that, *"only 6% of LAC go to university in England" (P2-PST).* The participants attributed these results to the fact that higher education usually requires high levels of language skills, but these children are usually deprived of developing such skills and are consequently less likely to meet the educational requirements at further education levels.

Another negative effect of poor language skills on children's education was facing exclusions from schools. Participants stated that children hide their language difficulties with their behaviour such as by picking fights or talking throughout class. According to their observations, schools were not proactive enough in detecting children's language needs. Participants remarked that schools tended to perceive their difficulties with educational as a consequence of them being naughty, rude or displaying behavioural challenges that could cause LAC's exclusion from schools. They reported that facing exclusion causes serious consequences for LAC's educational attainment levels such as 'falling behind key stage two and onwards', and 'missing out on significant parts of their education'.

> *"Many of our children, you will find, have had recurrent exclusions from mainstream school too. What is seen as being that behaviour...and... that behaviour very often is hiding from speech and language, and communication needs underneath that behaviour, and it is more difficult to reach those children when they have been excluded from mainstream schools." (P17-SaLT)*

5.10.1.3.2: Sub-theme 2 - Impact of language difficulties on LAC's social, emotional and mental health well-being

One participant stated that LAC *"become the product of their behaviour" (P10-VSH))* as their behavioural difficulties are assumed by frontline workers to be part of their personalities. The participant felt that if children have clear recognition and support for their language difficulties, their behaviours will improve. Another participant noted that there is always a reason for LAC's behavioural difficulties, and that they may try to communicate something via their behaviours as they may not have the tools or strategies to communicate it directly.

> *"A child's behaviour, there's always a reason for that behaviour, they're trying to communicate something, maybe they don't have the tools of strategies to communicate… they grow up in an environment where they have not been able to learn that there is not enough role modelling to learn… maladaptive coping strategies or way of communicating their needs." (P24-SW)*

Further, in the interviews, it became clear that children's language difficulties pose significant challenges in social aspects of their life. They referred to failing to make strong peer group friendships and failing to build social interaction with their surroundings. Some aspects of this have been commented on earlier in respect of issues raised within Theme 1, regarding social / pragmatic issues, and a SaLT stated that:

> *"Having a peer group and having a friendship is so much harder for them, it's so much harder for them anyway; because of the issues they have around trust attachment and language impairments, it is even more difficult." (P13-SaLT)*

Some participants discussed how LAC's language difficulties significantly impact their confidence. They expressed how language and communication difficulties make LAC feel that they were not good enough to achieve many things or succeed in life. The participants further reported that due to their difficulties, some young people often isolate themselves from their environments. Other participants specifically stressed that LAC's language difficulties often hinder and have a knock-on impact on their mental health and well-being, confidence and self-esteem. They expressed such effect usually led LAC to go down isolated or different routes which may affect their life negatively, as well as lead to display of destructive behaviours.

> *"They feel that they are different, or they feel that they're sort of damaged or whatever it is that goes through their mind that makes them have that lesser self-esteem, which... they then might not believe that they could achieve as highly as another child who doesn't have that and therefore... they almost put their own limitations on what they think." (P5-VSH)*

They further stressed that language difficulties lead LAC to have low opinions of themselves and as a result, being unable to recognize why their educational attainments appeared to be poor. They stated that these children often called themselves stupid, dumb or lazy. Such feelings reportedly have significant impacts, causing an inability to perform well in education or make friends in school.

"I did an assessment on a 21-year-old… she just turned 21, she was in college. She had an education, health care plan, but… she had never been assessed by a speech therapist. She had severe difficulties with understanding and processing information. She had social communication difficulties….And if she had the additional support from when she was younger, how much more progress could she have made... and more than anything… her own sense of self, she is a young woman who just had a real low opinion of her academic abilities and who she was, and just referred to herself as, like… 'stupid … I just don't listen... I'm lazy'." (P21-SaLT)

5.10.1.3.3: Sub-theme 3 - Impact of language difficulties on other areas or future life chances

Another sub-theme reported by most participants was that LAC's language difficulties negatively affect their future life opportunities, with key areas of concern including facing sex and gang exploitations, involvement in criminal justice systems and not gaining employment when they grow older. This has some correlation to the issue of educational attainment, as expressed within the first sub-theme. These concerns were greater for adolescents with unidentified language difficulties. This was attributed to the fact that before their needs are identified, adolescents are more likely to fall through the gaps between different services. One participant stated that language difficulties are *"a vicious circle"* (*P15-SaLT*) for this population's future life. Some participants also reported that due to their difficulties, LAC are known to the criminal justice system at a higher prevalence, have poor self-esteem and mental health and lack of employment opportunities, with many of them having been excluded from mainstream school.

"They won't know that they're having problems around the comprehension or their understanding, or…a lot of those areas that are part of that speech and language needs. They will often say 'I'm thick, nobody understands me... stop trying to explain' and get angry and that's the first...response to things... if they're getting frustrated, becoming angry and then that compounds that negative perception of that young person. So, no, I don't think the majority of young people would know that was an issue for them and I think that impact is massive

for them because that can impact on their education, on their peer networks, on their employment opportunities." (P8-SM/survive manager)

Other participants reported that some LAC with difficulties are more likely to bond with people in a different way; for example, they stated that LAC may inadvertently seek out someone (e.g., an abusive person) who will not treat them well based on their original adverse childhood experiences. Participants thus stressed that without realising the root or impact of their language difficulties, children might not notice that they are seeking out individuals who may place them in exploitive situations. As they will feel a sense of belonging and a sense of worth even if these people are being exploited. They described situations where LAC are criminally exploited in multiple ways such as involvement in the so-called county lines gangs or sexual exploitation. This is remarked on as:

"The ones I worked with, a lot of the time they are getting involved in gangs... county lines...exploitation and that sort of thing... Again, it comes down to...if they do not have the language, they will not have the thinking skills, verbal reasoning...to be able to understand when somebody is actually a friend when you're being exploited... and to be able to express that to a carer or somebody and get help... a lot of them don't understand." (P12-SaLT)

Furthermore, one participant expressed worry about how LAC will cope with life administration when they grow older, referencing paying their bills, council taxes and dealing with other daily admins. In addition, it was also reported by a participant that not receiving support for their language difficulties when they are young could likely reduce their level of productivity in their adulthood or decrease their chance to receive promotions in their work life. She stressed that:

"*All of my kids have some difficulties and I worry about how they'll cope with admin when they're older...so much of our life as adults is admin and there is… support for people who've got, like, a visual impairment or physical impairment, but there is less support for adults who... kind*

of got a 6 year old's reading age or... so I do worry how they are gonna cope with life admin." (P28-SW)

5.10.1.4: Theme 4 - Support: Available support systems and strategies relevant to LAC's language needs

A theme that emerged from the analysis refers to systems and strategies relevant to LAC's communication needs. All participants agreed (by giving their own accounts) that providing varied support systems and strategies would be beneficial to this group's language difficulties. They felt that children's language difficulties should be perceived in a similar manner to their other needs. Within this theme, other sub-themes emerged: 1) Providing training to professionals; and 2) Embedding or implementing a variety of support strategies and interventions.

5.10.1.4.1: Sub-theme 1 - Providing training to professionals

One main sub-theme identified was the need to expand or enhance the knowledge of all professionals concerning language difficulties encountered by LAC. The participants referred to training everyone in signs and symptoms of language difficulties, and providing 'resources or support strategies' that are relevant to LAC's language needs. As described in Section 5.10.1.2.3 above, the interviews revealed a lack of understanding and recognition of this population's language difficulties amongst professionals. Participants thus stressed that there should be an increased frequency and scope of language difficulties awareness training in the various teams that provide services or support to the LAC population. They referenced providing language difficulties or SLCN awareness training within various disciplines such as LAC teams, foster carers, social workers, nurses, doctors, paediatricians and schools so they can recognize and pick up LAC's language difficulties early.

Other participants stated that children do not come into care from nowhere, as they are often previously known to children's welfare or children in need teams. They thus thought that receiving training would be necessary for all professionals to fulfil their role in detecting and supporting this population's language difficulties. The participants also emphasised that the knowledge gained via SLCN, or language difficulties awareness training would improve professionals' skills in identification or recognition of children's language difficulties; support strategies and implementation of those when working with them. A social worker said:

"Let's say we're going to meet a child, it's not maybe something we think when we go to an initial visit. It's maybe not in the forefront of our mind that the child might not understand, English is their first language. But they still might not understand, it might be incredibly anxious for them when you speak at them and they can't understand, so just more education for practitioners would be a good start." (P28-SW)

Some foster carers highlighted that being trained on different support strategies related to language difficulties increased their understanding of how to address children's language difficulties. They expressed that such knowledge allowed better recognition of language difficulties of children under their care and thereby supporting their needs accordingly.

"The virtual school's speech therapists got involved with the little lad I had, and she taught me some really good, kind of exercises to do with him and she came around, like, for six appointments and I think it made such a massive difference. So, it wasn't about working with him, it was about working with me... so that I could then do it with him. I think that made a big difference to his life because it was not about, it wasn't just about talking, it was about eye contact as well, and it made a big difference... It changed the way he was. She homed right in on it, worked out what the issue was and then gave me, like, a little 10-minutes exercise every day to do with him. It really, really changed the way that he was communicating." (P29-FC)

Lastly, one participant specifically suggested that training across the professionals would broaden their understanding in terms of what affects LAC's language and communication from *"developmental and psychological points of view" (P14-SaLT)*

5.10.1.4.2: Sub-theme 2 - Embedding or implementing a variety of support strategies and interventions

Some participants highlighted that having an embedded speech and language therapist role or SaLT teams as part of their LAC teams or VHS teams would be vital for helping professionals detect language concerns early. They believed that such systems would guide them to

effectively meet children's language needs. Others mentioned the benefits of having in-house speech and language therapists (SaLTs) attached to their team which would be an integrated approach. They stressed that as part of this approach, SaLTs would take responsibilities as being linked clinicians between them and other services, signposting children to local services and helping to routinely screen children's language. They also reported that having a dedicated language therapist within their team enhanced their knowledge about the types of approaches to employ when supporting LAC's language needs.

A few of the participants stressed the importance of receiving more funding so as to enable the greater provision of training and speech and language therapy services. They believed commissioning or funding such services will serve as preventive measures to meet LAC's language needs.

> *"So perhaps more funding for speech and language therapy would be lovely so that we can deliver more training." (P17-SaLT)*

The interviewees further expressed that it was helpful to work in collaboration with all professionals in the LAC team. They felt that multi-disciplinary teamwork enabled them to effectively support children with their language difficulties, which included working with professionals such as nurses, paediatricians, educational psychologists, clinical psychologists, occupational therapists, and/or school staff. Participants stated that these professionals could detect LAC's language concerns and refer them to in-house SaLT teams or signpost them to the local SaLTs or school's SaLT teams. They also expressed that multi-disciplinary teamwork might help gain a deep understanding of the roots, complexity, and nature of these children's language difficulties. They thus highlighted the importance of using these professionals' expertise as another channel to identify and meet children's language difficulties and/or SLCN without delay.

> *"As an educational psychologist I have got a fairly broad remit. So, looking at learning, looking at behaviour and emotional needs, looking at communication...one of the great things is being able to work collaboratively with speech and language therapists to support these children." (P23-EP)*

Furthermore, participants reported that employing tailored interventions and support mechanisms was key to assisting LAC with language difficulties. They referred to various types of direct and early interventions such as friendship-based interventions, SaLT drop-in sessions, using blank levels for vocabulary interventions, Social Stories (Gillum, 2017), or Colourful Semantics (Bolderson et al., 2011) and Talking Mats (RCSLT, 2021) to support the language needs. Professionals suggested that utilizing diverse intervention approaches was considerably helpful in enhancing the language skills of children under their care.

5.10.1.5: Theme 5 - Being aware of their language difficulties and coping strategies

This theme reflects participants' views on ways in which LAC cope or deal with their language difficulties in different contexts. According to the participants, LAC use or develop different coping strategies to address these difficulties. They referred to using masking or hiding techniques to conceal them. Some participants described the masking techniques used by LAC as avoiding speaking in large groups, being very quiet throughout school, being reluctant to talk, presenting behaviours, swearing and disengaging, frustration of pushing people away or using a lot of languages echolalia.

> *"The biggest theme that I'm seeing at the moment, is around the children who are looking like they are understanding and looking like they're doing okay. But when you...break things down, they are not...so the children who have developed lots of masking techniques... it's those children that I'm worried about." (P13-SaLT)*

> *"The impact of having unidentified speech and language difficulties throughout your life...is so debilitating and some of these children can mask those needs in other ways. So quite often...we see presenting behaviours." (P3-EP)*

Other participants stated that teenagers and adults are good at hiding their difficulties in understanding and using language in different situations by using vague terms, pretending, or they can say that I don't understand you. They further mentioned that to cope with their language difficulties, LAC go into an acceptance mode by saying that this is me or this is who I am or adopting a denial mode by saying nothing is wrong with me.

"Just saw one young man, ultimately delightful, who's got really significant language comprehension difficulties, just said to me, 'that's just me, I don't hear things very well'. And it's normally fine...he just accepts it, just accepts that is the way he is. ...others, I think they do their very best to hide that they are struggling and they have convinced themselves there's nothing going on." (P13-SaLT)

5.11 Overall summary

The 5 main and 13 sub-themes were identified in the thematic analysis of the interviews with professionals. This synthesis has highlighted that LAC's language difficulties are often overlooked and they are at increased risk of language difficulties from an early age, which profoundly effects their life trajectories. The professionals remarked that LAC are at a greater risk of having difficulties in all areas of language (expressive/receptive) including social pragmatic and cognitive skills. They reported that there are many risk factors that were related to their poor skills in these domains and emphasised the necessity of early language assessment to address this population's language difficulties. They also stressed the importance of the SaLT roles and services in relation to carrying out early assessments and interventions, as well as providing practical support to those professionals who provide services to LAC.

The professionals who work with LAC on a day-to-day basis continued to have limited knowledge and understanding of the relationship between language difficulties, educational and SEMH outcomes, and perceived LAC's difficulties as behavioural difficulties rather than language difficulties. This research has also found that professionals see LAC's poor language difficulties as closely linked with their wider life outcomes such as difficulties with relationships with peers, others and not obtaining employment when they get older. Further, the study reported that LAC are sometimes not equipped to deal with or understand why they have language difficulties. Thus, with the input of the professionals, the study has identified a variety of ways in which to support the development of these LAC with respect to their language difficulties.

Often some LAC (in particularly younger ones) do not recognize that they have language difficulties which are closely linked to their behaviours or stress. For others, who are mainly older LAC, in order to deal with their language difficulties, they are found to be

using masking techniques such as displaying challenging behaviours, being quiet or pretending that they understand everything. Overall, this study found that in order to address LAC's difficulties, language appropriate support strategies are needed and that, without this, LAC's language difficulties and ability to overcome their difficulties in above mentioned developmental domains can be severely hindered. Through early language assessments and effective support strategies, it was proposed that LAC may be better prepared to cope with their language difficulties, and which can therefore have a positive impact on their life outcomes.

5.12 Limitations of the qualitative study

While undertaking this study, the researcher was subjected to certain limitations. A significant issue was lockdowns caused by the COVID-19 pandemic. The original plan was to collect data through face-to-face semi-structured interviews based on the convenience of the professionals regarding place and time. However, due to the unprecedented circumstance caused by the pandemic, the original plan could not be followed, and an online platform was used to undertake the interviews. Furthermore, it became necessary to alter all materials for the project documentation such as protocols, information sheets, consent forms and recruitment procedures (see Appendix G).

An additional limitation of the current study was that the data collection and initial coding stages were conducted by the researcher, who was a PhD student. This approach might have introduced personal biases, beliefs, and assumptions that could have influenced the interpretation of the findings. To address and mitigate these limitations, the researcher collaborated with a senior qualitative researcher. That researcher also analysed 10% of the transcripts and agreed 100% with the initial codes and themes (see section 5.8 and 5.9 for more information). The researcher has continued to work with senior qualitative researchers throughout the data thematic analysis process by applying Braun and Clarke's (2006) six steps process accordingly. However, it is essential to note that the current study was limited by time constraints and resources since it was a PhD project. To improve the study's credibility and enhance the rigour of the findings, future research should consider employing multiple researchers to collect and analyse data, thereby reducing the likelihood of personal biases. Additionally, researchers could use a triangulation approach by comparing the findings from different data sources, such as interviews and focus group observations, to enhance the validity and reliability of the results.

