

Submitted in partial fulfilment of the Lancaster University Doctorate in Clinical Psychology,

May 2017

Doctoral Thesis:

Staff experiences in paediatric trauma services: Exploring perceptions of resilience when dealing with distress

Gemma Foat-Smith

Doctorate in Clinical Psychology

Division of Health Research, Lancaster University

All correspondence should be sent to:

Gemma Foat-Smith
Doctorate in Clinical Psychology
Furness College
Lancaster University
Lancaster
LA1 4YT
g.foat-smith@lancaster.ac.uk

Word Counts

	Main Text	Appendices (including tables, figures and references)	Total
Thesis abstract	195	-	195
Literature Review	7,917	6,084	14,001
Empirical paper	7,810	4,967	12,777
Critical Appraisal	4,199	357	4,556
Ethics Section	5,184	4,220	9,404
Total	25,305	15,628	40,933

Thesis Abstract

An absence of qualitative research exploring stress and coping in particular paediatric specialities has been highlighted. With the aim to explore stress and coping amongst all health-care professionals within inpatient paediatric specialities, a review of published research using a meta-synthesis approach was undertaken. The qualitative synthesis of 23 studies highlighted a complex relationship between stress and coping factors that included: relationships and loss of relationships, complexity of professional role and organisational support and working within a multi-disciplinary team (MDT). Clinical implications are discussed.

The second section of the thesis is an empirical study that explored resilience amongst health professionals working within a paediatric trauma setting. Seven participants were recruited that included medical and nursing professionals working in a specialist trauma service within a paediatric hospital. Using Interpretative Phenomenological Approach (IPA) the data highlighted the importance of self-awareness in understanding resilience amongst professionals working in this context. Clinical implications and limitations of the study are discussed. Further research is recommended in developing theoretical understandings.

The third section of this thesis takes the structure of a critical appraisal that further discusses the process of conducting the thesis; specifically focusing on conducting research within the area of 'resilience'.

Declaration

This thesis records work undertaken for the Doctorate in Clinical Psychology at the Division of Health Research at Lancaster University from August 2016 to May 2017.

The work presented here is the author's own, except where due reference is made. The work has not been submitted for the award of a higher degree elsewhere.

Name: Gemma Foat-Smith

Signature:

Date:

Acknowledgements

I wish to express a sincere thank you to the professionals who generously gave up their time to participate in my research. Without them, the completion of this study would not have been possible.

A special thanks to my research supervisor, Dr Suzanne Hodge, for her continued encouragement and guidance throughout this research. Also, thank you to Dr Jennifer Dainty and Dr Clare Dixon for their expertise and support. I am deeply appreciative of your invaluable contributions.

I would also like to thank my family for their unconditional love and continuous support. A special thanks to my Mum for always believing in me and her continuous words of encouragement during times of despair.

Lastly, thank you to Peter for your love and patience with me during the last few months – no more studying I swear!

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Section One: Literature Review

Stress and coping amongst inpatient paediatric health-care professionals:

A meta-synthesis

Gemma Foat-Smith

Doctorate in Clinical Psychology

Division of Health Research, Lancaster University

Work Count: 7,917 excluding title page, references, tables/figures

Prepared in accordance with 'Author Information Pack' for the journal 'Clinical Psychology
Review'

All correspondence should be sent to:

Gemma Foat-Smith
Doctorate in Clinical Psychology
Furness College
Lancaster University
Lancaster
LA1 4YT
g.foat-smith@lancaster.ac.uk

Abstract

Purpose: To identify and synthesize qualitative studies exploring experiences of stress and coping amongst health professionals working in paediatric inpatient settings.

Methods: A systematic search of six databases for qualitative research exploring experiences of health professionals working within paediatric hospital settings was conducted. Papers that met the inclusion criteria for the review were evaluated using the Critical Appraisal Skills Programme (CASP) quality guidelines. Themes were extracted and synthesized in accordance with the procedures outlined for qualitative metasyntheses.

Results: From the 23 papers included for the review four concepts were identified: (i) Relationships: the double edged sword, (ii) Complexities of role, (iii) 'Letting go': experiencing death and overcoming grief and (iv) Systemic influences and challenges.

Conclusions: The findings of the current review highlight factors that can enable organisations and institutions to better support the professionals within these settings. It is recommended that services consider the emotional and practical support of professionals, particularly to increase formal and informal support for paediatric health professionals.

Occupational stress is defined as work-related conditions that impact the well-being of the employee (Health and Safety Executive (HSE), 2007). Stressor domains include: demands, control, relationships, the role, change and support (HSE, 2001). As nursing ranks highly amongst stressful occupations (HSE, 2000), there may be factors specific to the environment which could be applicable to other health professionals in these settings. It is acknowledged that some individuals respond positively to stress (McCloskey & Taggart, 2010) however, for most, occupational stress commonly leads to poor physical and emotional health (Beehr, 2014). Thus for professionals working in these settings, staff sickness may be common due to the effects of the role. Prolonged stressors are also associated with increased societal and economical costs (Beehr, 2014). Although the importance of developing an effective health-care workforce has been highlighted (Department of Health, 2008), it is increasingly challenging to retain the health-care professionals needed to meet a growing demand (International Council of Nursing, 2015). NICE (2015) guidance recommends the need for a supportive environment for employees which enhance the individual's well-being.

Paediatric inpatient settings

Health professionals working within inpatient paediatric settings are responsible for the care and treatment of children with a wide range of physical health conditions; some of which are life-limiting and/or life threatening. Professionals also attend to and support the emotional needs of the wider family and are often faced with overwhelming emotions as a result of the child's suffering or death (Sekol & Kim, 2014). During the last few decades advances in medicine and technology have improved the prospect of survival for many paediatric physical health conditions (Stenmarker, Hallberg, Palmérus, & Márky, 2010). Therefore professionals are required to have specialist clinical and technical knowledge (Foglia, Grassley, & Zeigler, 2010) but, despite advances in medicine, mortality remains an issue (Cook et al., 2012). With this in mind, mortality is a big aspect of healthcare amongst

some sub-specialities within inpatient paediatric care. The emotional labour associated with inpatient paediatric care is thus highlighted and indicates staff working in these settings require effective strategies to manage the complexity of the role.

Stress and coping within role

Working in paediatric services is personally and professionally challenging due to the emotional labour involved in working in this context (Sekol & Kim, 2014; Zander & Hutton, 2009). Alongside this, moral distress is commonly experienced by professionals working within these settings (Pye, 2013). Moral distress was first introduced by Jameton (1984) and has been studied primarily amongst nurses. Jameton (1984) described moral distress as an internal conflict resulting from a situation in which the professional is aware of the morally appropriate course of action but is prevented from carrying this out by the institution. Moral distress could relate to professional role differences as nurses are often required to provide treatment to their child patient¹ as directed by the medical professional responsible for the child's care. If nurses disagree with the treatment or feel it is causing unnecessary pain or discomfort, this would cause distress in the professional. Moral distress appears significant within health professionals within paediatric settings (Pye, 2013). This may relate to the unique and complex demands associated within the role.

There is a body of research looking at the related issues of stress, coping and staff retention (Ekedahl & Wengström, 2006; Muscatello et al., 2006; Jourdain & Chênevert, 2010). When considering professionals that work in paediatric services, interest has gathered from qualitative and quantitative researchers over the last two decades exploring role specific stress factors. A combination of personal influences that include: experience, marital status

¹ Research conducted within physical health settings commonly refers to the individual receiving treatment as the "patient". For the purpose of this review, the client group will be referred to as patients throughout. This is in line with existing research and the service in which the research was conducted, as opposed to the preference of the researcher.

and professional role (Hinds, Quargnenti, Hickey, & Mangum, 1994; Isikhan, Comez, & Danis, 2004) have been identified as stress factors for professionals in this context.

Additionally, professional influences have also been identified that include: physical environment, responsibilities, interpersonal conflict, lack of resources, shift work and an absence of organisation support (Gallagher & Gormley, 2009; Isikhan et al., 2004; Judkins, 2003; Zander, Hutton & King (2010) . Repeated exposure to stress within the work-place can result in difficulties for health professionals continuing to work in these settings (Jourdain & Chênevert, 2010).

When exploring retention amongst inpatient paediatric professionals using qualitative methods, five key issues emerged that related to wider systemic influences (Skinner, Van Dijk, Elton & Auer (2011). These included: workload and shift patterns, difficulties accessing leave and child-care arrangements (Skinner et al., 2011). This highlights personal challenges for professionals working within a paediatric hospital. When considering coping within paediatric inpatient settings many professionals discussed how their personal relationships were commonly a source of support (Fanos, 2007). Thus, previous research captures the challenges to inpatient settings: working shift patterns and an inability to access time off not only directly impacts the professionals' wellbeing; they also inhibit their access to an important coping strategy - support from relationships outside of work. It is noteworthy that the aforementioned studies were primarily conducted within oncology settings and thus it is unclear if these findings relate to all sub-specialities.

Despite the aforementioned research exploring stress within paediatric settings, there is an absence of reviews. To date, most reviews have been conducted within oncology settings or relating specifically to moral distress. In reviewing the qualitative and quantitative research available, Mukherjee, Beresford, Glaser and Sloper (2009) highlighted the individuality related to burnout amongst professionals working within paediatric oncology.

The transactional model of stress and coping highlights that stressors are only considered as such if they are appraised by the individual as stressful (Lazarus & Folkman, 1984). Thus, working in paediatric settings will expose the professional to an array of stressors, however these may not all result in negative outcomes or be experienced as negative by the individual. It is the individual's evaluation of the situation and the coping strategies available to them that influences the interpretation of the stressor. In considering professionals' coping, Zander and Hutton (2009) identified the importance of reflective practice for professionals working in paediatric contexts. This would suggest having a supportive and protected space to discuss and share difficulties associated with working in this emotive context enables the professional to continue working within this setting. Taken together, the importance of organisations to enable the implementation of strategies that enable professionals to continue working in this area is highlighted.

