Patients' experience of trauma care in the emergency department of a major trauma centre in the UK

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INTRODUCTION

Trauma is the fourth leading cause of death in western countries and the leading cause of death in people under 40 years old (National Confidential Enquiry into Patient Outcomes and Death (NCEPOD) 2007). There has been focus on developing trauma care in the last few years with the National Health Service (NHS) Outcomes Framework (Department of Health (DoH) 2013) Domain 3 being focused on survival for major trauma. Major trauma describes serious and often multiple injuries where there is a strong possibility of death or disability (National Audit Office 2010).

Trauma affects people from all age groups, geographic areas and socioeconomic classes. Trauma patients require specialist care from a multidisciplinary group of professionals. The initial assessment of major trauma patients' is challenging with minutes making the difference between life and death. Trauma can impact physically, emotionally and financially on the patient as well as their family and friends, both by the immediacy of the traumatic event and the long-term effects.

The trauma team consists of clinicians who carry out pre-assigned roles simultaneously so that interventions occur rapidly (Cole and Crichton 2006). Good trauma care involves getting the patient to the right place at the right time for the right care (NHS.UK 2014), and major trauma centres (MTC) are set up to provide this specialised care. This involves rapidly identifying injuries, completing investigations and accessing specialist care as soon as possible after arriving at hospital.
Despite on-going improvements in trauma care and trauma systems, there is little literature looking at the patients’ experience of trauma care in the emergency department (ED). In a review of the literature, seven studies were identified which examined the trauma care from the patient perspective, one of which was UK based. When O’Brien and Fothergill-Bourbonnais (2004) interviewed seven trauma patients about their perspectives on trauma resuscitation in the Emergency Department (ED), they found patient’s initial perceptions of vulnerability subsided as a sense of feeling safe became prominent and that caring behaviours, such as touch and tone of voice contributed to a positive experience. The combination of efficiency and caring by the trauma team helped to create an environment where patients’ felt safe. An earlier study by Jay (1996) explored and described issues in relation to nursing care that are important to trauma patients in the ED in England. In their findings based on seven interviews with trauma patients, they concluded that touch, company and information were important in coping and regaining control, as well as the need to trust the healthcare professionals.

Patients in an MTC are likely to be severely injured and Franzen et al (2008) found that severely injured patients tended to rate the quality of care more highly. Franzen et al (2008) and Wiman et al (2006) found that the less severely injured patients felt that communication was lacking affecting their perception of quality of care. Wiman et al (2006) focused on the trauma patients’ conceptions of encounters with the trauma team. Their findings focused on communication between the patient and the healthcare professionals and found that participants were more confident, satisfied and gained comfort from professionals who treated them with both good physical care as well as providing psycho-social care.

Increasing knowledge about the patient experience of care in the ED is important to understand their situation and their needs following a traumatic event.

METHODS
A qualitative research design was used and data collected by semi-structured interviews. The interviews were transcribed verbatim and analysed thematically.

The study aim was to describe the patient perspective of trauma care in the ED. The study objectives were to: describe the ED environment from the perspective of the trauma patient; explore the trauma patient’s experience of engagement with healthcare professionals in the ED; illuminate the trauma patient’s emotional trajectory and their reflections on care in the ED.

**Study context and participants**

The participants for this study were recruited using a pragmatic convenience sample from adult patients admitted to the trauma ward of an MTC in London, having suffered a traumatic injury. The use of convenience sampling for the patient group allowed for recruitment of a diverse group of participants as described in Table 2.

The key ethical issues addressed in relation to the conduct of this study were related to ensuring informed consent and confidentiality as well as reducing the risk of coercion and any potential distress that might result from discussing a sensitive topic. A member of the clinical care team identified potential participants from trauma admissions. They used the inclusion and exclusion criteria (table 1) when screening patients, and if the patient fitted the criteria, they invited the patient to participate in the study. During the data collection period (April – June 2015), 263 patients were screened and 37 patients were identified as potential participants from the trauma unit. A patient information sheet was given to them and if they agreed, their details were passed to the researcher. Those that agreed to see the researcher were approached; after the patient had a minimum of 24 hours to consider the study. The researcher was a fulltime student during the study and was not involved in providing trauma care in the ED.13 patients in total consented to participate in the study. Participating patients were assigned pseudonyms.