Another limitation was researcher bias which is a risk for all kinds of research projects, including the one in question (Braun & Clarke, 2021). The researcher attempted to address this issue by using several strategies, which are discussed in sections 5.8 and 5.9 above. The researcher's personal beliefs, values, and experiences can influence the interpretation of the data collected, leading to skewed results (Braun & Clarke, 2021). To overcome this risk, the researcher implemented several strategies to address researcher bias. One strategy employed was reflexivity which is discussed in section 5.6.1 above. This approach allowed the researcher to identify her preferences and to take steps to manage them to ensure that her biases did not influence the current research findings. Another strategy used by the researcher was triangulation. Triangulation involves using multiple methods or sources to cross-validate the data. This approach reduced the potential for researcher bias by allowing the researcher to confirm the consistency of the data across multiple sources e.g., SR and quantitate study and qualitative study results (Creswell, 2009). The researcher also employed an approach which involved seeking support and advice from a senior qualitative researcher to address researcher bias. This process involved discussing the data analysis, coding and identifying the themes with another researcher. This approach allowed that other researcher to offer regular feedback, suggestions and critiques, which helped identify and address any potential biases that the current study's researcher may have missed (see section 5.8 and 5.9).

Another limitation could be the specific participant group of the current study, their job roles and level of involvement in children's lives. For example, while the study interviewed professionals from various fields who worked with children in different capacities, some professionals worked with LAC with severe developmental needs, while others only worked with mild ones. For instance, professionals who worked with LAC with severe developmental difficulties might have perceived their language needs differently to those who worked with children with mild needs. To address such limitations, future research could consider comparing the language difficulties of LAC between severe and mild developmental needs to gain a more nuanced understanding of the participants' perspectives on their language difficulties. Additionally, researchers could conduct follow-up interviews with the same participants to assess changes in their views over time or examine the perspectives of other stakeholders, such as nurses and police, to gain a more comprehensive view of LAC's language difficulties and needs.

Furthermore, LAC are the ones who experience language difficulties, and thus their perspective would have been invaluable in understanding the extent and nature of language difficulties in this population. Thus, by interviewing the children, the researcher could have gained insight into the specific areas where the children struggle, such as grammar, vocabulary, social pragmatics, or more. If the researcher had conducted interviews with the children themselves, first-hand information could have been gained about their experiences with language difficulties. This would have allowed the children to speak for themselves and share their perspectives on the specific areas in which they struggle with language. By giving children a voice in the research process, the findings could have been more meaningful. Moreover, the researcher could have used this information to develop more targeted interventions to address the specific language difficulties experienced by the children in the population being studied. In addition, interviewing LAC would have allowed the researcher to gather information about the contextual factors that contribute to language difficulties. For instance, the children's home environment and cultural background are known to significantly impact their language development (e.g., Hoff, 2003; 2006; Fernald, et al., 2013; Vernon-Feagans et al., 2012). By hearing directly from the LAC, the researcher could have gained a more comprehensive understanding of these contextual factors and how they interact with language difficulties. Lastly, including the children's perspective in the study would have provided a more holistic understanding of language difficulties. By combining the perspectives of children and professionals, the researcher could have created a more nuanced portrayal of the language difficulties in this population and identified potential interventions that address the needs of all LAC.

Another limitation is that physical meetings would have created a safe and comfortable atmosphere that is essential for building trust and rapport with some interviewees. This could have been particularly important for participants who worked with children with high needs, as they may feel more comfortable sharing their experiences and perspectives in a face-to-face setting where they feel supported and valued. The online interviews used in the current study did not allow for the same level of interaction as in-person interviews since the interviewer and interviewees were not physically present in the exact location. Thus, it was vital for the researcher to have acknowledged and considered the benefits of face-to-face interviews when planning their research methodology. While remote interviews can be useful for gathering data, the researcher has experienced that they may

not capture the same level of richness and depth as face-to-face interactions. Further, the researcher may have missed out on critical non-verbal cues that could have contributed to a better understanding of participants' experiences and perspectives (Novick, 2008).

Overall, the current study had some limitation; however, by implementation of some valuable strategies such as reflexivity and triangulation and seeking the advice and help of a senior researcher, it was possible to address some of the potential limitations to increase the validity of the current research findings. Chapter six will bring together the results from both the quantitative (chapter 5) and qualitative studies, as well as scoping review.

CHAPTER Six: Discussion

6.1 Introduction

The aim of this chapter is to pull together the findings from Chapters 3, 4 and 5 and discuss the overall themes that came out across the thesis. The PhD covered three phases: a scoping review (Chapter 3), quantitative study (Chapter 4), and qualitative study (Chapter 5). This work represents the first to the author's knowledge to investigate language difficulties in LAC by examining evidence from 3 key sources: previous research, existing data and interviews with professionals, that is all guided by the same sets of research questions. By adopting multiple data sources, the researcher was able to triangulate evidence on language difficulties in the LAC population. The triangulation of data improves the reliability of the findings.

Following a synthesis of findings in this chapter, the next chapter outlines implications for clinical and governmental practices which are explored and discussed in the conclusion chapter. Finally, suggestions for future research which may arise within the realm of language difficulties in LAC are presented.

6.2 Key findings

Four main findings were identified across the PhD:

1. LAC are at higher risk of poor development of language skills across all areas of language, including social pragmatics and related areas of verbal cognition
2. There are specific demographic and environmental factors which relate to language development and difficulties in LAC (e.g., OHC settings, maltreatment), although these relationships are likely to be complex and not picked up with routine data
3. There is a link between language difficulties, educational, social, emotional and mental health difficulties (SEMHD)
4. LAC face barriers to accessing language assessment and intervention, but there are some support strategies and systems relevant to LAC's language difficulties which need to be implemented routinely

The section begins with a discussion of the first two findings (key findings 1 and 2) together. This is followed by a discussion of key finding 3, about the link between language difficulties and LAC's life outcomes. Lastly, key findings 4 are discussed in details. Following this general

discussion, the chapter reviews a model which describes the overlap in risk factors between LAC and other groups. In addition, the specificity of the multifactorial additive risk factors for LAC compared with non-LAC peers (see Figure 6.1).

6.2.1 Finding 1: LAC have a higher risk of poor language skills across a range of domains

As reviewed in Chapter 2 children's language development depends on their social environments, which helps them develop sufficient receptive, expressive, and pragmatic language skills to communicate with others (Taylor et al., 2013; Conti-Ramsden& Durkin, 2016; Law et al, 2017). Some children experience ACEs and are more at risk of difficulties with language development (Westby, 2019; Hwa-Froelich, 2012; Lum et al., 2015). LAC are one of those groups who both predominantly come from low SES backgrounds and face ACEs (e.g., maltreatment and trauma) and are vulnerable to language difficulties (e.g., Stock & Fisher, 2006; Eigsti & Cicchetti, 2004; Stacks et al., 2011). This finding is supported in all areas of the current thesis. Across 35 studies in the scoping review (Chapter 3) LAC consistently perform below the age-matched non-LAC population (Di Sante et al., 2019; Cobos-Cali et al., 2017). In the quantitative study (Chapter 4), 56 from 78 LAC (72%) presented with language difficulties. High incidence of language difficulties was found in all three developmental domains assessed: expressive/receptive language, pragmatics/social issues, and verbal cognitive difficulties. Throughout the qualitative study (Chapter 5) professionals reported significant concerns for language, pragmatics/social issues and verbal cognitive difficulties in LAC. The findings suggest that language difficulties in LAC are likely to have multiple, cumulative and complex causes. Some of these causes overlap with other vulnerable groups in the wider literature.

6.2.2 Finding 2: Possible factors affecting language skills in LAC

Multifactorial risk factors are considered under several categories, namely undetected or unrecognized language difficulties - lack of knowledge, training, and awareness of these difficulties in LAC; the effect of social disadvantages on language difficulties; different experiences of parent/caregiver-child interactions; poor care in the OHC placements placement disruptions or instabilities and early childhood adversities.

6.2.2.1 Undetected and/or recognized language difficulties: lack of knowledge about language difficulties, training and awareness in staff who work with LAC

A common finding across the thesis was LAC's language difficulties are often unrecognized or in the majority of the case remain undetected. Studies from the scoping review in Chapter 3 concluded that between 54-63% of LAC have unidentified language difficulties (e.g.,Nathanson and Tzioumi 2007; Cross, 1998; McCool & Stevens; Hagaman et al., 2010; Bryan et al., 2015; Palazon-Carrion & Sala-Roca, 2020). Analysis of data for a specific LAC sample in Chapter 4 recorded only 8% of LAC screened (six from 78) were previously known to receive SaLT services. The unrecognized and/or undetected language difficulties in LAC were also reported across several of the professional interviews in Chapter 5 (see section 5.8.1.2. Theme 2 for more information). In fact, some of these professionals stated that LAC's language needs are not often prioritized as much as their other needs, such as finding them a safe place to live. The threshold for receiving an early language assessment is quite high, and, as a consequence, LAC's language needs stay at the bottom of the local authorities' priority list. Furthermore, several professionals commented that some social workers in their experience have never heard of 'language difficulties or SLCN' before.

Several professionals stressed that unless there is an obvious sign or explicit report of language difficulty, it is not at the forefront of professionals' minds when children are becoming LAC (see Chapter 5). Thus, it is widespread for language difficulties in LAC to go unnoticed due to a lack of resources, training, and awareness among frontline workers. Furthermore, some interviewees stated that children are known to local authorities as 'children in need' long before they become LAC. These professionals asserted that training to those who make the initial contact with LAC could help identify their language needs early. This comment suggests that the high number of LAC with undiagnosed language difficulties is connected to a systematic lack of training and awareness of this population's language needs.

A further important finding that emerged from the interviews with professionals (Chapter 5) was that LAC's language difficulties are often misinterpreted as other disabilities (e.g., Autism or Dyslexia) by school staff. Misinterpretations can lead schools and OHCs to decide they can no longer meet such children's needs. Professionals reported that LAC with poor language and communication skills often become frustrated, withdrawn and display challenging, or destructive behaviours. This can lead LAC to be perceived as being educationally 'problematic' which sometimes leads to permanent school exclusions (Chapter 5). Therefore, it is likely that LAC will not receive speech and language therapy services and will live with language difficulties throughout their lifespan.

6.2.2.2 Effect of social disadvantages on language difficulties

The literature reviewed in Chapter 2 argued that while most children develop complete language skills (Asmussen et al., 2018; Assous et al., 2018; Raaska et al., 2013) there are also a large group of children who have variable levels of language. There is a commonly reported link between this variability and children from socially deprived backgrounds (RCSLT-Factsheet, 2018; Law et al., 2011; Locke et al., 2002). Other studies report that these children continue to lag behind their peers from higher SES backgrounds throughout school life (Pace et al., 2017; Hoff, 2006; Meir & Armon-Lotem, 2017).

A majority of LAC also come from socially disadvantaged backgrounds (Simkiss et al., 2012) and share some risk factors with these other disadvantaged groups (Mathers et al., 2016). LAC, as part of a disadvantaged population, are prone to the same language difficulties as other risk groups. However, many LAC have additional issues. For example, they are frequently raised in extreme living situations that go beyond social disadvantage with subsequently more significant negative effects on development. This is described in several studies in the scoping review in Chapter 3. Pears and Fisher (2005) described LAC displaying lower language skills than their age and SES-matched peers. In Chapter 4 an analysis of SES was not possible because family demographic characteristics of LAC participants were not available due to safeguarding reasons. We can however use alternative information to explore this issue. First, the borough where the LAC originated is classed as low SES, where over 30% of primary- and secondary-age pupils are eligible for free school meals. It is probable that these SES-related inequalities in the wider geographical area may have affected the quality of LAC's home learning environments. The research suggests this, in turn limits their chances of experiencing rich language input and social interactions with parents/carers for example shared-book reading (Attig & Weinert, 2020; Hart & Risley, 1995; Qi et al., 2006; Raikes et al., 2006; Vernon-Feagans, 2012). Second, although the majority of the LAC samples resided in foster homes, with possibly higher SES backgrounds, the risk factors linked to social disadvantage were present before they entered into care. Third, based on a major theme linked to lack of awareness of language difficulties in this group, the LAC sample in foster care settings may have been monitored by frontline staff who were unaware of their language needs. It is thus plausible that frontline staff may not have been able to offer carers with information on ways to increase communicative activities or opportunities for LAC to enhance their language skills while in care. Even good quality foster care reduces adequate family-like experiences supporting their

language development. Notably, the interviewed professionals reported that LAC might live with foster families who do not recognize their language difficulties and thus might not seek help or support for their needs in a timely manner to address and enhance LAC's language needs. All of these factors linked to social disadvantage raises the risk of poor language learning environments outside of LAC's control. In Chapter 5 professionals also reported that LAC often missed out on opportunities to attend nurseries regularly and be taken to playgrounds. These out of home environments provide learning opportunities, allowing children to practise and improve their language skills. The professionals argued that LAC are possibly at risk of reduced life opportunities, subject to a range of risk factors over time, and so are more likely to develop poor language skills. The current study results suggest that LAC's language difficulties can be attributed to the complexity of their upbringing, particularly prior to entry into care, lower-SES environments and reduced opportunities to enjoy wider learning environments. Although LAC share some of the risk factors with non-LAC peers from low-SES groups, these differ quantitatively due to their unique experiences and care status.

6.2.2.3 Effects of early parent/caregiver-child interaction and inadequate OHC placements LAC's language

Parent-child interaction is considered in the broader literature to be a major factor explaining variability in rate of language development (Neppl et al., 2020; Frosch et al., 2019; Schoenmaker et al., 2014). Many studies highlight parent sensitivity, active interaction, high quality verbal stimulation and wider parenting knowledge as contributing to better child language skills (e.g., Hart & Risley, 1995; Hoff, 2003; Hoff, 2006).

Regarding parent-child interactions, in the case of LAC, the possibility of poor parent/caregiver-child interactions may be more frequent and extreme. Many LAC face adverse pre-care experiences including limited early parent-child interactions, and parental maltreatment (Krier et al., 2017; Wilkinson & Bowyer, 2017; DfE, 2018a). Most of the LAC sample investigated in Chapter 3 and Chapter 4 were in care due to these very reasons. Parental maltreatment is characterized by the absence of or interruption in the amount and quality of verbal and nonverbal communication (Sylvestre et al., 2016). Hence, being born and raised in such an environment is more likely to pose considerable risk factors to language development. The parent-child interactions that LAC were likely to have experienced could have involved neglectful, unresponsive and rejecting experiences. Although testing the relationship between parent-child interactions and language difficulties was beyond the scope of the current study,

the topic was nevertheless raised several times in the scoping review in Chapter 3 (e.g., Byrne et al., 2018). It was also raised in the qualitative study (Chapter 5). Several professionals reported neglect as a potential factor for LAC's language difficulties since it frequently results in poor caregiver-child relations and less exposure to effective parenting. The professionals also stated that LAC's language difficulties were related to trauma and attachment issues. They continued that specific pre-care experiences hinder LAC's access to positive parent-child interactions, contributing to their poor language skills. Furthermore, poor parent/caregiver-child interactions also continue once the child is placed in care. The effect of social disadvantages on poor caregiving is evident in Bowlby's study of the impact of caregiving in orphanages (Bowlby, 1951; Bakermans-Kranenburg et al., 2011). Furthermore, it must be kept in mind that a disruption in the interactions between parents/caregivers and children is at the heart of early child adversities (e.g., neglect), possibly relating to pre- and in-care experiences. Thus, to understand why so many LAC are at risk of having language difficulties, it is important to consider the environmental and relational context in which these children grow up.

Further, the purpose of OHC placement is to provide stable family-like environment that provides safe care and in turn, improve LAC's developmental needs. However, LAC are exposed to various OHC settings and caregivers who might not be able to provide responsive, sensitive and reciprocal interactions (Windsor et al., 2011; Bowlby, 1951; Bakermans-Kranenburg et al., 2011). The literature reviewed in the scoping review of the current study supported this notion. The effect of poor or inadequate placements contributes to reduced language skills across the reviewed studies (see Chapter 3 for more information). Despite being regarded as safe care environments, inadequate OHC placements cumulatively affect LAC's language skills. It could be that poor or inadequate OHC placements may have an absence of opportunities for adequate stimulation, communicative activities, and resources that play a crucial role in LAC's language difficulties. This topic is also raised on numerous occasions across the thesis. In the scoping review (Chapter 3), some OHC placements were reported to lead to a reduction in exposure to accessing stimulating opportunities for language input and social interaction (e.g., Windsor et al., 2011, 2013). Professionals reported children in OHC settings often experience a reduction in cognitive stimulation. In addition, the professionals also discussed the effects of foster care on LAC's language skills in the qualitative study (Chapter 5). Moreover, expectations regarding adequate care are known to be shaped by the relationships children form with their parents or caregivers and influenced by the bonds they establish with their carers (Coman & Devaney, 2011). In foster care settings, for example, a

foster carer's understanding of a child's behaviour, unique personality, and past experiences all play a significant role in their ability to manage their relationship with the child effectively. Therefore, the foster carer's capacity to establish a positive and supportive relationship with the child can impact the child's expectations and attitudes towards the care they receive and future relationships with their new carers, consequently it can contribute towards their language skills. The effect of such relationships observed in a theme from the scoping review was that foster care placements acted as protective factors for LAC's language skills.