Moral distress has been identified as a particular stressor for paediatric professionals (Pye, 2013). Austin, Kelecevic, Goble and Mekechuk (2009) conducted a review to summarise the factors that contribute towards moral distress. It was highlighted that moral distress arises from a variety of factors including; treatment decisions, life-or-death decision making, training, power issues and personal values and beliefs (Austin et al., 2009). Similar findings were highlighted in a more recent review; that moral distress most commonly relates to medical interventions that the professional does not consider in the child's best interest (Prentice, Janvier, Gillam & Davis, 2016). The reviews highlight however that for professionals working within intensive care settings, distress may be a result of conflicting personal and professional beliefs, commonly related to treatment for the young person. This indicates the importance of team working within these settings and for all professionals to be heard and respected in relation to clinical decisions.

Rationale and aims of current review

An absence of high quality research exploring stress and coping in particular paediatric specialities, including oncology, is highlighted (Mukherjee, Beresford, Glaser, & Sloper, (2009). A body of qualitative research has accumulated in the area that explores experiences of a variety of medical specialities. However, no review of studies in relation to stress and coping including all paediatric health professionals has been conducted to date. In considering this, the current review will expand on current published reviews by exploring stress and coping amongst all health-care professionals within all inpatient paediatric specialities. The review will adopt a meta-synthesis approach, as this provides a depth and richness that is absent in other review approaches.

In considering the aforementioned, the aim of the current review was **to synthesise qualitative literature exploring stress factors and coping mechanisms amongst professionals working within inpatient paediatric services**. Thus, the review has the following research questions:

1. What aspects of working in inpatient paediatric services do professionals find stressful?
2. What coping strategies are used by professionals working within inpatient paediatric settings?

Method

A meta-ethnography approach as developed by Noblit and Hare (1988) was adopted for the current review as it allows qualitative results to be interpreted and integrated to generate new meanings (Kane, Wood & Barlow, 2007). This approach is appropriate for the current review as it allowed the original findings to be re-interpreted and new concepts generated in line with the research question.

Searching for studies

A number of inclusion and exclusion criteria (see Figure 1) were used to identify papers for the review. Relevant papers were identified by searching PsycARTICLES, PsycINFO, CINAHL, AMED, Academic Search Complete and PubMed electronic databases in December 2016. This covered a range of medical, nursing and psychology journals. The searches covered the periods from January 1985 to December 2016. The full-text search terms used within the review were verified by a librarian at Lancaster University.

Insert Figure 1 here

The terms used for the current review were: [stress* or distress or burnout or exhaustion or occupational stress or compassion fatigue] AND [health professional* or health worker* or health personnel or allied health professional* or allied health personnel or medic* or doctor* or physician* or nurse* or surgeon* or clinician* or paediatrician* or pediatrician* or neurologist*] AND [paediatric* or pediatric* or child* or infant*]. Subject headings were also used in conjunction with search terms for each database (see Appendix 1-A for details of the search strategy for each database). Evidence based filters were also used

to search for qualitative research material within each database. The filters developed by the University of Texas (UTHealth, 2014) were used in the search process. This resulted in the identification of 5,082 papers (PsycARTICLES = 1,319, PsycINFO = 1,333, CINAHL = 1,167, AMED = 32, Academic Search Complete = 8, PubMed = 1,223). The papers were first reviewed by examining the title and abstract, and duplicates removed. Where it was not clear from the information available whether a paper was suitable for inclusion in the review then a full text of the paper was requested. The reference sections of all included papers (except Kellogg, Barker, & McCune, 2014 whose reference list was not made available in the journal) were also considered for the review. Following this process 23 papers were identified for inclusion within this review (see Figure 2 for a flow chart of this process).

Insert Figure 2 here

Characteristics of the selected studies

The 23 papers selected for inclusion in the meta-synthesis explored health professionals' experiences of working within a paediatric inpatient setting. All studies were published between 1996 and 2016. The review represented a wide ranging international sample including: ten studies conducted in USA, five in Canada, one in Iran, three in the United Kingdom, one in Ireland, one in Sweden, one in Greece and one study recruited from both Greece and China. Sample sizes ranged from 6-63 participants. All 23 of the papers included nurses, seven included medical personnel, two included social workers and one included therapists. The papers covered a variety of specialities; 11 were conducted in oncology, 11 in ICU settings, two in cardiology and two in burns, one in haematology, one in chronic health and one in pain settings (see Table 1 for study characteristics).

Appraising the quality of the selected studies

One difficulty in reviewing qualitative studies is an absence of quality appraisal tools specifically for qualitative studies (Dixon-Woods & Fitzpatrick, 2001). For the current review, the Critical Appraisal Skills Programme (CASP) (Public Health Resource Unit, 2013) was used to assess the strengths and weaknesses of the included papers against 10 criteria that are considered appropriate for qualitative research. Quality appraisal was conducted prior to data extraction as recommended by Harden and Thomas (2005). Each study was given a score based on a three point rating system developed by Duggleby et al., (2010) to indicate a (1) weak (2) moderate or (3) strong explanation of the particular item. The scores were used to provide an indication of the studies' quality and not used as exclusion criteria, as the current aim was to provide a broad overview of the stress and coping factors amongst all paediatric health professionals. Additionally, there is a lack of agreement of indicators of quality in qualitative research (Harden & Thomas, 2005; Sandelowski & Barroso, 2005).

Insert Table 2 here

Analysing the studies and producing the synthesis

Meta-ethnography was used for the current review to produce a new explanation of the data. Meta-ethnography has evolved since it was first introduced by Noblit and Hare (1988) almost three decades ago and has received much interest relating to the appropriate number of studies to be synthesised. (Campbell et al., 2011) evaluated meta-ethnography as an approach for synthesising health research. Campbell and colleagues argue that a maximum of 40 papers should be included in a meta-ethnographic approach as this can create

challenges in balancing the breadth and depth of the papers needed for each stage of the synthesis.

In accordance with Noblit and Hare's (1988) approach, the 23 studies were read to determine how they were related. Once the papers were read, data extraction was completed for all studies using Munro et al.'s, (2007) data extraction guide (see Appendix 1-B for data extraction template). During data extraction all themes or theme components were identified from the results section of each paper. This process allowed the author to consider how the papers were related and begin to identify recurring themes. Following this, the original themes identified from the papers that related to the research question of the current review were recorded. Aspects of each theme were then grouped together to generate new key themes that captured different aspects of the review. According to Schutz (1962, as cited in Britten et al., 2002), these new themes are termed 'second order constructs'. The themes were further analysed and those relevant to the research question of the current meta-synthesis were compiled for each study included in the review. Following this, themes from the original papers were then grouped together to form new themes for the current review. Each concept was further examined with a focus on how well it captured the original theme in each study. Key themes were then synthesised into core 'concepts' using an iterative, constant comparison approach used in grounded theory (Corbin & Strauss, 1990). A line of argument was then developed by considering each concept and second-order constructs. This led to the final iteration of four key themes which are considered third-order constructs (see Appendix 1-C for an illustration of the process).

Insert Table 1 here

Results

The quality appraisal scores ranged from 15 to 27 out of a total of 30. No studies were excluded based on the scoring as no individual paper was considered poor quality based on this. Four concepts were identified from the meta-synthesis of the identified papers: (i) Relationships: the double-edged sword, (ii) Complexities of role (iii) 'Letting go': experiencing death and overcoming grief, and (iv) Systemic influences and challenges.

Concept 1: Relationships: the double-edged sword

The concept of relationships was multi-faceted for many of the health professionals within the studies. Relationships reflected internal and external relationships and included personal and professional relationships. Relationships were a source of both coping and distress for the participants.

Relationships with families

By nature of the working environment, relationships formed between professionals and families could be developed rapidly or over many years but despite this, all relationships had an intensity that might not be evident in other working environments. Inevitably, the relationships formed with families were commonly the source of distress for many of the professionals (Borhani, Abbaszadeh, Mohsenpour, & Asadi, 2013; Davies et al., 1996; Costello & Trinder-brook, 2000; Kaplan, 2000; Lee & Dupree, 2008; Maytum, Heiman, & Garwick, 2004; Rashotte, Fothergill-Bourbonnais, & Chamberlain, 1997; Thomas, Thammasitboon, Balmer, Roy, & McCullough, 2016); "I just didn't feel I had the words to support them (the parents), I didn't know what to say to them" (Pearson, 2013, p. 200). Professionals discussed that the development of attachments with children and their parents caused emotional distress throughout the child's treatment (Davies et al., 1996; Costello &

Trinder-brook, 2000; Maytum et al., 2004). The distress experienced as a consequence of the relationship formed could be in relation to the attachment developed: "The patient was undergoing CPR while everyone was crying. That was because we had known the patient for more than four years and had a relationship with him...it should not have happened to him, but it happened anyhow and we lost the patient" (Borhani et al., 2013, p.350), disagreeing with treatments (Lee & Dupree, 2008; Thomas et al., 2016) and expectations of themselves and others: "All these expectations are put on me. I have a lot of parents...dependent on me. It's wearing after a while" (Maytum et al., 2004, p. 175).

Relationships with families were also a source of satisfaction for many of the health professionals (Hilliard & O'Neill, 2010) and a motivator to continue working in such difficult settings (Dix, Gulati, Robinson, Syed, & Klassen, 2012; Papadatou, Bellali, Papazoglou, & Petraki, 2002). Comfort in relationships was evident during times of recovery (Olson et al., 1998; Papadatou et al., 2002) and despair (Costello & Trinder-brook, 2000). Professionals discussed how working so closely with parents and experiencing grief alongside parents was a source of comfort and coping (Davies et al., 1996; Olson et al., 1998; Costello & Trinder-brook, 2000). Some professionals reported that maintaining emotional boundaries prevented burnout when supporting children who were dying (Cook et al., 2012).