Coercion was minimal as a member of the clinical care team initially approached the patients, allowing patients to fully consider if they wanted to participate prior to being approached by the researcher. All patients identified
were approached to minimise any bias in recruiting patients. The impact of discussing a sensitive topic was considered in the formulation of the topic guide and in the ethics committee meeting. Participants were reassured they could stop at anytime and could be signposted to the appropriate people.

Trauma is classified using an injury severity score (ISS), an anatomical scoring system that provides an overall score for patients with multiple injuries, ranging from 0-75 with a score of 16 or greater signifying major trauma (National Audit Office 2010). The ISS for the participants ranged from 4 to 21 (mean= 12.46, SD= 5.91).

Interviews and data collection
Participants were asked to narrate their experience from the initial injury up until transfer from the ED to the ward. Open questions were used to encourage patients to describe their engagement with the healthcare professionals; the environment in the ED; as well as their feelings and emotions, using questions like ‘Can you describe the environment you were in?’ and ‘Tell me about any feelings or emotions you experiences.” Follow up questions were used to clarify thoughts, feeling and experiences if this information did not appear in the narrated story (Mishler, 2005). The interviews were semi-structured to ensure that key questions were answered in relation to the research aim whilst allowing participants to elaborate on issues they felt important. Interviews were performed between 2 and 23 days after the injury event. Interviews were conducted as soon as the patient felt they were able to participate. Interviews lasted between 9 and 42 minutes and were transcribed verbatim.

Data analysis
The interviews were analysed using thematic analysis (Braun & Clarke 2006). Thematic analysis involves discovering, interpreting and reporting patterns and clusters of meaning within the data (Spencer et al 2014). Analysis involves constantly moving backwards and forward between the entire data set, to code the data, categorise the codes, analytical reflected and
construction themes (Braun & Clarke 2006). After several readings codes were assigned that described the content while still keeping the core content. The codes were grouped into categories and sub categories. During the whole process discussions between two of the authors (IS and EM) led to a refinement of the codes and categories in order to strengthen the credibility of the final thematic structure. The analysis resulted in four main themes.

**FINDINGS**

The four themes that emerged are: initial impact of the trauma; environmental factors; communication styles; and reflecting on the trauma.

**Theme 1: Initial impact of the trauma**

- **I was in shock**
  
  Participants reported how they felt both the physiological response of feeling cold, shaking, tachycardia – a racing heart - as well as the psychological response of a panic or disbelief that something like this could occur to them. There was also a realisation that the state of shock protected them initially from the realisation of what had occurred: “I'm not cold, it's shock’. You just suddenly realise that something has happened to you”(P9).

- **I was scared**
  
  An emotional response to the trauma was described by a sense of fear and panic. These feelings of fear and panic overlapped with their arrival in the ED and were exacerbated by a lack of knowledge and uncertainly to the extent of their injuries. This is a feeling that would remain in the ED as well due to the lack of knowledge and control about the situation and the potential extent of their injuries: “I can’t explain the kind of sense of panic when you are lying at the side of the road, you think you have a serious injury and you just think nobody knows, (my wife) doesn’t know, I don’t know how bad this is, the people, there was a doctor there, but they can’t do anything. I could have died there and then and never spoken to (my wife)”(P13).