The professionals also described that in some boroughs, many LAC are placed in residential schools or homes. These types of placement arrangements pose a greater risk for LAC to develop adequate language skills. In some cases, residential homes can be used as short-term emergency placements where a child has experienced significant harm within a family environment until alternative care and support are arranged. This is to ensure the safety and the well-being of the children immediately (WWCSC, 2019; UNICEF, 2015, 201; Milligan et al., 2019). But, in most cases, residential homes are mainly used for children considered incapable of living in a family-like environment and, therefore, are seen as the last option. These children usually face significant traumatic experiences or mental health conditions (Steels & Simpson, 2017). Thus, these types of placement arrangements might not be appropriate for all LAC, especially those with language needs. As in certain situations, recognising and addressing LAC's language needs in such environments may be challenging. Indeed, as was mentioned earlier, some professionals have commented that in the world of social work, the language needs of LAC are either overlooked or given low priority. In respect of the arranging of placements this neglect is serious, as a lack of consideration of LAC's language needs could prevent them from having opportunities to be with peers and groups of a similar age while preventing them from interacting with their surroundings or with one another in communicative ways, and thereby contributing to their poor language abilities. Therefore, it is crucial to consider each LAC's unique needs when selecting an OHC setting to ensure they receive the necessary support and resources to develop better language skills. The scoping review reported that the age of placements and length of time the child spent in each placement (see Chapter 3 for more information) related to their poor language skills. The literature relating to time spent in care and language difficulties is inconsistent. Further research is needed to unpick the link between variations and conditions of OHC placements on LAC's language difficulties.

6.2.2.4 Effects of placement instabilities on LAC's language

Placement instability was a theme in the qualitative study. Interviewed professionals reported that when children enter into care, they often experience multiple changes in homes, schools, workers, and even in local authority regions and see different professionals throughout their LAC journeys (see Chapter 5 for more details). Some professionals described that due to placements instabilities most LAC having multiple primary caregivers, including birth families, foster carers and residential workers/caregivers. This is a situation which is also known to cause additional disruptions and may be related to higher levels of developmental risks, including language difficulties (Hawk et al., 2018; Ogundele, 2020; Clemens et al., 2018). Furthermore, several professionals commented that instabilities and frequent changes in placements result in the unnoticed development of language difficulties in LAC- each change has a cumulative negative impact on the LAC's language, communication skills, and overall development. Additionally, they reported that frequent placement changes often prevent LAC from staying in one place long enough to undergo language assessments or receive SaLT services. This observation suggests that the more changes LAC experience, the more difficulties they potentially perceive in their language skills. This effect is also evident in literature where it was reported that each placement change might include multiple transitions, bringing many changes and challenges affecting LAC's outcomes (Fawley-King et al., 2017; Jones, 2011; Rock et al., 2015; Jones et al., 2011; Clemens et al., 2017). Further, a significant effect of frequent placement changes is also seen in areas where LAC's language difficulties are perceived as either mild or difficult to deal with; consequently, they are not considered for assessment (see Chapter 5 for more details). This finding is important, as it indicates that more experience in placement instabilities and/or changes may bring more challenges, resulting in LAC having poor language skills during early childhood and beyond.

As a last point, professionals stated that for some LAC, being labelled as 'looked after' carries a stigma that prevents them from engaging in communicative activities within their environments and further developing their language skills. This finding suggests that being in care has wide-ranging developmental impacts on LAC that could cause long-term detrimental consequences to the language skills of the LAC population.

6.2.2.5 Early childhood adversities: maltreatment

As discussed in the literature review in Chapter 2 the effect of early childhood adversities, in particular maltreatment, on neurological development and language development is

widespread (Westby, 2007; De Bellis et al., 2013; Culp et al., 1991; De Bellis et al., 2009). The majority of studies in the scoping review found that LAC exposed to various forms of maltreatment (e.g., abuse, neglect, and trauma) had difficulties in all aspects of language. For example, among the studies reviewed, almost 45% of LAC in Trout et al.'s (2011) study were described as struggling with receptive language, while in the study of Di Sante et al. (2019), they were described as struggling with pragmatic language skills (45%). These findings are also evident in the analysis of LAC date the quantitative study. One of the main reasons a large LAC sample was in care was due to various form of maltreatment. The results provided in Chapters 3 and 4 coincided with the qualitative study findings in Chapter 5. The interviewed professionals reported that ACEs, in particular abuse and neglect, play an important role as predictor of LAC's language difficulties and prevent LAC from developing better language skills, consequently reducing their chances to use their skills in communicative activities in different contexts (e.g., schools). A wide aspects of language was impacted: expressive/receptive languages, social pragmatics, speech articulation, as well as the verbal working memory capacity.

It is possible that clinicians and educators may 'expect or assume' that LAC are more likely to have poor language skills due to their unique care experiences (e.g., maltreatment, trauma), and thus rate them accordingly. Such expectations might also be the case for interviewed professionals in Chapter 5, as all of these professionals worked with LAC in different capacities and have access to LAC's care-related backgrounds, which may have included their maltreatment histories. It is possible that some of the reporting of maltreatment categories in the current thesis (Chapters 3 and 4; see the limitations section below) was either unclear or overlapped with other risk factors when professionals were recording their histories, which might have affected the degree of correlation between ACE and language difficulties in LAC. The combined evidence across the three studies within the current thesis suggests that maltreatment was critically related to LAC's language difficulties. However, caution must be taken when professionals are recording children's ACEs histories when they enter in care. This caution would help local authorities' clinicians to identify and address LAC's language needs while helping researchers produce more robust evidence on this topic.

6.2.3 Finding 3: Links between language difficulties, educational, and social, emotional, and mental health (SEMH) and wider outcomes

There is much evidence which confirms that LAC face a greater risk of poor outcomes beyond language difficulties such as early attachment, education, social and emotional well-being. Many of these areas are interrelated (Bell, 2007; Mathers et al., 2016; Oakley et al., 2018; DfE, 2015a, b; DfE, 2016c; DfE, 2018c; Adley & Kina, 2014; NSPCC, 2019; NICE, 2019; Sebba et al., 2015; Mannay et al., 2017; Gypen et al., 2017; Bazalgette et al., 2015; Sempik et al., 2008; Richardson & Lelliott, 2003). However, there is less research regarding the association between LAC's language difficulties and wider outcomes (see Halfon et al., 1995; Cross, 1998; Roy & Rutter, 2006; Pears et al., 2011; Moreno-Manso et al., 2015; Snow et al., 2020; Chambers et al., 2010). Even in these studies, the association between LAC's language skills, their educational attainment and SEMH was not directly examined. Therefore, the present thesis represents the first to categorically identify such associations. In particular, the thesis asked what role was played by language difficulties in the educational attainment and SEMH outcomes of LAC.

6.2.3.1 Association between educational attainment and language difficulties

The literature on non-LAC children with persistent language difficulties shows a significant relationship with academic challenges (Norbury et al., 2016b; Janus et al., 2019; Matte-Landry et al., 2020). LAC share some of the same risk factors identifies in the wider literature (e.g., DfE, 2010; Simkiss et al., 2013' Evans et al., 2017). The thesis aimed to investigate the links between language difficulties and LAC's educational outcomes (in English, Maths and Science). Chapter 4 detailed a range of associations between poor educational outcomes and LAC's language difficulties e.g., LAC's cognitive and social pragmatics skills. Similar themes were raised in interviews with professionals in the qualitative study. These were barriers for children in their ability to access the national curriculum, making them unable to meet the social and academic demands of classroom tasks and other learning activities at school. In fact, some professionals described having language difficulties as being a 'knock-on effect' on LAC's confidence and self-esteem, affecting their schooling while making it harder for them to remain focused on their education (Chapter 5).

The negative effect of their language difficulties on their poor education attainments is also observed in their behaviour, such as 'picking fights' or 'talking throughout the classroom', resulting in them facing permanent exclusions from school. The professionals remarked that LAC who were at risk of being excluded from school frequently fall behind in their studies in primary school and beyond, and they miss out on substantial portions of their education. These

findings underline the potential negative effects of unidentified and unmet language difficulties when a child is known by social services and/or when they become LAC.

Further, although explorations of the link between LAC's wider life outcomes and language difficulties were not within the scope of the current study professionals talked about LAC having a less chance of attending university compared to the general population. In fact, some comments included those around LAC's difficulties gaining employment or receiving promotions when they get older. This finding expands on previous literature, where it was found that maltreated children are also less likely to finish high school and gain university qualifications, which subsequently leads to unemployment and lower incomes (Mersky & Topitzes, 2010). Another important finding that emerged from the interview results is that due to their language difficulties, LAC struggle with their day-to-day administrative tasks when they grow older, such as dealing with their bills and council tax. These findings also provide significant support to the recent work by Oakley and colleagues which reported that approximately 40% of those care leavers (previously LAC) between the ages of 19 and 21 were not in education, employment, and training (NEET: Oakley et al., 2018). This indicates that LAC are more likely to experience academic and economic disadvantages throughout their lifespan. For some professionals, LAC's difficulties with language could possibly mean that they can only complete lower-level vocational qualifications which can exacerbates their chances of going to university and gaining employment.

These results underline how crucial it is to conduct early language assessments in LAC to improve their educational and wider outcomes. In the same way, they stress that early assessment and detection of language difficulties can have the potential to impact many aspects of LAC's life positively, such as overcoming difficulties with continued academic achievement, being included in school, and handling daily administrative tasks effectively, thereby improving their life chances. However, further research is needed to evaluate the impact of LAC's language difficulties on their wider life outcomes in a large sample.

6.2.3.2 Association between LAC's social, emotional and mental health (SEMH) and poor language skills

The results across the thesis provides evidence that LAC's language difficulties are closely associated with their SEMH. This was seen in the correlations reported for the quantitative study (Chapter 4) and discussed frequently in the qualitative interviews (Chapter 5). The

interviewed professionals described the link between LAC's language difficulties and their SEMH, as LAC are presenting difficulties in areas such as social pragmatic difficulties, anxieties, stress, and challenging behaviours. In fact, some participants stated that LAC 'become products of their behaviours'. Their language difficulties are perceived as behavioural difficulties as some frontline professionals and school staff assume that LAC's behavioural difficulties are part of their personality instead of thinking that these children may not have the tools to communicate their needs using language appropriately. The professionals said that misinterpreting LAC's language difficulties as behavioural difficulties is a common practice, which could exacerbate or even cause some of their SEMH. In fact, several comments were made by professionals that language difficulties frequently inhibit and have 'a knock-on impact' on LAC's overall mental health well-being and self-esteem, consequently manifesting in their SEMH. Talking about this issue, interviewees reported that LAC with language difficulties often hide their difficulties with frustrations or behaviours. The results of the qualitative study further found that in some cases, LAC pretend that they understand everything and portray a picture that everything is going well in terms of their language, because they do not want to be seen as having language difficulties or being different from their peers in that respect. This is serious, as such behaviours could also exacerbate their difficulties and could put LAC in vulnerable situations in different contexts (e.g., educational, social stitiations or employments)

The wider literature has reported mixed findings for this same question. Snow and colleagues found no correlation between oral language, literacy, and mental health conditions within a LAC sample (Snow et al., 2020). They instead argued that mental health difficulties are common symptoms rather than a cause of LAC's language and literacy difficulties (Snow et al., 2020). In other research close correlations between language difficulties and mental health issues were reported (e.g., Cross, 2011a; Levickis et al., 2017; Curtis et al., 2018; Durkin et al., 2009). Further research in larger LAC samples is needed in this respect.

Another related issue raised by professionals was that LAC's language difficulties could make them vulnerable to be exploited by people, being involved in crimes and even becoming part of gang members such as so-called 'county lines' (see Chapter 5 for more details). This finding expands the small volume of literature exploring language difficulties in LAC who were under the youth justice system (e.g., Bryan et al., 2007; Bryan et al., 2015) and juvenile offenders with language difficulties (Snow & Powell, 2008; Fitzsimons & Clark, 2021). Some

professionals reported that LAC often search for a sense of belongingness to a group. However, they stressed that due to their poor language skills, they bond with people in different ways (e.g., being with abusive people), and the consequences of such relations may lead them to face sex and gang exploitation. Some professionals felt that language difficulties reduced LAC's opportunities to strengthen their coping capabilities. Instead, LAC were found to have developed various negative coping strategies by themselves to manage their language difficulties, one of which was the use of 'masking or hiding techniques'. These techniques were reported in respect of the use of vague terms, pretending, presenting behaviours, swearing or choosing not to talk in different situations. All this may mean that LAC have difficulties with finding word to communicate their needs, initiating conversations with others, maintaining the topic during conversations, answering or asking questions, resolving conflict, and building relationships. These ideas are reflected in the wider LAC research e.g., self-esteem (Schofield et al., 2015; Richardson, 2002), lack of involvement in school activities (Berridge, 2007; Simkiss, 2012) and association with delinquent peers (Jacobsen et al., 2020; Richardson, 2002), achieving age-expected qualifications (e.g., Sander et al., 2018; Clegg et al., 2009; McCrystal et al., 2007).

6.2.4 Finding 4: Barriers and solutions for accessing language assessments and interventions

6.2.4.1 Barriers to access

It has been well documented that children from disadvantaged backgrounds have higher chances of entering preschool with limited oral language skills (Dockrell et al., 2022; Law et al., 2017; Chiat & Roy, 2014) and addressing their language delays may entail providing regular SaLT assessment and interventions (Dockrell et al., 2017). Access to assessments is raised in the current thesis several times. In the scoping review, several studies suggested that LAC would benefit from early language assessments, and this is also mentioned across several of the professional interviews in Chapter 5. The current thesis raised a series of obstacles preventing LAC from receiving early language assessment and intervention: interviewees spoke about a shortage of SaLTs to undertake their assessments, a lack of funds, limited understanding and recognition in professionals of which children have language difficulties, inadequate language assessment tools, and inconsistencies in assessment times are a few of the factors named by professionals. These barriers might be more problematic for LAC. A majority

of the LAC samples in studies in the scoping review and in the quantitative study were not known by a SaLT team prior to their entry in care. A small body of literature that has also highlighted the issues around early language assessment of LAC's language needs (e.g., Evans et al., 2004; Cross, 1998; Bryan et al., 2015; Maguire et al., 2021).

Other reported barriers raised in the current thesis were limited available SaLT services as the NHS does not have enough capacity to meet LAC's language difficulties, and there is an issue of who pays for LAC's SaLT services (see Chapter 5). Specifically, interviewed professionals have expressed concern about a lack of consistency over the 'who or whose umbrella' LAC's speech and language difficulties sit under. These professionals may argue that as LAC move between services such as health and/or education, it seems to create serious confusion and issues regarding funding about who pays their SaLTs. According to the interviewed professionals, further barriers were related to LAC not meeting the criteria for language assessments and SaLT services', with the thresholds reported to be relatively high (Chapter 5).

Even when a LAC receives intervention it is possible therapists have inadequate information regarding LAC's histories related to their language difficulties. In the scoping review, only a few studies (e.g., Byran et al., 2015) could find information about children's SaLT histories prior to their care status. A similar result is also evident in the quantitative study in the current thesis (Chapter 4) where, of the 78 LAC, only six children were recorded to be known to be receiving SaLT support prior to their language screening by the LA-X's SaLT team. This absence of prior information was also mentioned in the professionals' interviews in Chapter 5. The professionals described this as a challenge for accessing LAC's data related to their histories including their language needs as each service has their own systems or databases to record such information. There is a high possibility that LAC's language histories might not be passed on to or shared between services. Lack of information sharing between services may lead LAC to miss out on receiving interventions in a needed timely manner, consequently leading them to fall through the gaps.