Relationships within the MDT

Working within a multi-disciplinary team (MDT) was a common source of stress for the professionals (Davies et al., 1996; De Almeida Vicente, Shadvar, Lepage, & Rennick, 2016; Dix et al., 2012; Foglia, Grassley, & Zeigler, 2010; Mahon, 2014; Maytum et al., 2004; Olson et al., 1998; Papadatou, Martinson, & Chung, 2001; Pye, 2013). For many individuals, the distress was the result of an absence of unified MDT working which left them feeling powerless (De Almeida Vicente et al., 2016), particularly when life-changing decisions were

being made: "I felt badly that we were prolonging the pain for her" (Davies et al., 1996, p. 6). This caused distrust, agitation and worry (Mahon, 2014) and left some professionals feeling devalued (Pye, 2013). This was most prevalent for nurses who were often the communicator for families, who worked long night shifts alone and who often felt unheard in the hierarchy of MDTs (Pye, 2013): "you are faced with the consultant ... that is challenging for us to see because sometimes you feel like they just want to play God" (Pye, 2013, p. 255).

Support from colleagues was considered essential within this working environment (Dix et al., 2012; Hilliard & O'Neill, 2010; Pearson, 2013). Having relationships with colleagues was the greatest support at work and was particularly evident amongst nurses (Davies et al., 1996). Despite this, some nurses experienced a dilemma with not knowing who they could share their emotions with, and reported wanting to express themselves away from others: "I go to the beach and I write their name in the sand and let the tide come in and wash it away" (Kaplan, 2000, p. 194). The implementation and use of debrief and reflective sessions encouraged staff to process difficult emotions and encouraged effective decision making: "you need to be supported...and you need to support people when other people need to be supported" (Lee & Dupree, 2008, p.988).

Personal relationships

Relationships outside of work were discussed as both a source of stress for the professionals and also a source of support (Cook et al., 2012; Forster & Hafiz, 2015; Kellogg et al., 2014). Some professionals who experienced a patient death within a burns unit felt personal relationships offered an additional support system (Kellogg et al., 2014): "so I am able to debrief when I go home ... that's really useful" (Forster & Hafiz, 2015, p. 297). For some nurses however they felt a sense of disconnect when discussing work events outside work and described how friends and family "just don't get it" (Cook et al., 2012, p. 17). It

appears that some professionals valued having supportive family and friends to offload emotionally to, whereas others found this increased their frustration as their family and friends did not understand what their role entailed physically and psychologically.

Concept 2: Complexities of role

Competing demands of role

Health professionals commonly described competing demands within their role that caused them considerable distress (Dix et al., 2012; Foglia et al., 2010). This was particularly evident amongst nurses who felt overwhelmed by the level of responsibility and felt unable to take breaks, leave work on time and take care of themselves (De Almeida Vicente et al., 2016). For some nurses however, general experience from working within their professional role enabled them to cope and have confidence within their role (Hilliard & O'Neill, 2010; Ljusegren, Johansson, Gimbler Berglund, & Enskär, 2012). Furthermore, nurses felt that through working in oncology settings, they experienced personal growth and fulfilment in their life (Dix et al., 2012).

Providing high-quality care to chronically unwell children was difficult for nurses, particularly when each nurse was responsible for caring for many patients, each with a different diagnosis (De Almeida Vicente et al., 2016). Professionals also discussed the challenges of a fast-paced and busy work environment and balancing this with their home life (Dix et al., 2012). It is highlighted therefore that the multiple demands involved in working across all paediatric inpatient settings caused distress for health professionals within this review.

'Putting on a mask'

A common difficulty for professionals working with young people in these settings was the array of difficult emotions they experienced including sadness (Kellogg et al., 2014; Lee & Dupree, 2008), fear (Ljusegren et al., 2012) and helplessness (Borhani et al., 2013). Despite experiencing sadness, professionals reflected that they welcomed this emotion as it signified humanity and emotional availability (Lee & Dupree, 2008). For some however, the difficult emotions they experienced triggered compassion fatigue and burnout (Maytum et al., 2004). In considering this, professionals discussed a need to repress their emotions to help them cope in a range of paediatric medical settings (Borhani et al., 2013; Cook et al., 2012; Kellogg et al., 2014). This did not appear an effective strategy however, as it created a sense of guilt through not feeling the emotions they felt they should (Cook et al., 2012; Kaplan, 2000). Thus, professionals experienced distress through the inescapable difficult emotions faced, which was further compounded by the uncertainty surrounding the expression of emotions which was explored in the first concept: Relationships.

Limits of treatment

For many of the professionals, a source of distress within this context related to aspects of the child's diagnosis and treatment (Borhani et al., 2013; Costello & Trinder-brook, 2000; Dix et al., 2012; Hilliard & O'Neill, 2010; Ljusegren et al., 2012; Olson et al., 1998; Papadatou et al., 2001; Pearson, 2013). Nurses working in oncology and burns settings commonly felt helpless when they were unable to alleviate the child's pain (Hilliard & O'Neill, 2010; Kellogg et al., 2014; Papadatou et al., 2001; Pearson, 2013), professionals who felt that they had caused distress during treatment found this particularly challenging (Dix et al., 2012; Olson et al., 1998). In addition, professionals experienced distress when a child was unresponsive to treatment efforts (Ljusegren et al., 2012). This caused further difficulties for nurses who described the challenges in discussing withdrawing treatment from the child with their family (Pearson, 2013). Helplessness and frustration were experienced

more by medical professionals than other disciplines (Lee & Dupree, 2008). Medical professionals are often responsible for making final treatment-related decisions in these settings which may explain this finding. In summary the limits of treatment is distressing for all professionals.

Concept 3: 'Letting go': experiencing death and overcoming grief

Experiencing death

Seven of the papers included in the review explored professionals' experiences of death explicitly and thus it emerged as a key theme within the review. The concept of experiencing death was evident in all medical settings and was most commonly discussed in papers focusing on nurses' experiences of death. Nurses reported a pre-occupation with patient death within their role (Papadatou et al., 2001) and common emotions following the death of a child included: hurt, sadness, sorrow, guilt, anger, depression, despair, feeling overwhelmed, shock, anguish and heartache (Davies et al., 1996; Meyer, 2014; Papadatou et al., 2001; Rashotte et al., 1997).

For many of the nurses, experiencing the sudden death of a child was considered the most challenging aspect of the role. This was evident amongst papers exploring nurses' views of job satisfaction overall (Mahon, 2014) and more specifically exploring caring for children who were dying (Costello & Trinder-brook, 2000). Interestingly, nurses had differing views on experiencing the death of a child that was not considered sudden. Although nurses agreed that experiencing the death was distressing (De Almeida Vicente et al., 2016; Mahon, 2014), for nurses within the intensive care units, the death of a child could be experienced as not as distressing as in other settings (Mahon, 2014). This related to feeling satisfied with the care they had provided and to the process and acceptance of death reported by nurses working in this environment. When considering nurses' different experiences of death, this was not

specific to a particular sub-speciality and was discussed across surgical, medical, oncology and intensive care units. This highlights the individual differences for nursing professionals experiencing patient death.

Nurses reported a process of accepting the mortality of a child; initially hoping the child would recover, however when they witnessed their health deteriorating they accepted the inevitability of their death and were able to 'let go' of the child (Davies et al., 1996). This letting go provided comfort for nurses in knowing they had done all that they could do for the patient (Costello & Trinder-brook, 2000). Conversely, where a death was sudden, professionals could not experience the process of death, and this appeared to result in greater distress. A close relationship with the child also increased the intensity of the grief the nurse experienced (Costello & Tindler-brook, 2000; Kaplan, 2000; Pearson, 2013; Rashotte et al., 1997). For some nurses, feeling somewhat to blame for the child's death exacerbated the emotions they experienced (Rashotte et al., 1997).

Individual belief systems appeared to compound grief reactions as nurses discussed their beliefs about how they thought a child should die and how these did not always match reality (Papadatou et al., 2001; Rashotte et al., 1997). Thus, witnessing 'meaningless' deaths was distressing for nurses and medical professionals (Papadatou et al., 2001). Furthermore, nurses described witnessing remarkable deaths where the individual displayed emotional and spiritual strength, encouraging the nurse to remain in their job (Olson et al., 1998).

Coping with grief

Following the death of a child, coping with grief was also described as a process and professionals reported a fluctuation between experiencing grief and repressing it (Papadatou et al., 2001). When considering coping with grief, many professionals discussed coping using both internal and external strategies. Avoidance and withdrawal was commonly experienced

by professionals (Davies et al., 1996; Meyer, 2014; Papadatou et al., 2001; Papadatou et al., 2002; Rashotte et al., 1997) and was considered a sign of burnout for some nurses (Papadatou et al., 2002). Self-reflection was considered a positive coping mechanism by nurses working in intensive care and enabled the individual to accept and create meaning for the child's death. Additionally, nurses were aware of the importance of engaging in self-reflection through the grieving process (Rashotte et al., 1997) and nurses discussed the importance of spirituality in coping with (Forster & Hafiz, 2015). Through this, nurses were better able to understand their individual reactions to death, understand the factors of death that impacted their grief and have knowledge of the coping strategies that were effective for them.

The conceptualisation of grief within the papers described a sense of coping with the grieving process within a professional context, as opposed to grieving per se. As this review is synthesising existing results, meanings taken from the original interviews cannot be guaranteed. What is hypothesised from the studies discussing grief is that perhaps professionals working in these contexts are expected to experience grief differently to the way it is experienced in a personal context; that perhaps grief should be contained and managed. Thus, grief is an aspect of coping within paediatric settings.