- **I was in pain**
Powerful descriptors, such as horrific and excruciating, were used to describe the pain from the injury and procedures carried out in the ED: “It was the pain. It felt like my body, my whole body was exploding.” (P1). They recalled being given analgesia, primarily morphine, for their injuries and recalled their pain being under control. Benefits of having pre-hospital analgesia were noted, making it easier to go through the initial assessments in the ED: “My pain was very well controlled, obviously it was bad, at the scene it was horrific” (P13). They recalled hallucinations or a feeling of detachment, resulting from the analgesia: “They gave me some morphine and stuff and from that point I just felt a bit in the clouds really” (P7).

**Theme 2: Environmental factors**

* Perspectives on the physical environment

Many participants arrived in the ED wearing hard collars to protect their cervical spine from injury until their neck could be assessed and cleared. This also involved being strapped down to a hard scoop on route to hospital and then lying flat on the bed with their head between two blocks, until their spine is medically cleared or waiting for CT scan results before being able to move. Therefore most participants described their initial view of the environment to be restricted to the ceiling and bright lights: “But you’re on your back, so your whole world is the ceiling” (P12). This also contributed to patients feeling a loss of control and helpless to their situation: ‘Claustrophobic. But I’m not a claustrophobic person… All I could do was look up. I couldn’t see the people around me” (P2). While lying flat, noise was a factor with the multitude of machines around: “Oh my god, all these machines beeping” (P1).

* Atmosphere within the ED

The dynamic combination of efficiency of the staff and their caring nature created an atmosphere in which these participants felt safe and cared for. Many participants commented on the alertness and preparation of the staff in the ED, which created a positive atmosphere: “And then there was a kind of buzz about it… It was the atmosphere, of well I felt they were very on, what the French would call the on the "qui vive", they were alert and ready” (P12). The environment also contributed to a
feeling of safety: “Clean, comfortable, safe… just the ambience of the place. I don’t know whether it’s because it’s new, but it made me feel safe” (P4).

Witnessing the trauma team at work

Positive accounts from the study participants of witnessing the trauma team at work were related to the perceived harmony and efficiency of the trauma team, being treated with respect and the importance of not being alone. There was a strong sense of safety and reassurance associated with witnessing the trauma team at work recounted by all the participants interviewed. There was a combination of the perception of efficiency of the trauma team with the compassion that the participants were treated with. This efficiency of the trauma team is demonstrated by the following quotation: “In ED they were all in harmony with each other… They all had a job to do and they did it, in sequence and sometime in parallel, they just knew what to do and they did it” (P4).

Participants almost unanimously reported that they felt respected by the staff in the ED. This came across in the way they were spoken to and cared for. This was widely related to interactions between the team as well as with the participant: “They treat you as a person, not as a lump of flesh. They do treat you with respect” (P9).

Participants also felt like they were not alone in the ED with most recalling there always a member of staff in close proximity. They said that they were reassured that they had a healthcare professional nearby to attend to their needs if required. This was particularly important for those strapped down to a hospital bed, wearing a hard collar waiting for results of investigations: “The fact that it is the same person coming back and not going away. And also making sure that I wasn’t left on my own with nobody around. I don’t think that ever happened. So my memory is that at no point was I left with nobody to say what’s happening” (P13).

Theme 3: Communication styles
Participants felt respected by the staff in the ED; this came across in the way they were spoken to. There were recollections of the use of humour by nurses and paramedics, particularly when clothes were being removed, which helped to put them more at ease: “I said ‘look at me lying here like this, everyone is looking at me’ But we were all having a laugh about it. But you know respectfully, because they did respect you as a person” (P9). Humour was also used during some of the procedures: “The nurse was talking to me while she was stitching my head and you know, just talking in general and we had a little laugh” (P11).

The feeling of reassurance that participants associated with the pastoral communication was felt to be hugely important as it reduced potential panic and made them more relaxed. It was also appreciated, as it helped the participants feel like they were treated as with respect and kindness, as human beings. One participant described the importance of good communication: “Communication skills in that sort of situation are so so important. Made such a difference to me…. I guess you could equally say if I am alive here and my arm has been fixed and everything and they were horrible to me, well does it make any difference? Well it really does…it is probably something that could have easily been missed because obviously your main concern is treating my injuries but the reassurance is hugely important” (P12).