Another important finding that emerged from the professionals' interviews was that the types of language terms and/or abbreviations used around them and attached to their LAC status (e.g., LAC, caregivers, PEP, SaLT) prevent children from understanding what is being said, asking them, or giving their opinions (Chapter 5). The professionals may suggest that such barriers are more likely to exacerbate LAC's difficulties with language.

6.2.4.2 Support systems and strategies relevant to LAC's language

Some professionals suggested that adding or making LAC's language assessments in their routine health assessments (e.g., dental, physical health and mental health), PEP and/or EHCP would help identify LAC's language needs early. The professionals thus argue that implementing routine or statutory assessment in such practices in the early phase of children's LAC status is crucial to meeting this 's language difficulties. This approach may mean that incorporating assessments of children's language into these processes would be the best way to determine whether they have difficulties with their language and meet their needs effectively. Another interesting finding was the benefit of multi-disciplinary teamwork, which suggested to allow local authorities and service providers to work together effectively to meet and support LAC with language difficulties (Chapter 5). Finally, other reported support strategies involved providing appropriate training to the staff, language assessment tools, resources, and intervention methods to address LAC's language difficulties (Chapter 5). All of these mentioned support strategies led interviewed professionals to suggest that these could help frontline staff in detecting LAC's language needs by raising concerns about their language difficulties and signposting them to SaLT teams in a timely manner.

Taken together, it could be argued that the practices related to routine and early language assessments, including collaborating with other multi-disciplinary agencies and providing appropriate support strategies, are crucial to meeting LAC's language needs. However, there are still significant gaps in the practices relevant to providing early language assessments, identification, interventions, and support strategies. It seems that for various reasons, practices related to early language assessment in LAC are very poor, which leads language needs of LAC remaining undetected. Future research should elaborate upon the benefit of having early language assessment and interventions on LAC's language diffiuclties.

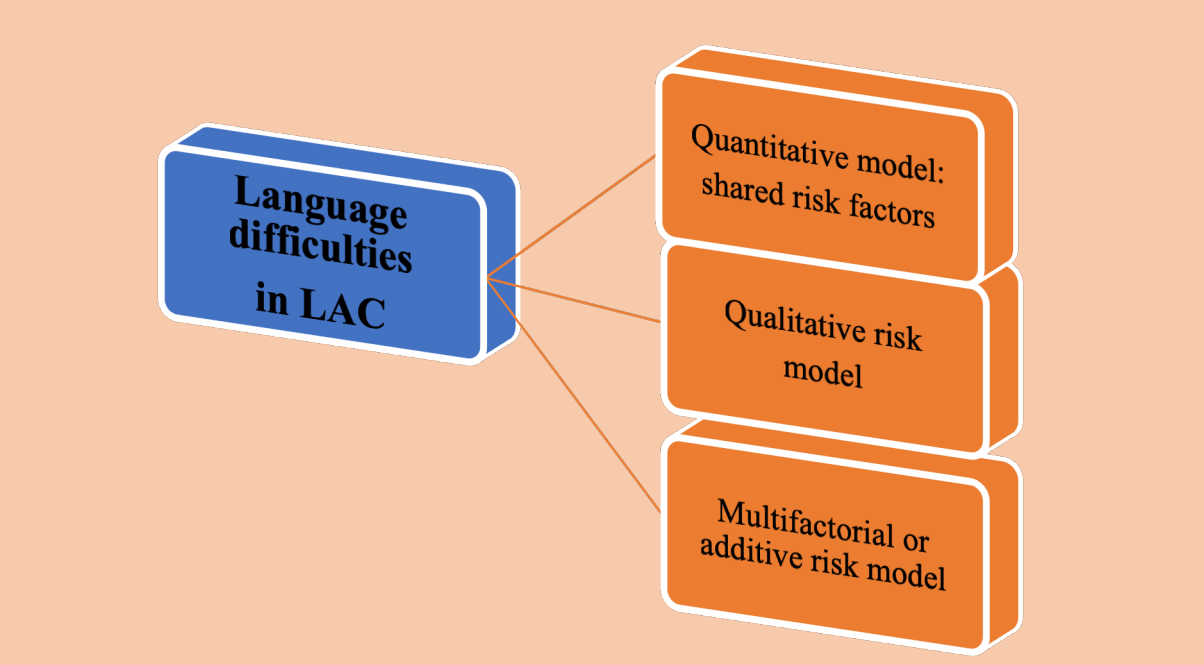
With the key findings of the thesis described the researcher next move on to discuss ways of conceptualising the reasons LAC have heightened risks for language difficulties and/or delays. She does this by discussing different possible risk models**.**

6.3 Understanding risk models of language difficulties in LAC

LAC share some risk factors with non-LAC groups in terms of language difficulties. However, it is crucial to differentiate the risk factors that only affect LAC and describe these factors based on their severity, as these risk factors could have a more profound effect on the language

difficulties of this population. To address these complexities and nuances, the researcher proposes three distinct risk models that take into account different life experiences.

Figure 6.1 Three risk models for language difficulties in LAC



6.3.1 Quantitative model

The quantitative model allows researchers to adopt statistical cut-off criteria to define language difficulties or disorders in different groups. It can also enable researchers or professionals to establish rates or degree of language impairments in children including LAC (Murphy et al., 2022; Bishop et al. 2017; RCSLT, 2020). This model could be used to describe shared risk factors between LAC and non-LAC with language difficulties. However, using some of the standardized test measures and the statistical cut-off criteria in the case of LAC might not be straightforward as there may be some qualitative differences between LAC and normative data or non-LAC samples**.**

Chapter 2 discussed that some children are known to be at higher risk of language difficulties than other groups, including children from low-SES and deprived backgrounds (e.g., Fernald et al., 2013; Locke et al., 2002; Hoff, 2003). In particular, standardised test measures based on developmental norms show that children from low-SES or deprived environments often perform in the DLD range (e.g., Roy & Chiat, 2013; Qi, et al., 2006; Hoff, 2006). Using a quantitative model, it can be argued that language difficulties are also common childhood problems for LAC. Since, LAC are one of these low-SES groups with the majority of them

coming from deprived backgrounds and often share similar risk factors with other low-SES or deprived groups. This raises the hypothesis that LAC who grow up in low-SES environments may struggle with their language difficulties because they are not achieving optimal cognitive function that support their language skills. Consequently, this may mean that the risk characteristics attached to those other language risk groups are more likely to be seen in LAC's poorer language scores and skills. The results of the current thesis support this proposition, with a higher level of language difficulties reported in the LAC population compared to aged-matched and normed samples. This models may suggest that LAC are not qualitatively different from other risk groups. Further, according to the literature, children with inadequate language skills are likely to experience poor educational attainment and SEMH outcomes (e.g., Conti-Ramsden & Botting, 2008; Lisa et al., 2019; Conti-Ramsden et al., 2018; Hollo et al., 2014; Norbury et al., 2016b). As with other groups, the quantitative model highlights the degree of language difficulties and their impact on LAC's educational and SEMH outcomes.

6.3.2 Qualitative model

This model assumes that the LAC as a group pass through general milestones of language acquisition as other groups do and undergo the same development processes that are involved in other, non-LAC groups. However, even though the language profiles of LAC might be identical to for example, non-LAC with Developmental Language Disorder, it is important to consider that the aetiological pathway (e.g., environmental or emotional factors) for these difficulties might be qualitatively different. By considering this pathway, we can present a more comprehensive depiction of the extent of language difficulties that LAC experience compared to their peers, as well as a more thorough understanding of the underlying causes of these difficulties. For instance, experiences of being LAC or being in care means their development and language learning processes can be disrupted due to a range of qualitative risk factors which often involve specific events or experiences that can significantly impact their language development. Difficulties with parents and/or caregivers can disrupt LAC's development across multiple contexts (e.g., Beckett et al., 2006; Sylvestre et al., 2016; Culp et al., 1999). Further, LAC are likely to experience fewer communicative interactions throughout their early childhood, more likely to face adversities or events that might affect their language development, and frequently experience maltreatment and social disadvantages.This suggests that despite sharing similar risk factors related to the development of language milestones, LAC differ from non-LAC groups qualitatively due to their unique LAC circumstances and experiences. Thus, one can argue about the qualitative differences in language difficulties

between LAC and other risk groups by considering the several risk factors, such as: a) Exposure to Language: as discussed in the literature reviewed in Chapter 2 and evident across the three studies of the current thesis, as a group, LAC may not have the same level of exposure to language as the other language risk groups due their extreme life circumstances (e.g., abuse or neglect). For example, LAC might be born in a household whose parents may suffer from mental health difficulties or have personal trauma which might result in them with having less time to talk, read, or play with their children. Further, there is the case of maltreatment by parents or caregivers which can prevent LAC in having quality or good communicative interaction with their parents or caregivers. These non-measurable or subjective risks factors can contribute to LAC's language difficulties. In contrast, parents of other language risk groups may have more time and resources to engage in activities that promote their children's language development. b) Family home or OHC environments: As discussed earlier, LAC are known to be more likely to live in homes or OHC placements that might be less language-rich compared to those of other language risk groups of non-LAC peers. c) LAC who live in inadequate or chaotic households or OHC settings are likely to have fewer opportunities for reading books, and fewer opportunities to have educational materials experiences, such as visits to museums. Further, due to poor living conditions and poor parenting, LAC might be at higher risk of health and malnourishing problems that can influence language abilities and other developmental skills (e.g., Petranovich et al., 2017; Tirella et al., 2007). For example, malnourishment can affect brain development and lead to language delays or difficulties. As a result, LAC area may also experience a higher prevalence of chronic health conditions such as mental health, which can affect their ability to attend and participate in activities that enhance their language skills. This has already been reported in literature where aside from their language difficulties, LAC were reported to experience developmental and physical difficulties, mental health difficulties such as bedwetting, coordination difficulties and sight problems (RCPHC, 2015; Petranovich et al., 2017; Bakermans-Kranenburg et al., 2011). When it comes to qualitative risk factors, it is important to assess LAC's unique experiences in specific events that can have a significant impact on their language difficulties, such as abuse, neglect, or trauma. These are apparent differences between LAC and other risk groups. LAC are more likely to suffer specific events or experiences that disrupt their normal course of language development and cause delays or difficulties in language abilities. Thus, the qualitative differences in language difficulties between LAC and other language-risk group children can be attributed to many risk factors that are specific to LAC, which can prevent them accessing opportunities related to exposure to language-rich environments, more resources and support.

6.3.3 Multifactorial risk model

While LAC might share some of the risk factors with other groups, they differ in degree (quantitative model) or uniqueness (qualitative model); and so there is a third model that could be considered a better fit for the LAC population. This model proposes that there are multifactorial differences between LAC and non-LAC groups. Multifactorial aspects can encompass the cumulative effect of a range of environmental risk factors (see Chapter 2 for more information) that can negatively impact children's language development, such as poverty, exposure to environmental toxins and characteristics of the home and family (Asmussen et al., 2018; Law et al., 2017; Hoff, 2003, 2006; Sundqvist et al., 2022). But, due to their unique care status or extreme life situations, the multifactorial risk factors faced by LAC are likely to be more severe than their non-LAC peers. These risk factors can include less exposure to enriching maternal language input (tapping into the mother's language skills), low-SES or extreme poverty, inadequate nutrition, poor housing conditions, maltreatment, and being raised outside the family context, such as in OHC settings (Pinto & Woolgar, 2015; Fisher, 2015; McCall, 2013). This means that it is essential to recognize that there is no single factor that can explain the differences in language development and difficulties between LAC and other groups. Further, LAC are more likely to be exposed to poor caregiving experiences within environments that provide fewer opportunities for positive interaction, be less inclined to engage with them, and may respond impulsively, which may cause them to experience fear and anxiety (Muhammedrhimov et al., 2004; Bakermans-Kranenburg et al., 2011). Therefore, it is crucial to consider all these risk factors when comparing the language difficulties of LAC with those of their non-LAC peers. Considering and acknowledging the impacts of multifactorial and additive risk factors can help portray a more comprehensive picture to determine the degree of language difficulties in LAC and causes of these difficulties. Moreover, conducting large-scale quantitative studies on the influence of multifactorial and additive risk factors on language difficulties in LAC and non-LAC groups would help clinicians and service providers understand better and, at the same time, examine their difficulties holistically.

6.3.4 Summary of the models

The current study results indicated that taking a multifaceted approach is essential to understanding the nuances of the language difficulties in LAC and other non-LAC groups.

When looking at the quantitative or scale model, it can be argued that LAC experience language difficulties to a similar degree as other non-LAC groups. In addition, as with other groups, the prevalence of language difficulties in LAC can be identified by using a range of standardized

language tools. On the other hand, the qualitative model indicates that non-measurable or individual risk factors attached to LAC's unique care status may contribute to language difficulties in this population. Furthermore, the qualitative model helps one to argue that despite the risk profiles that are shared with their non-LAC peers, they differ from their peers qualitatively due to their ACEs. Consequently, their peers might have more opportunities to access an adequate language-rich environment than their LAC peers, which can lead to better language skills. Regarding the multifactorial or additive model, this highlights that a combination of many risk factors can cause language difficulties in LAC. Therefore, this suggests that when exploring language difficulties in LAC, we must consider their unique situations and extreme life experiences.

Overall, these models underscore the importance of adopting a holistic approach in examining language difficulties among LAC rather than relying on oversimplified approaches. Accordingly, considering qualitative and multifactorial or additive risk factors can facilitate researchers and clinicians in gaining a comprehensive understanding of the language difficulties faced by this population.

6.4 Limitations of the current study

There are limitations associated with conducting studies with vulnerable populations in general, and a number of limitations that apply to this study specifically. The original plan was to use both qualitative and quantitative methods which involved direct testing of LAC and face to face interviews with professionals. The COVID-19 lockdown, social distancing measures and City's restrictions on face-to-face data gathering affected the research. This happened in the second year of the PhD and instead of the direct testing, a secondary dataset was acquired for the quantitative data. Most of the data for the qualitative study was gathered using online platforms. This adjustment required ethical form amendments, as well as a new ethical procedure and honorary contracting with the LA-X which took time. The use of secondary data also led to a number of design challenges, as the data had not been intentionally collected with the current PhD research purposes in mind (Vartanian, 2010). Scores from a non-standardized language questionnaire created by a group of highly specialist SaLTs was used as an indication of language difficulties. Although the questionnaire covered all areas of language skills, including cognition and pragmatic skills, some of the questions were not filled in. These changes might have affected the results of the current study as this measurement of language screenings has relied solely on a language screening questionnaire created by a highly specialist

Speech and Language Therapists (SaLTs) team, which was sent to different schools by LA-X's SaLT team for school staff to filled in such as schools' SaLTs or LAC's teachers. It has not been psychometrically validated, and we do not know if the items were clinically motivated. We also do not know under which circumstances LAC have been screened and how it is being used in practice. Despite this, the researcher has exercised a great deal of caution in the current study, and by treating this tool as though it can be relied upon in actual use. The fact that scores on the language assessment correlate with a variety of other outcomes (e.g., educational outcomes) helps to reassure us that the scale accurately reflects reality.

In contrast, the SDQ is a reliable measure that uses brief diagnostic instruments to assess children's emotional and behavioural concerns in practice. The researcher initially planned to use SDQ in the current study. However, due to Covid-19, the existing SDQ database was also used, which was already gathered by the LAC teams. This means that the researcher did not have control over which children had these data or not, as some children's scores could not be accessed which may have affected this study's results. The same might apply to the children's educational attainment results. This could be because, although LAC were under the legal guardianship of an inner London borough, due to the nature of the group's care status and their EHPs, children were studying across various schools, which is also likely to have affected this study's results.

Difficulties with gathering LAC's demographic information from the database was another limitation, as some information was missing or could not be accessed (e.g., ethnicity, reason for children entering in care) for various reasons. As a result, the analyses could only take into account the limited information that were available. This might have also affected our result that some of the demographic/environmental factors were not found to be associated as expected with language skills of LAC (see Chapter 4) which contradicts the literature (e.g., Di Sante et al., 2019; Byrne, 2018). Further research is needed to investigate predictors of language profiles of LAC in a larger sample, with more reliable skill-based assessments and demographic sources. Ideally, this would involve looking through care histories and direct testing of LAC and non-LAC children using standardized language measures to see if they differ.