For nurses, having colleagues to share experiences with and receive support from was crucial in overcoming their grief (Cook et al., 2012; Davies et al., 1996; Forster & Hafiz, 2015; Papadatou et al., 2001; Papadatou et al., 2002; Rashotte et al., 1997). This was not the case for medical professionals, however, who felt that colleagues were not emotionally supportive and thus would experience grief alone (Papadatou et al., 2002). Nurses reported that when able to share their experiences, they were able to use more adaptive coping strategies that in turn created a positive memory of the experience. It also increased nurses' ability to continue working with seriously ill children (Davies et al., 1996). Conversely, when unable to share their distress, nurses' energy focused on maintaining their professional

demeanour with little energy for effective coping strategies (Davies et al., 1996). Thus the importance of facilitating reflective sessions following the death of a patient within these settings is highlighted (De Almeida Vicente et al., 2016).

This theme highlights that experiencing death and coping with grief were both described as a process for the professionals. Distress related to the emotions the professional experienced and uncertainty around sharing the emotions with others. It also highlighted the importance of relationships and sharing emotions as coping strategies. The theme also highlighted issues in relation to how health professionals are expected to cope with death; how they manage the relationship between their personal and professional sense of self.

Concept 4: Systemic influences and challenges

Health professionals discussed the educational and health-care challenges that caused difficulties within their roles. Some professionals felt unprepared for working in paediatric services due to a lack of education provided during training (Kellogg et al., 2014). This was also due to some professionals being assigned by service managers to work in particular specialities rather than doing so from choice. Thus, some professionals working in paediatric Chinese and Greek hospitals had not chosen to work in that specific context (Papadatou et al., 2001). Furthermore, nurses who chose to work in paediatric services felt upset and outrage when asked to work in another ward area (Mahon, 2014). This was part of their role but prevented continuity of care of patients. This suggests differences between countries and cultures in relation to the amount of control professionals have over their chosen area of medical speciality.

Nurses highlighted inadequate support that related to formal and informal support, both practically and emotionally (Borhani et al., 2013; Kaplan, 2000). Nurses reported an absence of support when they experienced bereavement at work (Costello & Trinder-brook,

2000) and also when supporting bereaved families (Forster & Hafiz, 2015). Similarly, when making treatment-related decisions, some professionals felt a sense of abandonment due to a lack of guidelines. When this occurred nurses tended to blame themselves and reported feeling insecure and ignored by medical professionals (Ljusegren et al., 2012). Professionals discussed inadequate resources within their working environments as a source of stress within their role (Costello & Trinder-brook, 2000; De Almeida Vicente et al., 2016; Foglia, 2010; Maytum, 2004). This was particularly evident when nurses were unable to spend time with a child (Costello & Trinder-brook, 2000; Hilliard, 2010) or when nurses were not given adequate time to grieve following their death (Foglia et al., 2010; Kaplan, 2000). Nurses also spoke about the pressures of needing to admit and discharge patients fairly rapidly without adequate resources (De Almeida Vicente et al., 2016). This also related to feeling overworked, including excessive paperwork and staff shortages which triggered burnout amongst many nurses (Maytum et al., 2004). Supportive systemic factors were discussed in one paper included in the review (Dix et al., 2012). Health professionals within this paper felt that working in a large hospital provided opportunities for professional growth that helped them remain in these settings.

This theme highlights the different systemic challenges health professionals experience within their role. Several organisational challenges were highlighted.

Discussion

This meta-synthesis of 23 papers identified the complexity of working in paediatric settings as a variety of factors that related to stress and coping amongst professionals working within these settings was highlighted. The scope of the papers reviewed was broad, in terms of sample characteristics (including age, gender and different professions) and study settings (including many different medical settings and country of study). Utilising Noblit and Hare's

(1988) framework, four concepts were identified as described above. In keeping with providing a broad overview of the area, all studies were included irrespective of the quality appraisal scores. During interpretation of the studies it became evident that the identified constructs - relationships: the double edged sword, 'letting go': overcoming death and grief, complexities of role and systemic influences and challenges were interrelated. Many of the factors that contributed towards the professional experiencing distress were also a source of coping. This was particularly evident for relationships with families and MDTs and appeared to depend on both the situation and the individual.

A key concept to emerge from the review was that relationships with others (families, colleagues and personal relationships) were of particular importance because they were a source of both stress and coping. This finding was highlighted within the majority of the papers. The review highlighted that positive relationships with the individuals the professionals cared for and worked alongside were fundamental in the individual being able to cope and continue working in this environment. This particular finding was evident amongst a range of studies irrespective of the medical setting the professional worked in, or the professional role of the individual.

Positive attachments with patients and their families were a key source of coping within this review, including developing an open and trusting relationship with families based on a shared experience. Previous research has demonstrated that nurses who develop trusting relationships are able to provide more holistic care (Mok & Chiu, 2004). Having trusting relationships with health professionals also reduces the amount of stress patients experience during their care (Pullen & Mathias, 2010). Rushton, Reina and Reina (2007) have developed The Reina Trust and Betrayal Model which highlights that trusting relationships are based on: competence trust, communication trust and contractual trust. The model identifies how

professionals can build trust with patients and families which include: involving others and seeking their input, consistency and honesty.

The review also highlights the dual edged aspect of relationships within paediatric settings. Developing significant attachments with a child and their family was shown to create difficulties for the professional relating to the individual effectively managing their emotions alongside having a close relationship with the patient's family. Additionally, relationships with families often created challenges for the professional when difficult treatment decisions needed to be made (Lee & Dupree, 2008; Thomas et al., 2016). The challenges for health professionals in managing treatment decision making has previously been highlighted (Say & Thomson, 2003).

The review highlights differences amongst professionals in coping with death and overcoming grief as medical professionals discussed experiencing grief alone and not seeking support from colleagues (Papadatou et al., 2002). Medical professionals often cope with grief by detaching from the patient (Pessagno, Foote, & Aponte, 2013) which has parallels to the dual process model of grief. This theory proposes adaptive coping comprises of an avoidance and confrontation of loss (Stroebe & Schut, 1999), thus medical professionals' avoidance and detachment protects them from experiencing loss. Furthermore, medical professionals may unknowingly engage in similar behaviours with colleagues. In doing this, medical professionals can identify the emotions of others, but are not overwhelmed by it as this would prevent them continuing to engage in making life-or-death decisions for other patients. This fluctuation also allows professionals to use the loss of the child to invest in life and living (Papadatou, 2000). Within the current review however, nurses reported how crucial it was for them to identify particular colleagues to share difficult experiences with in order to cope within the role. This difference could be related to the nature of the role as nurses within these settings often work long shifts closely alongside peers whereas medical professionals'

role has a greater independent working approach. It could also be related to the differences in the nature of medic and nursing professionals work; nurses role focuses on the emotional and physical labour aspects whereas medic professionals' role relates to specialised medical procedures and life-or-death decision making.

The review also highlighted that some health professionals did not seek support from their own families as they felt their families did not fully understand the emotional labour of the role. This highlights the need for adequate support mechanisms in the workplace. This finding was also highlighted by Austin et al., (2009) who, following their review of distress in paediatric intensive care units (PICU), called for paediatric teams to engage in case discussions and reflections to influence professionals' experience of team working. This relates to the current review as professionals identified that engaging in group debrief and reflections enabled them to remain working in paediatric settings.

Experiencing paediatric death was highlighted as distressing for nursing professionals within this review (Costello & Trinder-brook, 2000; De Almeida Vicente et al., 2016; Mahon, 2014). As discussed, the review identified that nurses are more emotionally attached to their patients than medical professionals perhaps are. In considering this, the level of distress a nurse would experience would increase somewhat, which may highlight the importance of grieving to cope with patient deaths. In addition to this, professionals reported an array of difficult emotions they experienced following the death of a child within the studies. Kellogg et al., (2014) reports that paediatric death can be more stressful than adult patient death as it conflicts with nurses' beliefs about mortality and triggers a need for meaning to be made from the death. This was further discussed by professionals in the current review. Professionals also described caring for the patients siblings' and family members were a source of stress within their role that is absent from supporting patients in adult settings.

Within paediatric settings it is not uncommon for professionals to be caring for 'dying' children; those with chronic and severe illnesses. This was evident within the review as many professionals spoke about working with dying children. Furthermore, the review highlighted similar coping strategies when caring for unwell children, caring for dying children, or following the death of a child. It could therefore be suggested that all professionals working in inpatient paediatric settings experience the prospect of mortality due to the very nature of working in these settings. In a review of a bereavement training programme, MacKenzie and MacCallam (2009) identified that ongoing training and support were essential in relation to bereavement within paediatric settings. Taken together, this strengthens the argument that professionals should be encouraged to discuss and reflect upon mortality and death within paediatric settings. It has previously been highlighted that the process of reflection can support nurses in managing the stressful aspects on their role (Edward & Hercelinskyj, 2007), thus enabling nurses feeling able to continue working in these settings.

This review highlights the complexity and competing demands involved when working in paediatric settings. Similar findings were found by Kravits, McAllister-Black, Grant and Kirk (2010). Kravits and colleagues identified that loss, changes to technology and institutional issues related to the competing demands nurses face in their role that contributed towards stress and burnout. Nurses in the current review reported that the demands of the role reduced their capacity to engage in self-care (De Almeida Vicente et al., 2016). This particular stress factor is important to note as it directly prevents the professional engaging in strategies that enable them to cope in this environment. It is identified that high patient acuity and an absence of debriefing can lead to frustration and career fatigue (Kellogg et al., 2014). It is also identified that a nursing shortage is predicted over the next two decades (Mahon, 2014). Thus, encouraging and enabling nurses to engage in self-care that prolongs longevity within the profession is crucial.