When family were contacted is was hugely reassuring for patients and provided them with a sense of relief. However not all participants wanted their family to be present, this appears to be due to the additional worry that their family would bring, which would make the participant need to expend energy on reassuring their family, as well as feeling out of control in the situation.

When patients received enough information their injuries and treatment they felt safer and reassured: “They were really good, you know they kept coming through, every step, somebody was explaining, telling me what was happening and talking me through what they were doing…I felt very much like I knew what was going on and I
knew why things were being done and what the plan was” (P13). However some participants felt that the information given was lacking, particularly once transferred out of the resuscitation area: “I tell you the truth, coming up from ED where I was constantly told what was happening, I’ve come up here and I think this is the third ward I’ve been in and not been told anything…I feel like I’ve been put in a corner and nobody has informed me of anything”(P7). The following quotation described concerns about the lack of communication: “I don’t think I would have rerun it any differently except for a bit more communication when everybody faded away. I would have liked that and a bit more talk about what was actually the matter and why they were doing what I thought they were going to do”(P12).

Theme 4: Reflecting on the trauma

Participants reflected on their feeling on leaving the ED and being transferred to the ward. They also spoke about plans to return home and the impact on their family and jobs. Participants spoke with hope about their future, although the impact of the trauma still remained, with concerned about potential complications and memories that remained. This theme, reflecting on the trauma has been divided into subthemes: I will be okay, I appreciate the health care system and looking to the future.

- I will be okay
  There tended to be a sense of relief once they had been treated and stabilized in the ED and were ready to be transferred to the ward. This move to the ward was felt to be a move towards normalisation, a step towards a re-assimilation with the outside world: “When they said they were going to put me on the ward, I suppose that’s when I started saying, ok…suppose I am as safe as they tell me I am. They know more than I do”(P4). There was an element of reflection on surviving the injury and knowing they were going to be okay “I now know how lucky I am to be alive”(P8).

- I appreciate the health care system
  There was a sense of appreciation throughout for the care provided as a result of the traumatic injury. A couple of the participants particularly expressed appreciated for
the NHS as a healthcare system, who felt that the NHS is: “At its core it is a magnificent, unique service for people” (P12).

With participants that had been transferred from a trauma unit into the MTC, as well as the participants that were taken directly to the MTC due to the nature of their injuries, there was appreciation of being taken to a centre that was a specialist in dealing with traumatic injuries. Being treated by professionals who deal with trauma day in day out, gave participants as sense of reassurance: “I knew I was in safe hands” (P4); and P10 who said: “I see now why they send you to certain places for specific illnesses or conditions”.

Looking to the future

After surviving the traumatic injury and undergoing the period in ED, participants reflected on the impact on their lives, their future and the impact it would have on their families. For one in particular, the experiences has perhaps turned a potentially negative experience into a positive one, having a new appreciation for the fragility of life and the opportunity to make a change: “I know I have a long and rocky road but it has made me realise I want a few changes in my lifestyle.” (P8). Whereas for other participants there was a sense of coming out stronger “Makes you very strong, you’re more determined to deal with it” (P4).

However for one participant, who was a surgeon, who had broken his right arm in an accident, was still worried about the impact it was going to have and the potential for it to affect his career as a surgeon. However after the initial injury when he was at the roadside, fearing for his life, concerned about major bleeding from his pelvic injury, there was still a huge sense of relief that he was alive: “Despite the fact I know that these injuries are going to keep me off work for a while, but yeah, its difficult to explain, huge sense of relief and I guess the only persisting thing after that was my work. Was I ever going to be able to operate again?” (P13).

Discussion

This study of 13 trauma patients explored the experience of care in the ED with the aim of providing insights about perceptions of care from the patients.
This study represents the first of its kind in the UK. It illuminated the complex array of emotions that are experienced by trauma patients in the specific context of the ED and demonstrates that many patients have a heightened awareness of their environment in the ED. The interaction with the trauma team is central to negating the initial fear, ambiguity and uncertainty experienced by most patients.