Another limitation is that this study may have miscalculated the real impact of ACEs on language difficulties. Although the effect of wider ACEs was not the scope of the current study,

exploring the effect of full ACEs (e.g., duration or extent of LAC's maltreatment and/or trauma and biological family SES histories) on LAC's language difficulties would have been beneficial. As these others were not included, ACE factors may have influenced LAC's language skills. Further, LAC often face placement instabilities which may have resulted in the dataset regarding children's background information not having been shared or recorded accurately. Such factors may lead to an underestimation or miscalculation of the actual effect of ACEs and their relations to LAC's poor language outcomes. Thus, further research is needed to investigate the effects of wider ACEs on LAC. When determining such effects, the researcher can use measures of early screenings for wider ACEs involving both informal and/or formal assessments to identify LAC who might have been suspected of language difficulties.

The LAC sample in the current study was assumed to be representative of the general child welfare or LAC population, because the secondary dataset represented all children in the care of that LA-X who fitted the eligibility criteria. However, language data was not available systematically across all children. Instead, it was entered for those LAC that had initial SaLT assessments. To mitigate this, the prevalence estimate was calculated using the entire sample as a denominator (thus assuming children who had not been assessed by SaLT had no language difficulties). However, this in turn may have underestimated language difficulties in those not screened for language, and so it would be helpful for future research to screen all children in an LA-X for language or, what would be even more beneficial, test a whole sample's language skills using formal test measures to determine their difficulties from the point of view of standardized tests, and to compare their language results against normed samples or non-LAC comparison groups.

A further limitation is that the research was a within-subject study. It would be useful to measure the language skills of LAC, and directly compare these with a non-looked-after group. This study also discovered that despite the recognition of LAC's language difficulties or delays, interest in investigation of this population's language difficulties has been scarce. For LAC, a lack of evidence means that they are more likely to live with undetected and unmet language difficulties throughout their lifespan. Thus, future research directly assessing the language of a larger number of LAC is therefore warranted. Further, the current study found that LAC's difficulties with language demand a greater attention. Local authorities and policymakers thus should prioritize addressing LAC's language needs by focusing more on both comprehensive and multimodal early language assessments, as well as interventions. The main mechanism of

meeting these needs is to ensure that decisions on LAC's access to early language tests and treatments are made with input from all relevant agencies (e.g., schools, SaLTs, parents, and EPs) as the primary focus. Such collaborations and work can help to address LAC's language needs.

6.5 Strengths of the current PhD study

The main strength of this PhD is that it is the most comprehensive research on LAC's language difficulties in the UK and across other countries. It includes all available research related to LAC who resided in different OHC settings and were under local authorities' care or welfare systems throughout childhood. It also attempts to locate the cumulative reasons for why LAC experience heighted risk factors. A particular strength was a large LAC sample, including their language, SDQs, and educational outcomes. This allowed for a broader investigation of the language difficulties in LAC and wider outcomes. Also, this study has particular strengths in its breadth of methodological approach and design. Its particular, a broad approach allowed several important questions relevant to LAC's language difficulties and the ways in which their difficulties relate to their life outcomes to be addressed. Further, the study is novel as it incorporated three different data sources (a scoping review, quantitative and qualitative studies) in relation to LAC's language difficulties. This allowed the conceptualisation of the incidence rates and severity of language difficulties for the LAC population. Thus, conceptualising the severity of language difficulties in LAC allowed the researcher to move away from the current trend of investigating only one aspect of language difficulties in LAC. The inclusion of three data sources also provided holistic insight into the associations between LAC's language difficulties and their broader life outcomes. The broadness of design allowed the researcher to determine that LAC had difficulties in all areas of language. The methodological approach used can thus be a model for future research. The application of such a methodology or approach in future research can function as an effective template for better-resourced investigations, adding value to the original research, allowing for more robust results, and adding statistical power to future findings.

The study also drew on multiple perspectives which produced extensive data. For example, conducting online semi-structured interviews with professionals who were working with LAC on a day-to-day basis allowed the researcher to reach more professionals across the UK. Gathering the views of professionals from different regions provided strong support for and strengthened the overall study's results. This current study also revealed that LAC's other

needs are often prioritized above their language needs, causing them to face significant barriers to accessing SaLT provisions, consequentially live LAC with undetected and unmet language needs.

6.6 Future research

While the current study provides preliminary evidence, a number of possibilities for future research should be considered. First, there are significant gaps in evidence and investigation into the language development and difficulties, as well as a lack of prevalence of data on the language difficulties relevant to LAC globally. Further investigation into the language support needs and intervention strategies of LAC have yet to be explored by existing literature, which thereby also represents an important gap in knowledge. Until this foundation knowledge is carefully constructed, it is unrealistic to think and expect LAC to perform at the same levels as normed samples or their non-LAC peers in a variety of life trajectories. The current study addressed some of these gaps, exploring LAC's language difficulties and making some suggestions for how to meet their needs. Future research using a comprehensive battery of direct assessments should address such gaps further.

Second, the concept of language difficulties is multi-layered, and it would be fruitful to ascertain the precise nature of the difficulties in each layer for LAC. Future research that explores these aspects may provide additional insight about profiles of language difficulties, and whether these match language difficulties or SLCN in non-LAC, that could be helpful toward providing early assessment and therapy. A deeper understanding of the exact nature of these language difficulties may increase both service providers and clinicians' ability to support LAC at home and school. In addition, it would also be meaningful to investigate whether LAC with language difficulties show typical or slower developmental trajectories relative to typically developing children. Further, the current research has gone to identify that little is known about how LAC feel about their language difficulties and experiences. On one level, this is no surprise since language difficulties in LAC is an area that has not been given much attention to date. Future research in this area should be carefully designed to consider the views and perspectives of LAC on language difficulties and on what kind of support they want from both service providers and policymakers. Gathering LAC's views on their language needs might be clinically relevant and potentially impactful since their views are often underrepresented and are almost absent from the literature. Thus, the development of

participatory studies actively seeking the views and opinions of LAC from various OHC settings should be prioritized in addressing their needs timely manner.

Fourth, on a broader level, subsequent research is required to identify which aspects of early life are associated with language difficulties. This could enable potential problems to be identified and addressed in a timely manner and result in various support and intervention techniques that focus on improving LAC's language abilities, as well as on LAC's other needs. Early intervention for the language difficulties LAC experience could also lead to changes in practices in schools and homes, positively reducing LAC's frustrations or distractions, in turn enabling the children to focus on learning tasks. This could also reduce or eliminate the social, emotional, and behavioural difficulties in LAC in different contexts that might lead to exclusion from school and, consequently, low academic achievement. In line with this, there is a need for research that focuses on the effects of language difficulties on LAC's life outcomes in terms of education, social and emotional well-being. The knowledge attained from such future studies on LAC's language development and difficulties may result in more specialised interventions for LAC with language difficulties that rely on more comprehensive assessment instruments, including functional measures of language abilities in addition to developmental-based tests. Future research may shed light on whether strengthening specific language, cognition, and social pragmatic skills can improve LAC's language abilities in different contexts or vice versa.

Large longitudinal studies, which follow children across the pre-school period and into their adolescent years, would reveal important insights into the language difficulties and its association with LAC's life trajectories. Such research would be most beneficial if it were conducted at multiple locations, with LAC who were matched for age, gender, socioeconomic status, and cognitive ability. The more accurate identification of care-based predictors of poor language skills of LAC should be one of the highest priorities for future research.

CHAPTER 7: Implications and Conclusions

7.1 Implications

This study has a number of significant implications that have direct practical relevance to service providers and clinicians' practices and how to meet LAC's language needs. They may also positively impact the advice given to local authorities and policymakers or developers on how and when assessment, diagnosis and therapy should be conducted. These implications are now considered in turn.

7.1.1 Implications for clinicians, education and service providers

Findings from the current study have important implications for practices in terms of high rates of language difficulties in LAC. They support the language difficulties of LAC and notion of early identification and intervention to address their needs. Assessments and interventions, within the clinical, educational and service providers (e.g., residential schools and homes) mostly overshadowed by their other needs which often lead LAC to be given wrong label or diagnoses. Their language difficulties are often mixed up by professionals as LAC having SEND or disabilities (see Chapter 5). This highlights the lack of knowledge and understanding symptoms or nature of language difficulties in LAC. The current study suggesting that there need to be processes for early identification and addressing LAC's language needs which need to be followed by clinicians, educators and service providers. From a clinical perspective, early detection procedures utilising sensitive, properly developed screening instruments and interventions systems are required. Clinician's views can provide insights into areas of support LAC's needs most relevant to their language difficulties and where the focus of interventions should be.

Development of frontline staff is key for the timely identification of LAC with language difficulties, as well as the implementation of the best intervention strategies possible. Developing a skilled workforce is thus critical. Nonetheless, despite the fact that this parameter has been cited in numerous studies (Gascoine, 2008; Dockrell et al., 2012; Dockrell et al., 2014), the literature in the UK has indicated that those who work with LAC require training to develop their skills in this area (RCLT-Factsheet, 2018). Findings in the current study portray a significant picture of lack of training in language-related difficulties in frontline staff (see Chapter 5). In order to build robust knowledge about LAC'slanguage needs and for frontline

staff' preparedness to meet their needs, the general indication is that what might be required is an overall change of practice that target specific training programmes (e.g., language difficulties awareness training) that enhance staff skills relevant to LAC's language difficulties. Thus, at education and service provider levels, such specific training could be provided on a regular basis in several ways. First, to address the knowledge gaps in frontline staff (e.g., teachers, support workers, social workers, OTs, and foster carers) on language difficulties in LAC, with attendance at regular training enhancing frontline staff practices in recognition of language difficulties in LAC.

Second, frontline staff could benefit from high quality on-going short-term seminars explicitly targeting ways in which LAC present their difficulty with language and potential to effect a change in staff attitudes. Further, education and service providers can provide training to the frontline staff on use of alternative communication methods (e.g., using Easy-Read, the Makaton language programme to translate important legal documents). Lastly, education and service providers can ensure that frontline staff have a rich, informative data source of research in language-related difficulties, resources and materials for them to use when supporting or working with LAC with language difficulties. With such inputs, education and service providers will not only be informing frontline staff's current practice, but they could also further a change of attitude towards LAC who may mask their difficulties by displaying behaviours. This would mean that LAC will not receive incorrect diagnosis, and frontline staff will not be able to recognise their language needs, as well as signposting them to in-house or local SaLT teams to address their needs earlier. Further, with the help of regular training, the frontline staff will be able to take into consideration a high level of language difficulties in LAC and adjust their communication when working with LAC.

All these approaches and resources in turn could raise frontline staff' awareness regarding the importance of identifying language difficulties within the LAC fields, as the practices in this respect still require improvement.

More importantly, all these approaches could lead education and service providers to re-examine their current practices in respect of when children become LAC and addressing delays in identifying LAC with poor language abilities, as well as considering their need in a timely manner.

7.1.2 Implications for local authorities and governmental policymakers

Recent legislation (Children and Social Work Act, 2017) advocated for local authorities and policymakers to take into account language difficulty or SLCN in LAC and identify this when children enter adoption (Cross, 2018). However, the qualitative study of the current research highlighted that there are still significant gaps in local authorities' practices regarding the prioritizing of LAC's language assessments (see Chapter 5). As such, findings from this research have important implications for practices which local authorities and governmental policymakers should consider, and proactively change their policies and practices to prioritize early language assessment for LAC in the following ways:

- Ensure that LAC's language assessment is given the same weight as their other health needs and priorities even before they enter into care (see Chapter 5 for more details). These children are known to 'children in need services' long before they become LAC. Hence, when a child comes into care, comprehensive support and help should be made accessible as soon as possible to meet their language and other needs.

- Ensure that SaLT assessments are embedded in the regular LAC review meetings, health and/or needs assessments.

- Ensure that SaLT provisions are undertaken early in interventions, and provide the resources needed to meet LAC's language needs in a timely manner.

- Ensure that a SaLT is present in all LAC's teams who can provide advice and guidance to frontline practitioners and carers, such as school staff, who deal with LAC on a day-to-day basis. This would address some of the barriers to accessing or receiving early SaLT assessments (see Chapter 5) so that intervention strategies can be put into place. Ensure all professionals are aware of the characteristics of LAC with language difficulties and/or SLCN. The LAs could provide regular speech, language, and communication difficulty awareness training to everyone involved and explain how LAC with language difficulties behave and how language difficulties manifest in those behaviours. This may also reduce the number of incorrect diagnoses (e.g., displaying behavioural difficulties or ASD), consequently improving the life outcomes of LAC in other areas by preventing school exclusions and reducing LAC's academic failures and

SEMH. This would also help the early detection of LAC's language difficulties while improving the knowledge, and understanding of frontline STAFF teams, as well as providing more efficient use of resources for their use could be way forward to meet LAC's language needs. Give greater attention to OHC placements and make sure that STAFF who work in different OHC settings ARE equipped to provide optimal support.

- Work collaboratively with other services and local authorities in supporting LAC's language needs. This would allow those at high environmental risk to be targeted (see Chapters 2, 3 and 5 for more details) and diminish the disproportional effect that increases the risk of language difficulties in LAC. This would also allow local authorities to identify which risk factors have the most powerful influence on the language difficulties of LAC so they can address those risks first. This will have the biggest impact on improving LAC's language skills and subsequently their life outcomes.

- Local authorities should ensure they accurately record and collect background information about the LAC under their care. Local authorities and central government should adopt a universal and collaborative recording system, such as a 'central database' to record information related to LAC's language difficulties other needs accurately and collaboratively. As historically LAC move across local authorities or schools, the 'central database' could then be used and shared across authorities as a universal way of recording background information about LAC. Such systems could be useful for clinical purposes to provide better services and provide robust evidence for research. There is presently no central database to provide information on the number of LAC who have been diagnosed with language difficulties and/or impairments or identifying the effects of the more profound factors (e.g., maltreatment or poverty) on their language development and abilities (Harker et al., 2004; Mathers et al.,2016; McClung & Gayle, 2010; Oakley et al., 2018). Having a central database system would thereby assist local authorities in keeping accurate records about LAC's background information and meet LAC's needs accordingly.

- Local authorities should adopt a joint need-assessments approach. This could mean engaging and asking schools, foster parents or carers, OTs EPs, social workers, as well

as support workers to address difficulties that LAC might be having across different contexts, including their language, cognitive, social pragmatic, social, emotional, behavioural, and/or academic attainment concerns.

With respect to policies, the current study's results provide local authorities and governmental policymakers with evidence for considering development in the following areas:

- Ensure that all VSHs are champions for LAC's language difficulties or SLCN needs and that they must be involved in the policymaking process for how to address LAC's language difficulties or SLCN needs.
- Make language difficulties awareness training in LAC compulsory as an essential part of staff training and induction packs.
- Ensure language difficulties awareness is embedded in higher education social work and teacher training programmes. The development of such provisions or modules in higher education sectors would be a promising move toward identifying and addressing LAC's language needs early and promoting their life outcomes in school, higher education, and beyond.
- Ensure LAC's language assessment should be made compulsory when they are first observed in children in need teams or welfare teams and/or become LAC. This should be compulsory as with their first LAC review, their developmental, physical, and mental health needs assessment by clinicians, doctors, or their six-month dental check-ups. This would provide opportunities to identify LAC's language difficulties early and provide an appropriate support system from the onset of their LAC's journeys.
- The Children and Social Work Bill (2017) highlights the importance of identifying language difficulties or SLCN earlier and the Care matters: Time for Change (2007) legislation highlighted the improvement of LAC's outcomes. Thus, the directors of children's services and commissioners of health services should jointly commission SaLT services dedicated to assessing and addressing language difficulties of children and young people who are in care or are becoming care leavers.
- Additionally, at LA and governmental policy levels, all these measures would help to address the language needs of LAC and consequently contribute to improving their life outcomes.

7.2 Conclusions

Although the presence of language difficulties in LAC is now recognized, the evidence exploring language difficulties in this population is scarce and inconclusive. This is the first comprehensive study to investigate LAC's language difficulties using evidence from three different sources while linking the findings to the wider literature.

The keys findings of the current thesis suggest that language difficulties manifest in various domains. However, the analysis of the large dataset in Study 1 did not yield any definitive predictors based on LAC's background information related to their care status (see Chaper 4). This may be a result of database issues, or because the pathways are more complex than these variables can explain. Further, other health and practical needs (e.g., OHC placements arrangements, health needs) of LAC means their language difficulties are often overlooked and undetected.