Lastly, the review identified that a difficulty experienced by many of the professionals in the studies related to inadequacies within their department and wider hospital; an absence of support and staffing resources was commonly reported as a challenge when working within these settings. This created emotional turmoil for some professionals and, for others, resulted in burnout and compassion fatigue. This particular challenge was experienced in the UK (Costello & Trinder-brook), Ireland (Hilliard & O'Neill, 2010), USA (Foglia et al., 2010; Kaplan, 2000; Maytum et al., 2004) and Canada (De Almeida Vicente et al., 2016). The review also highlighted systemic issues that impacted nurses' wellbeing as staff working within Greek and Chinese paediatric hospitals were allocated a department to work in as opposed to this being the individual's choice. Interestingly, the lack of resources previously discussed was not identified as an issue in the Greek and Chinese contexts where staff were allocated to particular departments. The aforementioned indicates a global difficulty experienced by paediatric health-care professionals however that relates to wider organisational issues within these settings that create distress for the professional. This has critical implications for organisations and hospital managers as the well-being of staff is crucial in retaining staff in these areas.

Implications

A key finding of this review is that professionals value the opportunity to debrief and reflect either internally or externally when experiencing distress. This was evident across different medical settings and different professional roles. It highlights the importance of creating space for individuals or groups to discuss the challenging aspects of their role and to receive support. Whilst the review highlighted the importance of these sessions, it also highlighted an absence of such support. A recommendation for clinical practice includes supporting the development and continuity of these sessions. Psychologists working in these

settings should pay attention to group dynamics within reflective sessions as power imbalances within teams were highlighted within the review.

Avoidance of emotions was highlighted in the current review as an unhelpful coping strategy that may lead to burnout. Psychologists working in these settings need to be aware and consider why some individuals may avoid attending debriefing or reflective sessions. It is important to be aware that avoiding emotional difficulties may exacerbate the intensity of the emotions experienced (Kahn & Garrison, 2009), thus creating more distress for the professional if avoided. With this in mind, creating both formal reflective sessions and informal sessions may encourage more professionals to attend to explore issues and situations that may not be discussed in a group or formal setting. To the author's knowledge, it is believed that in some paediatric services, this occurs on an informal basis however no formal guidance is available to professionals in these contexts. Creating a standardised process would reduce health professional's anxieties about attending and manage expectations of the session.

The review also highlighted stress relating to a lack of knowledge in relation to particular diagnoses. It is recommended that implementing training sessions would increase knowledge and skills of professionals in these settings. These implications are in keeping with the World Health Organisation's (WHO) (n.d) global strategy aimed at strengthening nursing and midwifery services which highlights the need for educating health care staff to feel more competent.

Limitations

The main limitation of the review is that 17 of the papers included in the review included only experiences of nursing staff. Thus the findings of the current review are heavily weighted towards nursing experience. This could perhaps be a fair reflection of the ratio of

nurses to medical and other professionals within the health-care workforce and thus within the research base. Although limiting the study to nurses' experiences would have resulted in a smaller sample of papers, including only nurses' experiences has previously been highlighted as a limitation of research in this area (Mukherjee et al., 2009). Furthermore, including all health professionals' experiences allows theoretical understandings to be made that can better support and retain staff working in these contexts. The relatively large sample used in the current review could also be considered a limitation as this impacted on the level of depth and detail that could be reflected in the write-up of the synthesis. However, including all professional roles and sub-specialities across a large international sample is considered a particular strength of this review, as it enabled the development of concepts with greater explanatory power across paediatric inpatient settings.

It should also be acknowledged that the concepts that emerged from the current review report on third-hand interpretations of the original data. The findings reflect a representation of the original researcher's findings in each study, and in this meta-synthesis, another reinterpretation (Sandelowski & Barroso, 2007). This process highlights the subjectivity of meta-syntheses, which can be considered a limitation (Aguirre & Bolton, 2014). The current review was conducted by one author from collating studies to constructing core concepts. Thus, the current review is one author's interpretation using a systematic process of data collection, analysis and synthesis, but bringing her own experiences and knowledge of working in the area to bear upon her interpretation.

Future research and directions

The current review was exploratory in nature, highlighting stress factors and coping amongst all paediatric health professionals. A complex relationship between experiencing paediatric death emerged from the review. Future qualitative research could explore this

relationship further and consider how paediatric health professionals deal with sudden and anticipated death, what are professional's expectations around grief and grieving and explore what the boundaries are between the personal and the professional in relation to experiencing grief.

Conclusion

The qualitative synthesis of the 23 studies highlighted different stress and coping factors amongst paediatric health professionals within inpatient settings. Stress factors included: attachments with the patient and family, experiencing and overcoming patient death, challenges of MDT working, complexity of professional role and systemic challenges. Coping strategies included: boundaried relationships with families, peer and organisational support including reflection. These findings highlight clear factors that can enable organisations and institutions to better support the professionals that work within the emotive and demanding settings. In particular, it is recommended that services consider the emotional and practical support available for the professionals. In considering this, the review recommends an increase of formal and informal support for paediatric health professionals.

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Tables/Figures

Table. 1 Study characteristics

Authors/Year	Country	Aim of study	Study setting	Professionals included	Participant characteristics	Data collection methods	Analysis
Borhani, Abbaszadeh, Mohsenpour & Asadi (2013)	Iran	To explore staff experiences in this setting	Paediatric oncology	Nurses	Sample size: 7. Gender: F; Age: 35 (mean); Years experience: 11 (mean).	Semi-structured interviews	Content analysis
Cook et al., (2012)	USA	To explore coping strategies and resources	Paediatric oncology	Nurses & nurse practitioner	Sample size: 22; Years experience: 1-11+ years.	Focus groups	Content analysis
Costello & Trinder-Brook (2000)	UK	To explore experiences of caring for the dying child & identify key issues	Medical, surgical and oncology paediatric wards	Nurses	Sample size: 28.	Questionnaires, focus group and 1:1 interviews	Content analysis
Davies et al.,(1996)	Canada	To develop a theory about nurses experiences caring for children	Paediatric oncology and cardiology	Nurses	Sample size: 22. Gender: F; Age: 23-45 (years); Years experience: 7.2 (mean)	Semi-structured interviews	Grounded theory
De Almeida Vicente, Shadvar, Lepage & Rennick (2016)	Canada	To explore perceptions of work related stressors	Medical and surgical paediatric wards	Nurses	Sample size: 12; Gender: M (2) & F (10); Ages: 26-55 years; Average 8 years experience.	Semi-structured interviews	Content Analysis

Dix, Gulati, Robinson, Syed, & Klassen (2012)	Canada	To identify work-related demands and rewards	Paediatric oncology and PICU	Doctors, nurse & social workers	Sample size: 33. Gender: M (5), F (28); Age: 30-60+ (years); Years experience: 5-20+.	Semi-structured interviews	Thematic analysis
Foglia, Grassley & Zeigler (2010)	USA	To explore factors that contributed towards professionals voluntarily leaving professional role	PICU	Nurses	Sample size: 10; Gender: F; Age: 24-60 (years); Years experience: 2-22.	Semi-structured interviews	IPA
Forster & Hafiz (2015)	Australia	Explore coping strategies and support	Medical units, oncology & PICU	Doctors, nurse & social workers	Sample size: 10; Age: 24-57 (years); Years experience: 4-20.	Semi-structured interviews	Grounded theory
Hilliard & O'Neill (2010)	Ireland	To explore emotions and coping	Paediatric burns	Nurses	Sample size: 8; Gender: F; Years experience: 6-30.	Unstructured interviews	Phenomenology
Kaplan (2000)	USA	Explore emotion reactions and expressions following the loss of a child	Paediatric haematology, oncology & PICU inpatient (13% of sample included outpatient so included)	Nurses	Sample size: 15; Gender: M (1), F (14); Age: 28-52 (years). Years experience: 2-34.	Structured interviews	Not stated