Liminality is a term used to describe an experience of uncertainty and is used to describe the state of being in-between (Bruce et al 2014). The betwixt and between phase (van Gennep, cited in Turner 1967) emphasises the transitioning from one stage to another. Descriptions of liminality in health literature focus on transitions and temporary experiences that patients work to resolve and move beyond (Kelly 2008). In the context of life threatening illnesses, liminality is used to describe a psychosocial space for people living with end stage renal disease (Martin-McDonald and Biernoff 2002), HIV/AIDS (Kelly 2008) and cancer (Miles et al 2008).

The concept of liminality can help illuminate aspects of the findings from this study. Figure 1 has been developed from the findings using the stages of liminality to depict the stages of experience within trauma. The diagrammatic representation is intended to provide an overall picture of the trauma experience from the initial trauma through to preparing for discharge back to the outside world. The themes that emerged from the study can illuminate the feelings and emotions that occur within each stage of this process and what factors positively influence the experience.

Separation is the initial stage, relating to the immediate impact of the trauma and primarily related to the “initial impact of the trauma” theme. These initial emotions, feeling scared, are also identified in the studies by Jay (1996) and O’Brien and Fothergill-Bourbonnais (2004). The participants’ in the present study also recalled an awareness that they had been in shock, for example from a feeling of intense cold or their heart racing. Shock was also recognized in the O’Brien and Fothergill-Bourbonnais (2004) study as a physical phenomenon described as a feeling of intense cold.
The *transitional* stage is the time in the ED, primarily related to the communication styles and environmental factors themes. Participants who recalled emotions from their time in the ED often described emotions in terms of a range of experiences from scared to safe. Being scared was related to a loss of control, panic, anxiety, not knowing and being in pain, whilst feeling safe was related to being reassured, comforted, informed, in addition to the life-saving aspects of the ED such as the efficiency and competence of the trauma team. There was no straight path on the emotional trajectory, all participants’ emotions fluctuated in the ED. Perceptions of compassionate care, competent management and a clean environment were associated, however, with reducing fear, worry and pain and increasing the feeling of safety. This resonates with the findings of previous studies (O’Brien and Fothergill 2004; Jay 1996; Wright 2011).

The impact of trauma and the admission to the ED has a small but emerging body of research. Whereas critical illness and admission to intensive care units has been well researched and patient memories of frightening experiences has been shown to potentially threaten their later psychological recovery (Adamson et al 2004; Schelling et al 1999). In general, traumatic events are very clearly remembered by those that experience them and are seldom or never forgotten (McNally 2005). Memories of traumatic or frightening events usually persist for longer periods than emotional memories (Lof, Berggren and Ahlstrom 2008). It is unknown if the vivid memories from the trauma or the hallucinations resulting from analgesia reported by participants will have a lasting impact.

Participants accepted that the health service providers were providing the best available care, so whether they drove past the local hospital to get to the MTC or they were transferred to the MTC following an initial assessment at the local hospital, they were compliant with treatment pathway. This has not been a factor in previous literature on patients’ perceptions of trauma care in the ED, due to the recent set up of the major trauma network.
Most participants’ in this study expressed satisfaction with the teamwork and appreciated rapid attention. Baldursdottir & Jonsdottir (2002) conducted a study to identify which nurse caring behaviours are perceived by patients in an ED as important indicators of caring and found that patient rated clinical competence as the most important of nurses caring behaviours. The organization, attitude and competence of the trauma team brought patients a sense of safety and security (O’Brien and Fothergill-Bourbonnais 2004). Wiman et al (2007) also found that competence generated feelings of comfort, confidence and satisfaction. Several studies have shown that the presence of staff and the caring relationship that is formed is an important factor with regards to the trauma patients coping with the traumatic injury, the unknown, their sense of security, hope and sense of well-being (O’Brien and Fothergill 2004; Jay 1996; Wright 2011).