This study has highlighted particular gaps in knowledge, priority issues for early assessments, and the importance of identifying LAC's language needs. Identifying LAC's language difficulties at the earliest point before or after entry into the care system would allow LAC to receive the necessary support for their language needs and allow professionals to understand and address their specific needs. In this respect, the current study results provided significant evidence of the importance of prioritizing LAC's language assessments and providing SaLT support to address their language needs.

Finally, the findings of current study indicate that language difficulties can have a profound effect on LAC's life outcomes, preventing them from fulfilling their potential. In the current care systems, further attention needs to be given to address LAC's language needs along with their associated language difficulties (e.g., SEMH).

The language difficulties that LAC experience are multi-faceted and complex and cannot be overlooked or ignored. Therefore, early assessments and SaLT interventions must be part of a holistic support plan designed to address LAC's complex language difficulties. This may be the most effective way of improving the language skills and life outcomes of LAC.

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APPENDICES:

Appendix A: Types of out-of-home care (OHC) placements

1. Foster care: It is a type of formal care where children are placed with approved and supervised carers. They are employed by local authorities for the purpose of providing alternative care which takes place in carers' own homes rather than in children's homes (HMG, 2010; Milligan et al., 2016; United Nations, 2009).

2. Relative or kinship care: This is a family-based care where the carers of children are usually family members or close family friends who are known to the children. This type of care is either permeant or temporary (United Nations, 2009).

3. Residential care (homes and/or schools): refers to placements for children in care facilities including infants and children's homes, as well as residential or boarding schools, secure units and unregulated homes and hostels (Narey, 2016; NGO Working Group on Children without Parental Care in Geneva, 2013). It is a type of out-of-home care provision where children and young people are placed or accommodated to live away from their homes in an emergency situation. Residential care for children/young people can be organized under a care order, or a voluntary accommodation arrangement, which also includes short breaks services (for disabled children). Residential care is aimed at children who cannot live with their natural parents. It usually involves providing care to children in any non-family-based group setting such as emergency care, long or short-term residential care placements, as well as group homes. In the UK, residential care settings are run either by Local Authorities or voluntary and private organisations based on the New Children's Homes Regulations 2015, including relevant regulations (WWCSC, 2019; UNICEF, 2015; Milligan et al., 2019; Hart et al., 2015; Hart et al., 2016)

4. Children's institutions: They are usually large residential care provisions where abandoned and orphaned children are placed and looked after in any public, or private facility staffed by paid carers or volunteers. Institutional care is broadly used in countries with different socio-economic, ethnic and cultural backgrounds (UNICEF, 2015; van IJzendoorn et al., 2011; Milligan et al., 2019)

5. Secure accommodations/units, children's homes: Secure accommodations are children's homes which provide a locked provision for children posing problems to themselves or others. A placement in secure accommodation can be granted according to Section 25 of the Children Act (1989) or where the child is subject to a court order to stay in secure on remand. A secure unit provides care and accommodation to children who have been taken into custody and children who have been retained in secure accommodation, such as young offenders' institutions (DfE, 2018a; DfE ,2015a; Hart & La Valle, 2016; Harris & Timms, 1993).

6. Semi-independent living accommodation: Provisions where young people (care leavers aged 17-21years) are accommodated in the community and live on their own, or in small groups. This type of accommodation is created to enable them to develop their basic education and interpersonal skills in order to gain autonomy and make contribution to the society. The young people living in this type of accommodation usually have access to supervisory staff and support workers (UNICEF, 2015; DfE, 2018a; NGO Working Group on Children without Parental Care in Geneva, 2013).

7. Special guardianship orders: A special guardianship order is an order made by the Family Court that appoints one or more individuals to be special guardians to a child or a young person. It is a private law order made under the Children Act 1989 for children who cannot live with their natural parents and who would benefit from a legally safe placement. Consequently, these children live on a long-term basis with their special guardians rather than with their birth parents. The Adoption and Children Act 2002 provides the legal framework for special guardianship under the Children Act 1989 (DfE, 2017a; CoramBAAF, 2022).

Appendix B: Who is Virtual School Head (VSH)?

Local authorities act as corporate parents for looked-after children, and they have high aspirations for the children whom they are safeguarding. They are responsible for such children to help them fulfil their full potentials as other children do. According to Children and Families Act 2014, each local authority in England is required to appoint at least one lead person for the purpose of ensuring the local authority's fulfilment of their legal duties towards promoting the looked-after children's achievements. That lead person is called a Virtual School Head (VSH), who is employed by the local authority. As appointed leader, it is the VSH's role to ensure that the local authority is fulfilling its legal obligation towards all looked-after children. There are six key operational areas that provide a framework for VSHs role's which they should:

1. know who is on the role of their Virtual School
2. know where they live and where they go to school
3. know, at any time, how they are doing and be able to say if that is good enough
4. determine what actions to take if they are not doing well enough
5. evaluate the impact of actions taken to improve attainment and progress, and
6. understand their accountabilities and how their Virtual School will be inspected, and its impact judged. "(Navsh.org.uk, 2018, p.11; DfE, 2018a).

In relation to parenting and the VSHs, there are seven corporate parenting principals' that they expected to apply as they set out their role for looked-after children.

The VSHs role encompasses the following responsibilities;

A) To act in the best interests and promote the physical and mental health and well-being of children and young people;

B) To encourage children and young people to express their views, wishes and feelings;

C) To take into account the views, wishes and feelings of children and young people;

D) To help children and young people gain access to, and make the best use of, services provided by the local authority and its relevant partners;

E) To promote high aspirations and seek to secure the best outcomes for children and young people;

F) To ensure that children and young people are safe, and have stability in their home lives, relationships and education or work; and

G) To prepare those children and young people for adulthood and independent living. (Navsh.org.uk, 2018).

Appendix C: Chapter 3- List of Tables

Table 5: Scoping Review Search terms - List of words and phrases used during all databases search
Child, children, youth, adolescent, young people, teenager, young adults
Looked after children, foster children, care leavers, maltreated children, youth lives/living in care
Children in care, children in care residential care, looked-after children in criminal justice systems and young offenders
Maltreatment, Abuse, Neglect
Out of home care, children's homes, residential care, residential school, secure accommodation
Foster home care, kinships care, special guardianship care, children's institutions
Language barriers, communication barriers
Occurrence, Prevalence
Language impairments or language disorders/language deficits/ language difficulties/language delays/communication difficulties
Speech, language and communication difficulties or communication needs
Communication impairment, communication disorders, communication difficulties

Table 3.6: Specific demographics involving pre-care histories characteristics

4.2 Results from studies using general developmental	Maltreatment (abuse or neglect, Abandonment)/ Not provided/ Not applicable (NA)	SLT diagnosis or histories prior to become LAC (Yes/No) Not known/ Not applicable (NA)	Age of first placement (Yes/No) Not known/ Not applicable (NA)	SEN and or Learning Disabilities (Yes/No) Not known/ Not applicable (NA)
Simms, 1989	NA	N	Y	N
Halfon, Mendonca and Berkowitz, 1995	Maltreatment and abandonment	N	N	N
Nathanson and Tzioumi, 2007	Abuse	N	N	N
Stacks et al., 2011	Maltreatment (abuse or neglect)	N	N	N
Moreno-Manso et al., 2009	Maltreatment (abuse or neglect)	N	N	N
Moreno-Manso et al., 2010	Maltreatment (abuse or neglect)	N	N	N
Moreno-Manso et al., 2015	Maltreatment (abuse or neglect)	N	N	N
Moreno-Manso et al., 2016	Maltreatment (abuse or neglect)	N	N	N
Frederico et al., 2018	Maltreatment (abuse or neglect)	N	N	N
Results from studies using standardized tests and comparison with test norms				
Cross, 1998	Not provided	N	N	N
Hagaman et al, 2010	Not provided	Y	Y	N
Trout et al., 2011	Not provided	Y	Y	N

Lum, Powell and Snow, 2018	Maltreatment (abuse or neglect)	N	N	N
Snow et al., 2019	Maltreatment (abuse or neglect)	N	N	N
Bryan et al., 2015	Not provided	Y	N	Y
Bryan, Freer and Furlong, 2007	Not provided	Y		Y
Evans, Scott and Schulz, 2004	Maltreatment (abuse or neglect)	N	N	N
Zajac, Raby and Dozier, 2019	Maltreatment (abuse or neglect)			
Results from studies comparing LAC and a matched control group				
Pears and Fisher, 2005	Maltreatment (abuse or neglect)	N	Y	N
Di Sante et al., 2019	Maltreatment (abuse or neglect)	N	N	N
Greig et al., 2008	Not provided	N	N	N
Windsor et al., 2007	Abandonment	N	Y	N
Windsor et al., 2011	Abandonment	N	Y	N
Windsor et al., 2013	Abandonment	N	Y	N
Asimina et al. (2017)	Not known	N	N	N
Cobos-Cali et al. (2017)	Domestic violence / broken and dysfunctional families,	N	N	N
Palazon-Carrion and Sala-Roca (2020	Abandonment/ subjected to physical / psychological abuse, sexual abuse and gross negligence	NA	NA	NA
Results from Intervention studies				

Raby et al., 2018	Maltreatment (abuse or neglect)	N	Y	N
Bernard, Lee and Dozier, 2017	Not provided	N	N	N
Berument and Eyupoglu, 2011	Not provided	N	N	N
Moreno-Manso et al., 2012	Maltreatment (abuse or neglect)	N	N	N
Byrne, Lyddiard and Furniss, 2018	Maltreatment (abuse or neglect)	Y	Y	N
Byrne, 2017	NA	NA	NA	NA

Table 3 7: Assessment methodologies

Results from studies using general developmental	Assessments and interventions measures	Methodologies
Simms, 1989	Peabody Developmental Motor Scales (Alle, TX Teaching Group, 1983) Peabody Picture Vocabulary Test (3 to 12 years) (Dunn and Dunn, 1981) Battelle Developmental Inventory (Alle, TX Teaching Group, 1984)	Independent samples T-test
Halfon, Mendonca and Berkowitz, 1995	Standardized developmental and emotional assessments measured Connecticut Infant-Toddler Developmental Assessment (0 to 3 years) Denver Developmental Screening Test (0 to 6 years) Early Language Millstone Scale (1 to 3 years) Slosson Intelligence Test (3 to 12 years) Parent Supportive Presence Scale (0 to 12 years) Developmental Test of Visual Motor Integration (3 to 12 years) Peabody Picture Vocabulary Test (3 to 12 years) Vineland Adaptive Behavioral Scales (0 to 12 years)	Descriptive analysis Chi squared analysis
Nathanson and Tzioumi, 2007	The Australian Developmental Screening	Descriptive analysis
Stacks et al., 2011	Preschool Language Scale-3 (PLS-3; Zimmerman, Steiner, & Pond, 1991) National Survey of Child and Adolescent Well-Being (NSCAW) Bayley Infant Neurodevelopmental Screener (BINS, Aylward, 1995)	Descriptive statistics ANOVA
Moreno-Manso et al., 2009	The 'Objective Criteria Language Test (BLOC-Screening)' (Puyuelo, Renom, Solanas, & Wiig, 2002, 2006; Puyuelo, Renom, & Solanas, 2003),	Descriptive analysis ANOVA Pearson correlations
Moreno-Manso et al., 2010	Objective language criteria test (BLOC-Screening) (Puyuelo, Renom, Solanas, & Wiig, 2002)	ANOVA Pearson correlations
Moreno-Manso et al., 2015	Objective Language Criteria Test BLOC-S (Puyuelo et al. 2002)	ANOVA Pearson correlations

Moreno-Manso et al., 2016	Objective language criteria test (Revised BLOC-Screening) (Puyuelo, Renom, Solanas, & Wiig, 2002, 2006)	Independent samples T-test Correlation analysis
Frederico et al., 2018	Clinical Evaluation of Language Fundamentals − Australian Standardised Edition: CELF-4: Semel, Wiig & Secord, 2006 Australian Preschool Edition: CELF P2: Wiig, Secord, and Semel (2006) TNL: PRO-ED (2004); and Developmental Sentence Scoring: Lee & Canter (1971) Language Assessment Remediation and Screening Procedure: LARSP: Crystal (1979);	Chi-square ANOVAs Pearson correlations Logistic regression Qualitative analysis
Results from studies using standardized tests and comparison with test norms		
Cross, 1998	CELF (Semel et al., 1987)	Descriptive analysis
Hagaman et al, 2010	Clinical Evaluation of Language Fundamentals—4 Screening Test (CELF–4 Screening Test; Semel,Wiig, & Secord, 2004) Woodcock-Johnson Test of Achievement, 3rd Edition (WJ III; Woodcock, McGrew, & Mather, 2001) Kaufman Functional Academic Skills Test (K–FAST; Kaufman & Kaufman, 1994)	Independent samples T-tests
Trout et al., 2011	Clinical Evaluation of Language Fundamentals—4 Screening Test (CELF–4 Screening Test; Semel,Wiig, & Secord, 2003)	Descriptive statistics
Lum, Powell and Snow, 2018	Clinical Evaluation of Language Fundamentals-4th Edition, Australian Standardisation (Semel, Wiig, & Secord, 2003a) Social Skills Improvement System Rating Scales (Gresham & Elliott, 2008) Raven's Coloured Progressive Matrices (Raven & Court, 1998)	One sample T-tests
Snow et al., 2019	Test of Narrative Language (TNL; Gillam & Pearson, 2004) The Ravens Coloured Progressive Matrices (RCPM) (Raven, Raven, & Court, 1998) The Clinical Evaluation of Language Fundamentals (CELF-4; Australian standardisation; Semel et al., 2003)	One sample T-tests and Correlations analysis
Bryan et al., 2015	Comprehensive Evaluation of Language Fundamentals (CELF-4) subtests (Semel et al. 2006) British Picture Vocabulary Scale (BPVS) (Dunn Lloyd et al. 1997	Factor analysis and Correlation analysis

Bryan, Freer and Furlong, 2007	Test of Adolescent and Adult Language, 3rd Ed (TOAL-3) British Picture Vocabulary Scale (BPVS-II) Test for Reception of Grammar: Version 2 (TROG-2	Descriptive analysis
McCool and Stevens, 2011	The Children's Communication Checklist 2 (Bishop, 2002)	Chi-square test and Descriptive analysis
Evans, Scott and Schulz, 2004	Kaufman Brief Intelligence Test (Kaufman & Kaufman, 1990) Home-based developmental screening of children in foster care (O'Hara, Church, & Blatt, 1998) Wechsler Intelligence Scale for Children (3rd), (Wechsler, 1991) Woodcock-Johnson Tests of Achievement—Revised. Itasca, IL: Riverside (Woodcock & Johnson, 1989). Wide Range Achievement Test (3rd), Wilkinson, 1993).	Independent samples T-test
Zajac, Raby and Dozier, 2019	Peabody Picture Vocabulary Test, third edition (PPVT-III; Dunn & Dunn, 1997)	Independent samples T-test and Regression analyses
Results from studies comparing LAC and a matched control group		
Pears and Fisher, 2005	NEPSY: A Developmental Neuropsychological Assessment (Korkman and Kemp, 1998) Wechsler Preschool and Primary Scales of Intelligence-Revised (WPPSI-R) (Wechsler, 1989) Preschool Language Scale- Third Edition (Zimmerman, Steiner and Pond,1991)	T-tests
Di Sante et al., 2019	The Language Use Inventory: French (LUI-French; Pesco & O'Neill, 2016)	Mann–Whitney U tests
Greig et al., 2008	Computerised MacArthur Story Stem Battery (CMSSB) The British Picture Vocabulary Scale (BPVS) (Dunn et al., 1982) The Renfrew Bus Story (RBT) (Renfrew, 1991)	T-tests
Windsor et al., 2007	Receptive– Expressive Emergent Language Scale (REEL; Bzoch & League, 1971) Lexical–grammatical (Scott &Windsor, 2000; Watkins, Kelly, Harbers,&Hollis, 1995)	ANOVAs