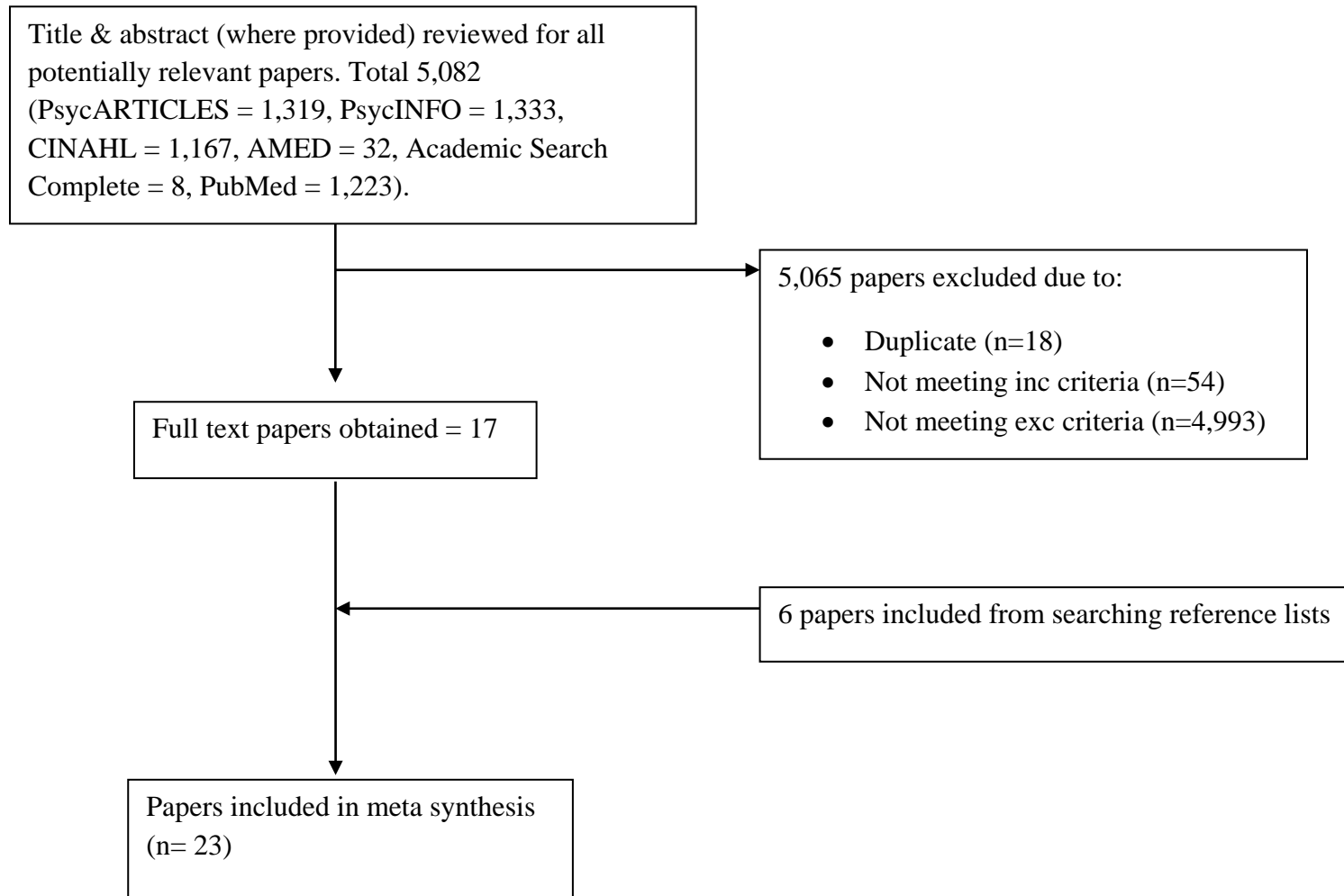
Kellogg, Barker & McCune (2014)	USA	To explore the experiences following patient death	Paediatric burns	Nurses	Sample size: 7; Gender: M (2), F (5); Years experience: 7-44.	Semi-structured interview	Selective approach
Lee & Dupree (2008)	USA	To explore experiences following the loss of a patient	PICU	Doctors and nurses	Sample size: 29; Years experience: 3-31.	Semi-structured interview	Content analysis
Ljusegren, Johansson, Gimbler, Berglund & Enskär. (2012)	Sweden	To describe experiences of caring for children in pain	PICU	Nurses	Sample size: 21; Ages: 26-55+ (years); Years of experience: 1-35.	Interviews	Content analysis
Mahon (2014)	Canada	To explore retention in medical setting	PICU	Nurses	Sample size: 31; Gender: M (31 percent), F (69 percent); Ages: 20-60+ (years); Years of experience: 2-35.	Semi-structured interviews	Not stated
Maytum, Heiman & Garwick (2004)	USA	Explore triggers and coping strategies	Paediatric chronic health inpatient settings	Nurses	Sample size: 20; Years experience: 4-36.	Semi-structured interviews	Content analysis
Meyer (2014)	USA	To explore experience caring for dying children	PICU	Nurses	Sample size: 10; Ages: 25-65 (years); Years experience: 3-40.	Interviews	Phenomenology
Olson et al., (1998)	USA	To identify ways professionals find meaning in their role	Paediatric oncology	Nurses	Sample size: 26; Gender: M (1), F (25); Ages: 26-48 (years); Years experience: 2-20.	Semi-structured interviews	Content analysis

Papadatou, Martinson, & Chung (2001)	Greece & China	Explore and compare experiences of professionals in these settings	PICU, oncology & NICU (>10% of total sample)	Nurses	Sample size: 63; Gender: M (5), F (58); Ages: 21-50 (years).	Semi-structured interviews	Grounded theory
Papadatou, Bellali, Papazoglou & Petraki (2002)	Greece	To explore grieving process and compare experiences	Oncology	Doctors and nurse	Sample size: 30; Gender: M (6), F (24); Ages: 21-50+ (years).	Semi-structured interviews	(Mixed methods used) Grounded theory used for qualitative analysis
Pearson (2013)	UK	To explore experiences providing palliative care	Paediatric oncology	Nurses	Sample size: 7; Gender: F; Ages: 22-25 (years). Years experience: >1-2.	Semi-structured interviews	Grounded theory
Pye (2013)	UK	To explore experiences and feelings concerning moral distress	Paediatric oncology	Doctors & nurses	Sample size: 8.	Semi-structured interviews	Phenomenology
Rashotte, Fothergill-Bourbonnais & Chamberlain (1997)	Canada	To describe grief experiences	PICU	Nurses	Sample size: 6; Gender: M (1), F (5); Years experience: 2-20 years.	Semi-structured interviews	Phenomenology
Thomas, Thammasitboon, Balmer, Roy & McCullough (2016)	USA	To explore moral distress	PICU	Doctors, nurses & therapists	Sample size: 25; Gender: M (7), F (18); Years experience: 2-35.	Semi-structured interviews	Not stated

Figure 1. Inclusion and exclusion criteria.

Inclusion criteria	Exclusion criteria
(i) the paper was published in English (due to a lack of resources to employ translators)	(i) studies conducted within either adult services only or a combination of child and adult services
(ii) the paper was published in a peer-reviewed journal	(ii) studies primarily conducted within antenatal or neonatal services (as the professional in these services provide support for parents, the current review focused on the impacts of caring for a sick child)
(iii) the paper involved a study in which qualitative methods of data collection and analysis were used,	(iii) studies primarily conducted within outpatient or community settings
(iv) the sample consisted of any health professional that worked within paediatric inpatient services at the time of the study.	(iv) studies that included professionals who do not work directly with young people (e.g. researchers/administrative staff)

Figure 2. Flowchart of study selection process



Appendix 1-A: Search Strategy

PsycARTICLES

STRESS

Thesaurus

(in abstract) = 110,026

- Stress
- Psychological stress
- Physiological stress
- Occupational stress
- Coping behavior

Keywords

(in abstract) = 247,317

- stress* or
- distress or
- burnout or
- exhaustion or
- occupational stress or
- compassion fatigue

Thesaurus+ Keywords = 283,231

HEALTH PROFESSIONAL

Thesaurus

(in abstract) = 17,097

- health personnel - couldn't locate when using in abstract so used 'all text'

Keywords

(in abstract) = 459,595

- health professional* or
- health worker* or
- health personnel or
- allied health professional* or
- allied health personnel or
- medic* or
- doctor* or
- physician* or
- nurse* or
- surgeon* or
- clinician* or
- paediatrician* or
- pediatrician* or
- neurologist*

Thesaurus + Keywords = 465,322

PAEDIATRICS

Thesaurus

- Pediatrics

(search in all text as didn't work in abstract) = 21,415

Keywords

(in abstract) = 596,366

- paediatric* or
- pediatric* or
- child* or
- infant*

Thesaurus + Keywords = 617,781

TOTAL FOR PSYCARICLES = 8638

Apply university of Texas qualitative filters = 1319

- Include = 7
- Doesn't meet inclusion = 26
- Doesn't meet exclusion = 1286

CINAHL

STRESS

Thesaurus

(in abstract) = 53,535

- Stress
- Psychological stress
- Physiological stress
- Occupational stress
- Coping behavior

Keywords

(in abstract) = 66,359

- stress* or
- distress or
- burnout or
- exhaustion or
- occupational stress or
- compassion fatigue

Thesaurus+ Keywords = 102,493

HEALTH PROFESSIONAL

Thesaurus

- health personnel

(couldn't locate when using in abstract so used 'all text') = 18,838

Keywords

(in abstract) = 411,118

- health professional* or
- health worker* or
- health personnel or
- allied health professional* or
- allied health personnel or
- medic* or
- doctor* or
- physician* or
- nurse* or
- surgeon* or
- clinician* or
- paediatrician* or
- pediatrician* or
- neurologist*

Thesaurus + Keywords = 424,847

PAEDIATRICS

Thesarus (in abstract) = 405,274

- adolescent
- child
- infant
- pediatric hospitals

Keywords (in abstract) = 169,181

- paediatric* or
- pediatric* or
- child* or
- infant*

Thesaurus + Keywords = 469,136

TOTAL FOR PSYCARTICLES = 6066

Apply university of Texas qualitative filters = 1167

- Include = 8
- Duplicate = 5
- Doesn't meet inclusion = 11
- Doesn't meet exclusion = 1143

PsycINFO

STRESS

Thesarus (in abstract) = 110,331

- Stress
- Psychological stress
- Physiological stress
- Occupational stress
- Coping behavior

Keywords (in abstract) = 248,213

- stress* or
- distress or
- burnout or
- exhaustion or
- occupational stress or
- compassion fatigue

Thesaurus+ Keywords = 284,188

HEALTH PROFESSIONAL

Thesarus (in abstract) = 17,162

- health personnel - couldn't locate when using in abstract so used 'all text'

Keywords (in abstract) = 461,076

- health professional* or
- health worker* or
- health personnel or

- allied health professional* or
- allied health personnel or
- medic* or
- doctor* or
- physician* or
- nurse* or
- surgeon* or
- clinician* or
- paediatrician* or
- pediatrician* or
- neurologist*

Thesaurus + Keywords = 466,827

PAEDIATRICS

Thesarus

- Pediatrics

(search in all text as didn't work in
abstract) = 21,527

Keywords

- paediatric* or
- pediatric* or
- child* or
- infant*

(in abstract) = 598,124

Thesaurus + Keywords = 599,627

TOTAL FOR PSYCINFO = 8,716

Apply university of Texas qualitative filters = 1333

- Include = 0
- Duplicate = 4
- Doesn't meet inclusion = 6
- Doesn't meet exclusion = 1323

AMED

STRESS

Subject

- Stress
- Psychological stress

(in abstract) = 2,344

Keywords

- stress* or
- distress or
- burnout or
- exhaustion or
- occupational stress or
- compassion fatigue