The findings of the present study have found that participants felt that they were treated with kindness, compassion, respect and with humanity in the ED. However Holbery (2014) identified emotional intelligence to be lacking amongst the trauma team in her reflective account of her experience of being both a relative of a trauma patient and a nurse. Holbery (2014) found care to be mechanical and protocol driven. None of the participants in this present study expressed feelings of vulnerability.

Compassion and competence of the trauma team were intertwined in the findings of this study. Caring is an essential element of nursing (Benner and Wrubel 1989). The DoH (2012) states that care is our core business and that of our organisations, and the care we deliver helps the individual person and improves the health of the whole community. Engagement with healthcare professionals is influenced by the emotional intelligence (EI) of the individuals within the trauma team. EI is defined by Salovey and Mayer (1990, p189) as a subset of social intelligence that involves ‘the ability to monitor ones own and others feelings and emotions to discriminate among them and use this information to guide ones thinking and actions’. The findings of the present study have found that participants felt that they were treated with kindness, compassion, respect and with humanity in the ED.
Participants completed their narratives with reflections and resolutions for the future, looking forwards to discharge, family and work life after their trauma. Many patients see the journey through the ED as a transition and the experience generates new perspectives on their lives as they exit. This represents their re-assimilation, in the final stage of the liminal period. Emotionally, participants were relieved to be okay and appreciative of care received. This resonates with findings in Wright (2011) who found that the majority of participants interviewed expressed appreciation and thanks for providing care in a time of duress. O’Brien & Fothergill-Bourbonnais (2004) also found that the traumatic event has lead to a reawakening, giving a new appreciation for the fragility of life which is supported by the findings in this study.

Limitations

As in most studies, all participants volunteered their time to be interviewed, which may suggest that they are generally more proactive and interested in scientific research. This could potentially mean that the participants had stronger views on the experience of care. When it comes to the content of the patients’ descriptions of their experiences in the ED, similar results have been reported in other studies and this partly confirms the transferability of the results (O’Brien and Fothergill-Bourbonnais 2004; Wiman et al 2007). The use of qualitative semi-structured interviews enables participants to describe their experiences. The researchers knowledge and experience are important to understand and interpret the material. A second person was involved in the analysis of a sample of transcripts and the same themes identified, indicating that the interpretation was authentic. The researcher was a novice in conducting interviews, which may have impacted on the depth and breath of the narratives analysed. Patient groups that were discharged from the ED and those admitted directed to theatre or ICU from the ED were excluded. It is possible that different perspectives may be voiced from these groups. However the aim of the study was to explore the range and diversity of perspectives rather than make generalisations as a whole.
The study corroborates existing literature linking competent and compassionate care with patients’ sense of safety. This study illuminated the multifaceted array of factors that influence the patients’ experience of care in the ED. This combination of factors and the influence it has on their emotions differs between individuals and is likely to be influenced by multiple factors including age, gender, mechanism and severity of injury, recovery and treatment course as well as personal circumstances.

Participants in the liminal period entered the ED scared, in pain and in shock. For participants to feel safe, secure and reassured in the ED it was important for staff to quickly build rapport with the participants. With this rapport, trauma teams are able to communicate not only essential information, but also provide reassurance, show respect and humanity. Trauma teams working in a MTC are exposed to trauma on a daily basis, competence in the management of trauma is shown to the patients in the speed and precision in which tasks are completed. Compassion in care is remembered by patients and forms part of the picture they remember about their trauma experience.

Liminality is a useful construct that can help make sense of ambiguous experiences. Understanding liminality helps us to understand what it is that trauma patients seek from the healthcare service. An understanding of the patients experiences and emotions in the ED has implications for how nurses interact with patients and raises opportunities for strengthening holistic nursing care and also raises challenges around what can be improved.
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