Windsor et al., 2011	Receptive– Expressive Emergent Language Scale (REEL; Bzoch & League, 1971) Lexical–grammatical (Scott & Windsor, 2000; Watkins, Kelly, Harbers, & Hollis, 1995	T-tests
Windsor et al., 2013	Receptive– Expressive Emergent Language Scale (REEL; Bzoch & League, 1971) Reynell Developmental Language Scales–III (RDLS; Edwards et al., 1997) The Bayley Scales of Infant Development II (Bayley, 1993	MANOVA
Asimina et al. (2017)	The Word Finding Vocabulary Test (Vogindroukas, Protopappas, & Sideridis, 2007 The Assessment for the Identification of Disorders of Speech and Language in Preschool Children (Economou, Besevegis, Mylonas, & Varlokosta 2007).	T-tests
Cobos-Cali et al. (2017)	The Evaluación Neuropsicológica Infantil (ENI) developed by Matute, Rosselli, Ardila & Ostrosky (2007)	U-Mann-Whitney test
Palazon-Carrion and Sala-Roca (2020	Scoping review	
Results from Intervention studies		
Raby et al., 2018	ABC-T and DEF- Attachment and Biobehavioral Catch-up Intervention for Toddlers (ABC-T) AND ABC-T or a control intervention (Developmental Education for Families; DEF). Developmental Education for Families is an adapted version of evidence-based interventions designed to improve children's motor and cognitive development (Brooks-Gunn, Klebanov, Liaw, & Spiker, 1993). Activities were chosen based The Peabody Picture Vocabulary Test–Third Edition (PPVT; Dunn & Dunn, 1997),	Independent samples T-test Prior power analyses

Bernard, Lee and Dozier, 2017	Attachment and Biobehavioral Catch-up (ABC) The Peabody Picture Vocabulary Test, third edition (PPVT-III; Dunn & Dunn, 1997), Control Intervention: Developmental Education for Families (DEF)	Independent samples T-test
Berument and Eyupoglu, 2011	Ankara Development Inventory (Savas¸ır et al. 1998)	Independent samples t-test MANCOVA to analyse the pre- and post-test developmental levels of the interventions.
Moreno-Manso et al., 2012	The revised version of the "objective language criteria test" (Revised BLOC-Screening) (Puyuelo, Renom, Solanas, & Wiig, 2002, 2006, 2007)	Test criterions used when comparing children's pre-and post-test scores.
Byrne, Lyddiard and Furniss, 2018	A range of non-standardised assessments can be successfully used to ascertain and describe delay in children in OOHC soon after they have entered OOHC (Table 2).	A range of non-standardised assessments can be successfully used to ascertain and describe delay in children in OOHC soon after they have entered OOHC
Byrne, 2017	Systematic review	

Appendix D: Chapter 4 - List of Tables

Table 4.4: RQ2 Assumptions of homogeneities= Levene's test results

Item/Question no	Questions	df	F	P
1	Have difficulty listening to spoken information?	33	F (2,33) = 2.278	0.118
2	Have difficulty paying attention to spoken information?	38	F (2,38) = 0.803	0.455
5	Have difficulty following spoken instructions or only follow part of them?	74	F (2,74) = 1.221	0.301
7	Needs regular repetition of information	35	F (2,35) = 1.410	0.258
8	Have difficulty thinking of the words s/he wants to say or use very simple/non-specific words?	74	F (2,74) = 1.326	0.272
9	Have difficulty explaining their ideas or describing events?	75	F (2,75) = 3.109	0.05
10	Have difficulty understanding a range of questions?	36	F (2,36) = 3.826	0.031
14	Have difficulty interacting with peers?	75	F (2,75) = 0.946	0.393
15	Appear frustrated or anxious when there is an unexpected change or transition?	42	F (2,42) = 2.405	0.103
16	Have difficulty understanding or using non-verbal communication?	72	F (2,72) = 2.451	0.093
17	Have difficulties using language to express their emotions?	37	F (2,37) = 1.299	0.285
18	Often misinterpret information you have said?	70	F (2,70) = 0.419	0.659

Table 4.5: RQ2 Assumptions of homogeneities= Welch's F test results

Item/Question no	Questions	df	F	P
3	Have difficulty paying attention and following an adult led activity?	39	F (2,18.372) = 38.043	< 0.001
4	Have difficulty remembering things people say?	75	F (2,20.607) = 39.402	< 0.009
6	Have difficulty understanding a range of word?	35	F (2,22.356) = 11.748	< 0.001
11	Have difficulty answering a range of questions?	41	F (2, 22.728) = 24.694	< 0.001
12	Is their speech difficult to understand?	75	F (2, 22.728) = 24.694	< 0.001
13	Have no/limited imaginative or pretend play? (Up to age 10)	24	F (2, 44.212) = 2.871	< 0.003
19	Have difficulties with time concepts?	74	F (2,66.059) = 2.641	< 0.001

Table 4.6: RQ2 Skewness of ANOVAs

Item/Question no	Questions	Skewness
Q1	Have difficulty listening to spoken information?	-0.132
Q2	Have difficulty paying attention to spoken information?	0.097
Q3	Have difficulty paying attention and following an adult led activity?	-0.241
Q4	Have difficulty remembering things people say?	-0.367
Q5	Have difficulty following spoken instructions or only follow part of them?	-0.152
Q6	Have difficulty understanding a range of word?	-0.848
Q7	Needs regular repetition of information	0.05
Q8	Have difficulty thinking of the words s/he wants to say or use very simple/non-specific words?	-0.54
Q9	Have difficulty explaining their ideas or describing events?	-0.275
Q10	Have difficulty understanding a range of questions?	-0.856
Q11	Have difficulty answering a range of questions?	-0.415
Q12	Is their speech difficult to understand?	-2.569
Q13	Have no/limited imaginative or pretend play? (Up to age 10)	-1.312
Q14	Have difficulty interacting with peers?	0.024
Q15	Appear frustrated or anxious when there is an unexpected change or transition?	-0.505
Q16	Have difficulty understanding or using non-verbal communication?	-0.608
Q17	Have difficulties using language to express their emotions?	-0.612
Q18	Often misinterpret information you have said?	-0.261
Q19	Have difficulties with time concepts?	-1.397

Table 4.11: RQ3 The breakdown of the normality (Kolmogorov-Smirnov) distributions for total language scores and demographic variable levels

Variable	Levels	P (df)	KS-statistic	p-value	Shape of distribution
Gender	Female	35	0.152	0.040	Not normal
	Male	43	0.132	0.058	Normal
Reasons for entering care	(Suspected) physical or sexual abuse	36	0.116	0.200	Normal
	Emotional Abuse	37	0.114	0.200	Normal
Ethnicity	White	24	0.116	0.200	Normal
	Black / African / Caribbean / Black British	27	0.158	0.081	Normal
	Other ethnicities	18	0.157	0.200	Normal
Placement types	Foster care Placements	49	0.139	0.018	Not normal
	Other placements (e.g., Homes/hostels/ Placement with own family or family member or friend / All types of temporary placements)	21	0.194	0.037	Not normal
Time spent in care		78	0.153	0.000	Not normal

Table 4.13: RQ3 Pearson correlations for total language scores time spent in care

Correlations		Total **language scores** 19Q	Time spent in care
Total **language scores** 19Q	Pearson Correlation	1	-0.170
	Sig. (2-tailed)		0.137
	N	78	78
Time spent in care	Pearson Correlation	-0.170	1
	Sig. (2-tailed)	0.137	
	N	78	78

** Correlation is significant at the 0.01 level (2-tailed).

Table 4.17. RQ3 Pre-regression T- tests- Descriptive statistic for potential predictors variables of language scores

Subgroups	df	Mean	SD	t	*p*	Effect Sizes	Levene's p
Foster care Placements	49	20.12	3.919	t (76) = -1.042	0.301	d= 0.012	0.807
Not foster care placement	29	21.07	3.807				
Emotional abuse	37	20.46	4.018	t (76) = -.032	0.975	d = 0.007	0.631
Not emotional abuse	41	20.49	3.802				

Table 4.18: RQ3 Pre regression T- tests - Descriptive statistic for potential predictors of verbal cognitive skills

Subgroups	df	Mean	SD	t	*p*	*Effect Sizes*	Levene's p
Foster care Placements	49	6.78	1.840	t (76) = -1.633	0.107	d = 0.414	0.870
Not foster care placement	29	7.52	2.098				
Emotional abuse	37	7.14	1.782	t (76) = 0.357	0.722	d = 0.081	0.171
Not emotional abuse	41	6.98	2.127				

Table 4.19: RQ3 Pre regression T- tests - Descriptive statistic for potential predictors of expressive/receptive language difficulties

Subgroups	df	Mean	SD	F	*t*	*Effect Sizes*	Levene's p
Foster care Placements	49	8.10	2.374	t (76) = -1.136	0.260	d = 0.274	0.097
Not foster care placement	29	8.69	1.892				
Emotional abuse	37	8.19	2.271	t (76) = -.495	0.622	d = 0.112	0.941
Not emotional abuse	41	8.44	2.180				

Table 4.20: RQ3Pre regression T- tests - Descriptive statistic for potential predictors of pragmatic language difficulties

Subgroups	df	Mean	SD	F	*t*	*Effect Sizes*	Levene's p
Foster care Placements	49	5.10	1.503	t (76) = -.004	0.996	d = 0.795	0.024
Not foster care placement	29	6.13	1.047				
Emotional abuse	37	5.05	1.373	t (76) = -.301	0.382	d = 0.073	0.765
Not emotional abuse	41	5.15	1.333				

Table 4.21. Pre-reg Pearson correlations between Total language scores of 19Q, Cognitive scores, receptive/expressive and pragmatic language scores and time spent in care

	1	2	3	4	5
Total language scores					-0.17
Total cognitive scores		1			-0.099
Total Exp/Recep language			1		-0.171
Total pragmatic scores				1	0.009
Time spent in care					1

Table 4.16 RQ4: The breakdown of normality (Kolmogrov-Smirnov), p-values, shape of distribution and skewness involving total language scores of 19 questions and demographic variable /groups

Groups	P (df)	KS-statistic	p-value	Shape of distribution	Skewness
Total language scores and English attainment results	58	0.176	0.001	Not normal	-0.673
Total language scores and Maths attainments results	58	0.143	0.005	Not normal	-0.275
Total language scores and Science attainment results	14	0.282	0.003	Not normal	-1.854
Total language scores and SDQ	48	0.145	0.013	Not normal	0.832

Appendix E: List of Figures (Chapters 4 and 5)

Figure 4.3: Normal P-P Plot of Total Language Scores and Demographic Factors

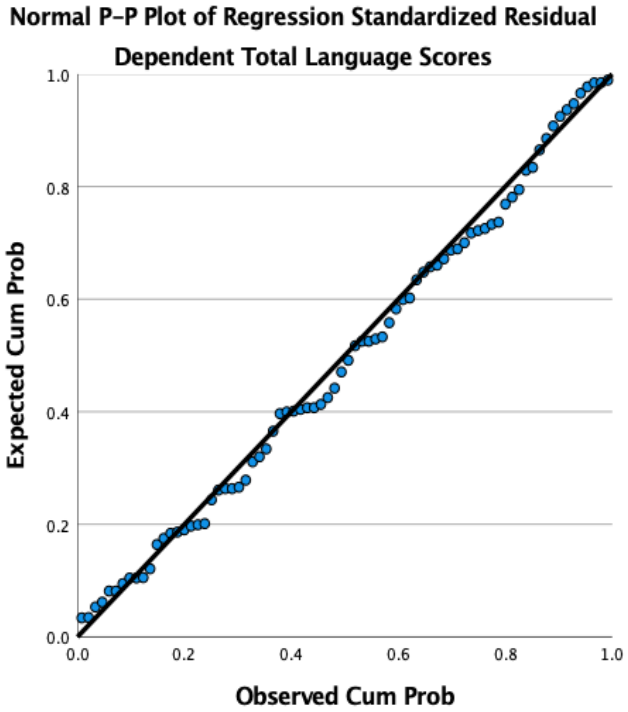


Figure 4.4: Normal P-P Plot of Total Cognitive Scores and Demographic Factors

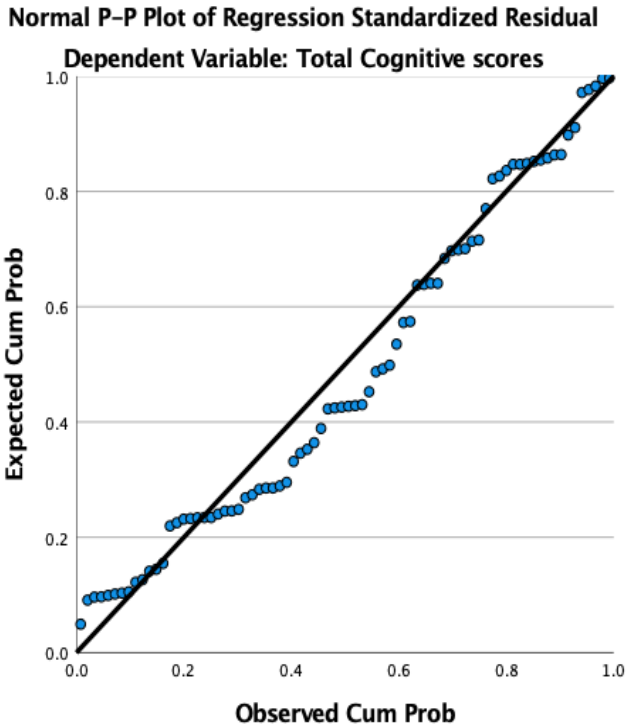


Figure 4.5: Normal P-P Plot of Total Expressive/Receptive Language Scores and Demographic Factors

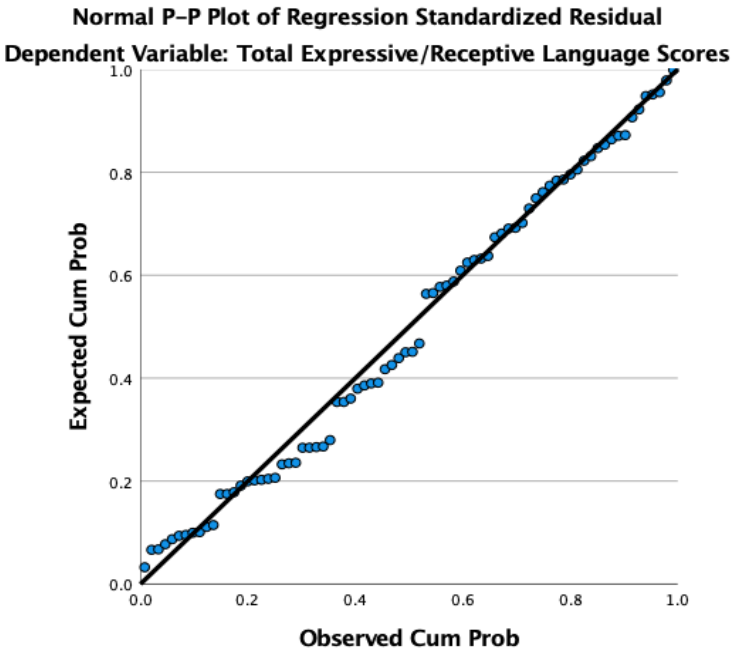


Figure 4.6: Normal P-P Plot of Total Pragmatic Language Scores and Demographic Factors