(in abstract) = 8,551

Thesaurus+ Keywords = 9,940

HEALTH PROFESSIONAL

Subject

- health personnel

(couldn't locate when using in abstract so
used 'all text') = 771

Keywords

- health professional* or
- health worker* or
- health personnel or
- allied health professional* or
- allied health personnel or
- medic* or
- doctor* or
- physician* or
- nurse* or
- surgeon* or
- clinician* or
- paediatrician* or
- pediatrician* or
- neurologist*

(in abstract) = 37,470

Thesaurus + Keywords = 38,042

PAEDIATRICS

Subject

- Pediatrics

(search in all text as didn't work in
abstract) = 352

Keywords

- paediatric* or
- pediatric* or
- child* or
- infant*

(in abstract) = 11,488

Thesaurus + Keywords = 11,669

TOTAL FOR AMED = 200

Apply university of Texas qualitative filters = 32

- Include = 0
- Duplicate = 1
- Doesn't meet inclusion = 0
- Doesn't meet exclusion = 31

Academic Search Complete

STRESS

Subject terms

= 0

- no search terms identified

Keywords

(in title) = 163,178

- stress* or
- distress or
- burnout or

- exhaustion or
- occupational stress or
- compassion fatigue

Thesaurus+ Keywords = 163,178

HEALTH PROFESSIONAL

Subject terms

= 0

- *no search terms available relevant to search*

Keywords

(in title) = 304,791

- health professional* or
- health worker* or
- health personnel or
- allied health professional* or
- allied health personnel or
- medic* or
- doctor* or
- physician* or
- nurse* or
- surgeon* or
- clinician* or
- paediatrician* or
- pediatrician* or
- neurologist*

Thesaurus + Keywords = 304,791

PAEDIATRICS

Subject terms

= 0

- *no subject terms available to current search*

Keywords

(in title) = 432,932

- paediatric* or
- pediatric* or
- child* or
- infant*

Thesaurus + Keywords = 11,669

TOTAL FOR ACADEMIC SEARCH COMPLETE = 96

Apply university of Texas qualitative filters = 8

- Include = 0
- Duplicate = 1
- Doesn't meet inclusion = 2
- Doesn't meet exclusion = 5

PubMed

STRESS

Mesh heading (in title/abstract) = 3257

- Psychological stress
- Physiological stress
- Behavior and behavior mechanisms

Keywords (in title/abstract) = 733,004

- stress* or
- distress or
- burnout or
- exhaustion or
- occupational stress or
- compassion fatigue

Thesaurus+ Keywords = 733,460

HEALTH PROFESSIONAL

Mesh heading (in title/abstract) = 12,577

- Allied health personnel
- Health occupations

Keywords (in title/abstract) = 2,286,029

- health professional* or
- health worker* or
- health personnel or
- allied health professional* or
- allied health personnel or
- medic* or
- doctor* or
- physician* or
- nurse* or
- surgeon* or
- clinician* or
- paediatrician* or
- pediatrician* or
- neurologist*

Thesaurus + Keywords = 2,294,129

PAEDIATRICS

Subject terms (in title/abstract) = 50,305

- Pediatrics

Keywords (in title/abstract) = 1,556,284

- paediatric* or
- pediatric* or
- child* or
- infant*

Thesaurus + Keywords = 1,566,205

TOTAL FOR PUBMED = 11,698

Apply university of Texas qualitative filters = 1223

- Include = 2
 - Duplicate = 4
 - Doesn't meet inclusion = 9
 - Doesn't meet exclusion = 1205
-

Appendix 1-B: Data Extraction Template

Author/ Title

Country

Aims of study

**Ethics – how ethical issues
were addressed**

Study setting

**Theoretical background of
study**

Sampling approach

Participant characteristics

Data collection methods

Data analysis approach

**Key themes identified in the
study (1st order
interpretations)**

**Data extracts related to the
key themes**

**Author explanations of the
key themes (2nd order
interpretations)**

**Recommendations made by
authors**

Assessment of study quality

Appendix 1-C: Data Analysis Process

Key themes, first iterations	Key themes, final iterations (second order constructs)	Core concept, first iteration	Core concept, final iteration (third- order constructs)	Relevant papers
Unrealistic expectations of the self; contextual factors; relationship with family; relationship with patient; guilt toward family; attachment with patient; over-involved with family; nurses expectations of parents; disagreeing with medic; role confusion; feeling unheard and powerless; absent trust; isolation in role; difficulties with colleagues; decision making within team; emotions with parents; reduce child distress; relationships helps coping; peer support important for coping; reflections; importance of communication; team working difficulties	demands on self; expressing self; reflections; relationship with family/child create difficulties/impacts grief/boundaries/helps coping/rewarding; challenges of MDT; feeling unheard/isolated; decision making difficulties; communication/peer support and coping; discussing death at home	Relationships with; self; family (child and parents); MDT; outside work	Relationships: the double-edged sword	Borhani, Abbaszadeh, Mohsenpor & Asadi (2013); Cook et al., (2012); Costello & Trinder-Brook (2000); Davies et al., (1996); De Almeida Vicente, Shadvar, Lepage & Rennick (2016); Dix, Gulati, Robinson, Syed & Klassen (2012); Foglia, Grassley & Zeigler (2010); Forster & Hafiz (2015); Hilliard & O'Neill (2010); Kaplan (2000); Kellogg, Barker & McCune (2014); Lee & Dupree (2008); Mahon (2014); Maytum, Heiman & Garwick (2004); Olson et al., (1998); Papadatou, Martinson & Chung (2001); Papadatou, Bellali, Papazoglou & Petraki (2002); Pearson (2013); Pye (2013); Rashotte, Fothergill-Bourbonnais & Chamberlain (1997); Thomas, Thammasitiboon, Balmer, Roy & McCullough (2016)

<p>Emotions; repressing feelings; balancing emotion; compassion fatigue; challenges of role; differing diagnoses; work-life balance; competing demands; challenges/difficulties related to treatment; feeling helpless towards illness/pain; compartmentalise/hide/disconnect</p>	<p>Repressing/displaying emotion; emotional/physical challenges/competing demands of role; role confusion; continuous learning; work-life balance; difficulties with treatment; feeling helpless; withdrawing/avoidance/compartmentalising/disconnecting to cope</p>	<p>Challenges within the environment; emotional, practical and treatment-related.</p>	<p>Complexities of role</p>	<p>Borhani, Abbaszadeh, Mohsenpor & Asadi (2013); Cook et al., (2012); Costello & Trinder-Brook (2000); De Almeida Vicente, Shadvar, Lepage & Rennick (2016); Dix, Gulati, Robinson, Syed & Klassen (2012); Forster & Hafiz (2015); Hilliard & O'Neill (2010); Ljusegren, Johansson, Gimble, Berglund & Enskär (2012); Kaplan (2000); Kellogg, Barker & McCune (2014); Lee & Dupree (2008); Maytum, Heiman & Garwick (2004); Meyer (2014); Olson et al., (1998); Papadatou, Martinson & Chung (2001); Pearson (2013); Thomas, Thammasitiboon, Balmer, Roy & McCullough (2016)</p>
<p>Emotionally attached to child; grief reactions; inevitable death; death as failure; sudden death; personal beliefs and dying; grieving process difficulties; debrief helpful; peer support; expressing emotions; coping strategies and grieving;</p>	<p>Attachment prolongs grief; death as a failure of the system grief compounded by attachment; process of death; sudden death of a child; death of a child incongruent with values; avoiding death; peer support and coping; coping through talking to others; closure and grief; coping with</p>	<p>Process of death; values and beliefs of child loss; coping with loss</p>	<p>'Letting go': experiencing death and overcoming grief</p>	<p>Costello & Trinder-Brook (2000); Cook et al., (2012); Davies et al., (1996); De Almeida Vicente, Shadvar, Lepage & Rennick (2016); Forster & Hafiz (2015); Mahon (2014); Meyer (2014); Papadatou, Martinson & Chung (2001); Papadatou, Bellali,</p>

avoiding grief;	grief alone; coping by withdrawing; avoiding grief			Papazoglou & Petraki (2002); Rashotte, Fothergill-Bourbonnais & Chamberlain (1997)
Lack of support & with bereavement; lack of preparedness for role; limited resources; unrealistic expectations; opportunities within role	lack of support; lack of education; decision to work in setting; lack of preparedness for role	Challenges related to wider hospital and educational system	Systemic influences and challenges	Borhani, Abbaszadeh, Mohsenpor & Asadi (2013); Costello & Trinder-Brook (2000); De Almeida Vicente, Shadvar, Lepage & Rennick (2016); Dix, Gulati, Robinson, Syed & Klassen (2012); Foglia, Grassley & Zeigler (2010); Forster & Hafiz (2015); Ljusegren, Johansson, Gimbler, Berglund & Enskär (2012); Kaplan (2000); Kellogg, Barker & McCune (2014); Mahon (2014); Maytum, Heiman & Garwick (2004); Papadatou, Martinson & Chung (2001)

Appendix 1-D: Author Guidelines for Journal 'Clinical Psychology Review'

Article structure

Manuscripts should be prepared according to the guidelines set forth in the Publication Manual of the American Psychological Association (6th ed., 2009). Of note, section headings should not be numbered.

Manuscripts should ordinarily not exceed 50 pages, *including* references and tabular material.

Exceptions may be made with prior approval of the Editor in Chief. Manuscript length can often be managed through the judicious use of appendices. In general the References section should be limited to citations actually discussed in the text. References to articles solely included in meta-analyses should be included in an appendix, which will appear in the on line version of the paper but not in the print copy. Similarly, extensive Tables describing study characteristics, containing material published elsewhere, or presenting formulas and other technical material should also be included in an appendix.

Authors can direct readers to the appendices in appropriate places in the text.

It is authors' responsibility to ensure their reviews are comprehensive and as up to date as possible (at least through the prior calendar year) so the data are still current at the time of publication.