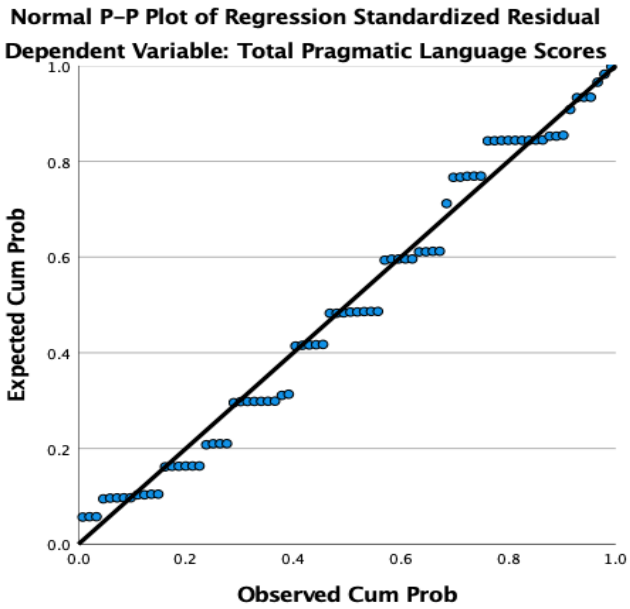
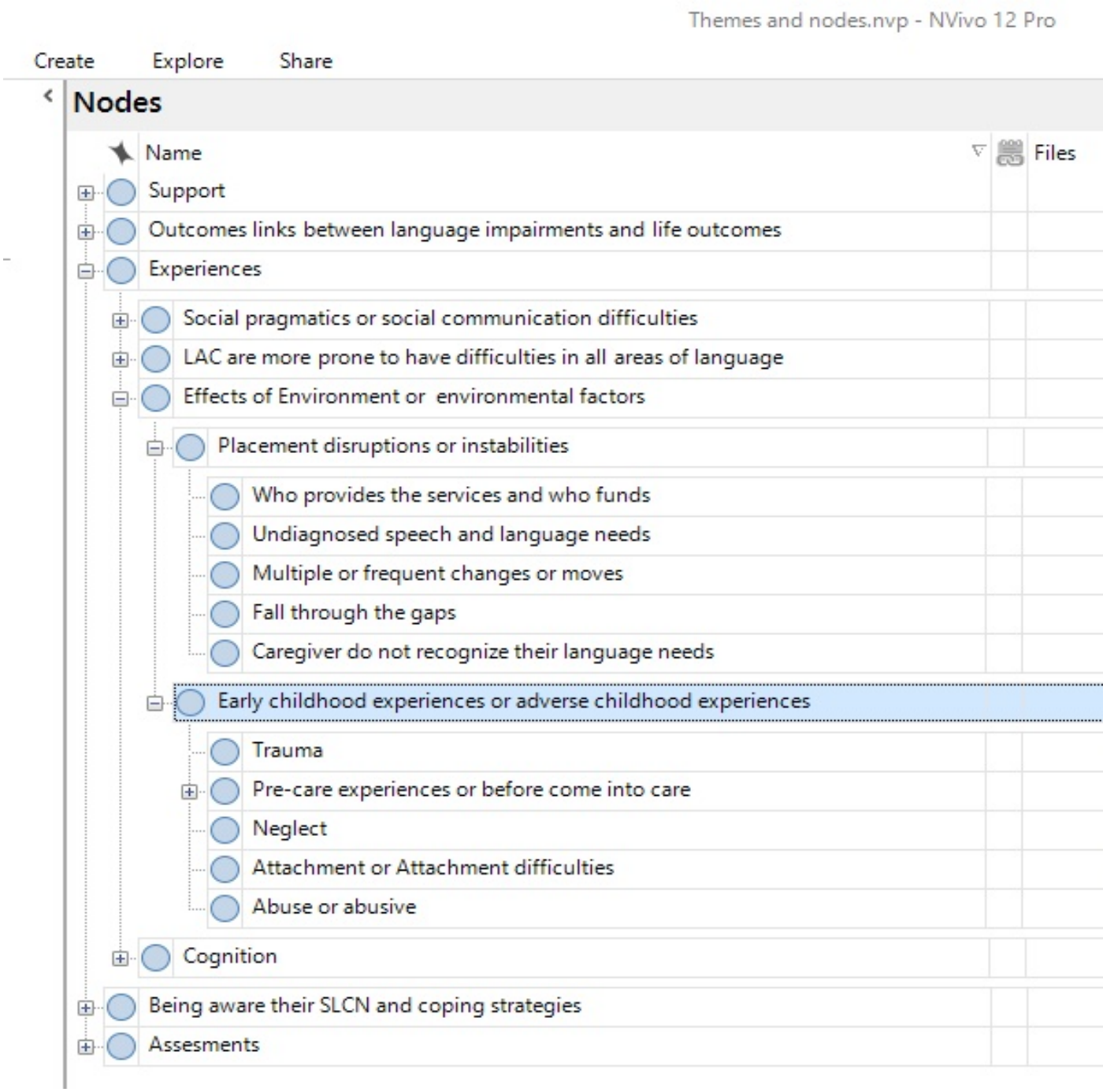


Figure 5.2 Examples of themes and sub-themes



Appendix F: Copies of the ethics approval letters

Ethics ETH2021-0366: Mrs Sevil Savi-Karayol (Medium risk): Decision
Sent on 20 Oct 2020 by [redacted]

Dear Sevil

Reference: ETH2021-0366
Project title: "Prevalence of language impairments in looked-after children aged 5 to 14: Professionals' and children's views on the nature of language impairments"
Start date: 7 Oct 2019
End date: 15 Oct 2022
I am writing to you to confirm that the amendments to the research proposal detailed above has been granted formal approval from the School of Health Sciences Research Ethics Committee. The Committee's response is based on the protocol described in the application form and supporting documentation. Approval has been given for the submitted application only and the research must be conducted accordingly. You are now free to start recruitment.
Please ensure that you are familiar with City's Framework for Good Practice in Research and any appropriate Departmental/School guidelines, as well as applicable external relevant policies.

Please note the following:
Project amendments/extension
You will need to submit an amendment or request an extension if you wish to make any of the following changes to your research project:
· Change or add a new category of participants;
· Change or add researchers involved in the project, including PI and supervisor;
· Change to the sponsorship/collaboration.
· Add a new or change a territory for international projects;
· Change the procedures undertaken by participants, including any change relating to the safety or physical or mental integrity of research participants, or to the risk/benefit assessment for the project or collecting additional types of data from research participants;
· Change the design and/or methodology of the study, including changing or adding a new research method and/or research instrument;
· Change project documentation such as protocol, participant information sheets, consent forms, questionnaires, letters of invitation, information sheets for relatives or carers;
· Change to the insurance or indemnity arrangements for the project.
· Change the end date of the project.

Adverse events or untoward incidents
You will need to submit an Adverse Events or Untoward Incidents report in the event of any of the following:
a) Adverse events
b) Breaches of confidentiality
c) Safeguarding issues relating to children or vulnerable adults
d) Incidents that affect the personal safety of a participant or researcher
Issues a) and b) should be reported as soon as possible and no later than five days after the event. Issues c) and d) should be reported immediately. Where appropriate, the researcher should also report adverse events to other relevant institutions, such as the police or social services.
Should you have any further queries relating to this matter, please do not hesitate to contact me. On behalf of the School of Health Sciences Research Ethics Committee, I do hope that the project meets with success.

Kind regards
[redacted]
School of Health Sciences Research Ethics Committee
City, University of London

Appendix G: Initial research proposal and contact letter for local authorities' and amended consent form

Initial Research Proposal and Contact Letter

'Talking and Listening Skills in Children from Different Home Backgrounds'

Dear LA-X's Ethics Committee

I am a doctoral research student at the City, University of London's Language and Communication Science Program. I am working on a research study to investigate the prevalence of speech, language and communication difficulties in looked-after children aged 5 to 14 years old. My supervisors for this project are Professor Gary Morgan and Professor Nicola Botting and our research project has been welcomed and supported by the National Association of Virtual School Heads (please see the NAVSH's July 2019 Newsletters/Research Updates for more information on this).

The aim of this research study is to discover more about looked-after children's speech, language and communication needs. More importantly, it aims to shed more light on the prevalence and the nature of speech, language and communication difficulties in this population because we believe that their needs in these respects still demand much attention. The findings will contribute to the development of the early assessment mechanisms needed to diagnose language and communication difficulties in looked-after children and, further, will contribute to developing adequate clinical intervention and support plans that can support the lives of those in this population.

This research study has two parts: 1) Assessing the language skills of looked-after children and 2) Gathering children's own views on their speech, language, and communication needs (SLCNs) through semi-structured interviews (please see Participants Information Sheet for more details).

Due to the sensitivity and nature of the field of looked-after children, care will be taken to protect the identity of the participants. This will be done by keeping all responses anonymous and allowing you to request that certain responses not to be included in the project's results at any stage.
In addition to this, it is up to you to decide whether or not children you are looking after should take part in the study and You will have the right to end your participation in the study at any time. But, if you do decide that children you are looking after can take part, you will need to sign the consent form attached and return it to the researcher (Sevil Savi-Karayol).

In addition, due to the sensitivity and nature of the field of looked-after children, the research will be conducted delicately ensuring that participants are comfortable and confident in participating throughout the research process. In particular, each child's health and well-being will be prioritised throughout, and local policies on safeguarding will be followed strictly. Therefore, the researcher will work, and remain closely in contact with the Virtual School Heads team who can be on hand to provide support, advice and guidance, for any participants should they require it as detailed above.

The ethics protocol for this project was reviewed by the City, University of London's School of Health Sciences Research Ethics Committee, which provided clearance to carry out the research. If you have any ethical concerns with the study, please contact [redacted] who is the Research Governance & Compliance Manager for this project and her contact details are; **address:** The City, University of London, Northampton Square, EC1V 0HB; **email:** [redacted]; **phone**: [redacted]
If you would like to participate in this research project, or have any questions, please contact me at [redacted]

Amended consent form for professionals

'Talking and Listening Skills in Children from Different Home Backgrounds'
Start of Block: Default Question Block
[Note: Qualtrics adds the City Logo here automatically]

My name is Sevil Savi-Karayol and I am a Ph.D Candidate at City University of London. I am conducting a study to investigate the prevalence of unidentified language impairments in looked-after children and the nature of communication difficulties in this population. My supervisors for this project are Professor Gary Morgan and Professor Nicola Botting. We would like to invite you to take part in our research study which is part of a Ph.D project at City, University of London. The study aims to evaluate the Prevalence of undetected language impairments in looked-after children and the nature of language impairments in this population. However, before you decide whether you would like them to take part, it is important that you understand why the research is being done and what it would involve for you. Please take time to read the following information carefully and discuss it with others if you wish to do so. Please ask if there is anything that is not clear or if you would like more information. Thank you for reading this.

What is the purpose of the study? Previous research has shown that language impairments in looked-after children are higher than other groups, and the majority of these children have long-standing unmet communication-support needs. In recent studies, it has been reported that between 40% to 56% of these children start school with limited language abilities. The aim of this research project is to shed more light on the nature of language difficulties (LI) in looked-after children and the nature of their language impairments. The findings from this project will support a wider population who provide services for looked-after children and as well as the children themselves. In addition, the findings will contribute to the development of the early assessment mechanisms needed to diagnose language difficulties in looked-after children and will contribute to developing adequate clinical intervention and support plans that can support the lives of those in this population.

Why have I been invited to take part? This research aims to investigate the prevalence of communication difficulties in looked-after children and the nature of their communication difficulties. Therefore, we are seeking professional participants who, due to their unique expertise in the field of looked-after children, can help us to explore the nature of the communication difficulties in this populations. We are aiming to recruit at least 35 professionals who work with looked-after children or provide services for this population. Therefore, your involvement in determining these children's communication needs would be greatly valued and appreciated. If you have any doubts or questions about this study, please speak to the researcher. The researcher's contact details are at the end of this letter.

What do I have to do? If you are happy to take part, please complete the consent form on the next page and leave an email contact so that we can arrange an interview. In addition, you will need a quiet room or space for the interview.

What will happen if take part? You will be invited to have an interview via Zoom or face-to-face depending on what suits you best and what is allowed in current restrictions. You will be asked eight to ten open-ended questions about looked-after children's language and communication difficulties. Your answers will be recorded via Zoom or audio recording for later assessment by the researcher. The interview will be arranged at a time convenient for you and will take place 'via Zoom or face to face as suits you best and restrictions allow, causing minimal disruption for your other commitments.

What are the possible disadvantages and risks of taking part? There are no disadvantages or risks in taking part in these assessments, except that it will take some. However, if at any point you feel uncomfortable or distressed and you do not want to continue, feel free to stop completing the test, and we can stop the interview immediately or you can withdraw from the study without given a reason.

What are the possible benefits of taking part? With your contribution, the research results will have direct benefit for the individual children themselves and the schools. In addition, the findings of this research will provide in-depth knowledge and understanding of the nature of LIs among looked after children. Early identification of looked-after children's communication and language difficulties, which will be beneficial for all looked-after children. Your contribution will also provide necessary information on how important it is to carry out early assessment and diagnostic procedures for local authorities, policy-makers and clinicians, ensuring that all looked-after children are receiving the most appropriate assessments, communication support and interventions, they require to fulfil their potential.

Do I have to take part? No, you will only take part if you want to. Participation in this project is entirely voluntary, and you can choose not to participate in part or all of the project. You can also drop out of the project at any time. It is up to you to decide whether or not you should take part. If you do decide that you want take part, you will need to sign the consent form attached. Even if you complete the consent form, you can still drop out at any time. You do not have to give any reason for dropping out. You can request that your data is not included in the project's results at any stage.

What will happen when the research study stops? The information that we collect about you will be kept at City, University of London. We will keep the paper data and the electronic data very carefully so that no one else can look at it. We will keep this information securely for 10 years following our university's data protection policy and GDPR rules, 2018.
Will my taking part in the study be kept confidential? Only the researcher, her supervisors (Prof Gary Morgan and Prof Nicola Botting), and you as a professional will be able to see the information, we collect about you during this study. None of the information kept about you will have your name on it because we will use a code number instead. After the study is finished, the anonymous information will be kept in a secure place at the university for 10 years.

What will happen to result of the research study? What we find out in this study will be written up into a Ph.D dissertation report. It is also hoped that this report may be published in academic journals or presented at a conference. Whenever we write or talk about what we have found out in this study, we will never use any names. After the study is complete, you will receive a summary of group results.

What will happen if I do not want to carry on with the study? If you, decide that you want to drop out from the study that is fine. You do not need to give us a reason for dropping out. If that happens, we will cancel our visit and we will remove all of the information we have about you permanently and you will no longer be included in this.

What are my rights under the data protection legislation? City, University of London is the data controller for the personal data collected for this research project. The rights you have under the data protection legislation are listed below, but not all of the rights will apply to the personal data collected in each research project: • right to be informed • right of access • right to rectification • right to erasure • right to restrict processing • right to object to data processing • right to data portability • right to object • rights in relation to automated decision making and profiling For more information, please visit www.city.ac.uk/about/city-information/legal

What if there is a problem? If you have any problems, concerns or questions about this study, you should ask to speak with the researcher. If you are still unhappy and wish to make formal enquiries, you can do this through the University complaints procedure. To enquire or make a complaint about the study, you can phone 020 7040 3040. Ask to speak to the Secretary of Research Ethics Committee and tell them that the name of the project is: "Talking and listening skills in children from different types of home background". You could also write to the Secretary at: [redacted] Research Governance & Compliance Manager Research & Enterprise City, University of London Northampton Square London EC1V 0HB Email: [redacted] Phone: [redacted] City, University of London holds insurance policies which apply to this study. If you feel you have been harmed or injured by taking part in this study, you may be eligible to claim compensation. This does not affect your legal rights to seek compensation. If you are harmed due to someone's negligence, then you may have grounds for legal action.

Who has reviewed the study? This study has been approved by City, University of London School of Health Sciences Research Ethics Committee.

Further information and contact details: Researcher: Sevil Savi-Karayol [redacted], Supervisor 1: Prof. Gary Morgan [redacted], Supervisor 2: Prof. Nicola Botting [redacted] Thank you for taking the time to read this information sheet. Please click to the next page to complete the consent form.
[Note: all boxes MUST be ticked before participants are allowed to move on]

Please tick all the boxes to take part in the study:

I confirm that I have had the project explained to me, and I have read the participant information sheet which I can download or print for my records (1)
I can access Zoom and be in a quiet room or space for the interview (2)
I understand that the interview will be recorded via Zoom or audio recording (3)
I understand this information will be held by City University of London as data controller as a public task 6 (1)(e) and processed following GDPR (4)
I understand that my profession type will be recorded and kept as part of the project, but no names or identifiable information will be kept on a database. City considers the processing of this information will fall under 9(2)(g) of the GDPR (5)
I understand that my participation is completely my choice, that I can choose not to take part in any or all of the project and that I can drop out at any stage without being penalised or having to give a reason (6)
I agree to City University of London recording, processing and storing information about me for the sole purposes set out above and that my consent is conditional on City University of London complying with its duties under GDPR (7)
I agree to take part in the above study (8)

Thank you for agreeing to take part! Please leave an email address so that we can arrange an interview at your convenience

Appendix H: Interview questions for professionals

1. Could you please tell me, what is your profession? what is your role in the field of LAC?

2. Regarding /Concerning LAC's SLCN, what are the main things that we are missing when a child enters in the care system or becomes a looked-after child?

3. In your experience, are language skills assessed routinely in LAC? -

4. Do you think, it would be useful to have language assessment as part of the (LACs) needs assessment?

5. What are the most important and complex difficulties/ challenges these children face in relation to their language/communication?

6. Do you think these children have difficulties in understanding explanations and instructions? Could you give me an example?

7. What steps could be taken to support this population's communication/language needs?

8. Do you think these children aware of their speech, language or communication difficulties, and what impact is this having on them?
9. Are you aware of any strategies OR support systems/ plans that are in place to help looked-after children to overcome their language difficulties?

10. Do LAC find it difficult to communicate with their peers?

11. Do you think language impairments affect children's life outcomes, education, attachment, emotional states and employment?

12. Do you think LAC have difficulty talking about experiences or situations so that the listener understands?