Authors are referred to the PRISMA Guidelines (<http://www.prisma-statement.org/statement.htm>) for guidance in conducting reviews and preparing manuscripts. Adherence to the Guidelines is not required, but is recommended to enhance quality of submissions and impact of published papers on the field.

Essential title page information

Title. Concise and informative. Titles are often used in information-retrieval systems. Avoid abbreviations and formulae where possible. **Note: The title page should be the first page of the manuscript document indicating the author's names and affiliations and the corresponding author's complete contact information.**

Abstract

A concise and factual abstract is required (not exceeding 200 words). This should be typed on a separate page following the title page. The abstract should state briefly the purpose of the research, the principal results and major conclusions. An abstract is often presented separate from the article, so it must be able to stand alone. References should therefore be avoided, but if essential, they must be cited in full, without reference to the reference list.

Highlights

Highlights are mandatory for this journal. They consist of a short collection of bullet points that convey the core findings of the article and should be submitted in a separate editable file in the online submission system. Please use 'Highlights' in the file name and include 3 to 5 bullet points (maximum 85 characters, including spaces, per bullet point). You can view [example Highlights](#) on our information site.

Keywords

Immediately after the abstract, provide a maximum of 6 keywords, using American spelling and avoiding general and plural terms and multiple concepts (avoid, for example, 'and', 'of'). Be sparing with abbreviations: only abbreviations firmly established in the field may be eligible. These keywords will be used for indexing purposes.

Footnotes

Footnotes should be used sparingly. Number them consecutively throughout the article. Many word processors can build footnotes into the text, and this feature may be used. Otherwise, please indicate the position of footnotes in the text and list the footnotes themselves separately at the end of the article. Do not include footnotes in the Reference list.

Electronic artwork

General points

- Make sure you use uniform lettering and sizing of your original artwork.
- Embed the used fonts if the application provides that option.

- Aim to use the following fonts in your illustrations: Arial, Courier, Times New Roman, Symbol, or use fonts that look similar.
- Number the illustrations according to their sequence in the text.
- Use a logical naming convention for your artwork files.
- Provide captions to illustrations separately.
- Size the illustrations close to the desired dimensions of the published version.
- Submit each illustration as a separate file.

A detailed [guide on electronic artwork](#) is available.

You are urged to visit this site; some excerpts from the detailed information are given here.

Figure captions

Ensure that each illustration has a caption. Supply captions separately, not attached to the figure. A caption should comprise a brief title (**not** on the figure itself) and a description of the illustration. Keep text in the illustrations themselves to a minimum but explain all symbols and abbreviations used.

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Please submit tables as editable text and not as images. Tables can be placed either next to the relevant text in the article, or on separate page(s) at the end. Number tables consecutively in accordance with their appearance in the text and place any table notes below the table body. Be sparing in the use of tables and ensure that the data presented in them do not duplicate results described elsewhere in the article. Please avoid using vertical rules and shading in table cells.

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Introduction to the electronic age (pp. 281-304). New York: E-Publishing Inc. [dataset]
Oguro, M., Imahiro, S., Saito, S., Nakashizuka, T. (2015). *Mortality data for Japanese oak
wilt disease and surrounding forest compositions*. Mendeley Data, v1.
<http://dx.doi.org/10.17632/xwj98nb39r.1>

Chapter Two: Empirical Paper

*Staff experiences in paediatric trauma services: Exploring perceptions of
resilience when dealing with distress*

Gemma Foat-Smith

Doctorate in Clinical Psychology

Division of Health Research, Lancaster University

Work Count: 7,810 excluding title page, references and tables

Prepared in accordance with 'Author Information Pack' for the journal 'Qualitative Health
Research'

All correspondence should be sent to:

Gemma Foat-Smith
Doctorate in Clinical Psychology
Furness College
Lancaster University
Lancaster
LA1 4YT
g.foat-smith@lancaster.ac.uk

Abstract

Understanding how health professionals manage distress in paediatric health settings represents an area that has been understudied. The current study aimed to explore resilience amongst staff working in a paediatric trauma health setting. Seven health professionals were recruited and the data analysed using Interpretative Phenomenological Approach (IPA). The findings highlight the importance of self-awareness in understanding resilience amongst professionals working in this context. This was particularly in considering the professional and physical limitations of the individual. Further research is recommended in further developing a theoretical understanding of resilience in this context. Recommendations for supporting professionals in maintaining and developing resilience are made.

Health professionals are repeatedly exposed to trauma and distress within the work-place. This is through treating patients who may be traumatised by the experience that led them to hospital. This is also through witnessing medical trauma, performing medical procedures and supporting people at the end of their life (Pockett, 2003). Repeated exposure to trauma can result in burnout, compassion fatigue and vicarious trauma and secondary traumatic stress (STS) (Zander & Hutton, 2013). All these terms are used to describe the effects of occupational exposure to another person's trauma (McGarry et al., 2013).

Work-place stress is amongst the second most common reasons for staff sickness (Office for National Statistics, 2017). Statistics from 2016 highlight that the average sickness rate within the NHS was 4.37 percent, employees within North-West England had the highest rates of sickness at 5 percent. Interestingly, health-care assistants had the highest rates of sickness (6.5 percent) and nursing had the lowest (1.23 percent) (NHS Digital, 2017). It is further reported that in considering the sickness levels of all professionals within the United Kingdom, public health professionals have the highest rates of absence (Office for National Statistics, 2017). In order to achieve safe and effective care for patients¹, the emotional and physical wellbeing of professionals must be a priority (Royal College of Physicians, 2015). The challenges associated with distress experienced directly as a result of the work-place can threaten the healthy working environment (ICN, 2012).

Health-care professionals and paediatric trauma services

Professionals who work within paediatric hospitals have a different skill set, understanding and knowledge base when compared with professionals working within adult

¹ Research conducted within physical health settings commonly refers to the individual receiving treatment as the "patient". For the purpose of this research, the client group will be referred to as patients throughout. This is in line with existing research and the service in which the research was conducted, as opposed to the preference of the researcher.

hospitals (British Royal Infirmary Inquiry, 2001 as cited in Mukherjee, Beresford, Glaser & Sloper (2009). O'Leary et al., (2006) conducted research exploring experiences of staff in paediatric palliative care who had also worked in adult palliative care. O'Leary and colleagues (2006) found that providing end of life care for children was more demanding than caring for adults in similar settings. This related to the death of a child which was considered unnatural events, and supporting parents. It is acknowledged that the current study is focused on trauma services however the aforementioned study highlights the specific challenges that arise from supporting children in health settings. Health professionals working in paediatric hospitals are commonly exposed to high stress environments (Kellogg et al., 2014). As previously highlighted, this can be related to emotional stress, helplessness, pain and sadness, in addition to having to develop specialised skills and an ability to handle stressful situations (Sekol & Kim, 2014). Children receiving treatment for a range of diagnoses also experience different malignancies when compared to adults and receive more dose-intensive therapies in their treatment (Mukherjee, Beresford, Glaser & Sloper, 2009). In addition, recent literature exploring Trauma-Informed Care (TIC) has highlighted the secondary traumatisation for staff.

Research exploring work-related stress has identified different constructs to capture the different psychological difficulties experienced by professionals. Compassion fatigue has historically been used to explain when professionals have lost their ability to nurture their patient (Joinson, 1992), this relates to a lack of warmth and empathy from the professional. Burnout was conceptualised several decades ago and describes the emotional exhaustion associated with caring for patients (Freudenberger, 1974). It can leave staff physically and emotionally unable to continue working in their particular work setting in a safe and healthy way for themselves, and the patient. Emotional exhaustion is the core element of burnout and

relates to the depletion of an individual's emotional resources (Maslach & Jackson, 1982).

Post-traumatic stress disorder (PTSD) develops as a direct result of a traumatic event to the individual (American Psychiatric Association, 2013). Work-related PTSD can be developed amongst health professionals that are commonly exposed to traumatic events in the work-place (Skogstad et al., 2013).

Compassion fatigue and burnout have previously been explored amongst health professionals working in a paediatric setting, when specifically considering the trauma related aspects of working in this context including illness, injury and medical treatment (Robins, Meltzer & Zelikovsky, 2009). Results identified that 39 percent of the participants were 'high risk' for developing compassion fatigue and 21 percent of the professionals were 'moderate to high risk' for reaching burnout. More recently, Colville et al., (2015) explored burnout amongst health professionals working within paediatric intensive care units (PICU). Results identified 61 percent reported burnout, 48 percent reported emotional exhaustion and 18 percent reported work-related PTSD symptoms. This was in addition to previous research identifying that PTSD symptoms were experienced by 21 percent of nurses working in a paediatric hospital (Czaja, Moss & Mealer, 2012). The aforementioned studies highlight the prevalence of psychological distress amongst health professionals in paediatric settings including those who work specifically within trauma services.

Sekol and Kim (2014) explored work-related psychological distress amongst nurses in different paediatric specialities. Results identified that nurses working in the haematology and oncology units reported lower levels of burnout, whereas those in the surgical unit reported higher levels of burnout. This could provide preliminary findings that professionals working within medical settings that frequently witness trauma are at an elevated risk of experiencing psychological difficulties. The trauma experienced by professionals could be different

depending on the work context; those working in medical settings may experience sudden medical trauma whereas those working in oncology settings may experience trauma in different ways. What is clear from the evidence is that health professionals supporting children with an array of physical health conditions experience a range of difficult emotions. Thus, it is imperative that professionals working in these contexts are supported to develop the skills and qualities to promote longevity in their professional role and protect their well-being.

Resilience

Resilience has been considered to mediate the distress individuals face, thus it is perhaps unsurprising that the concept has gained interest over the last two decades (Fletcher & Sarkar, 2013). The role of resilience amongst nursing professionals has begun to be explored by researchers, as its positive contribution to practice is recognised (Gillespie, Chaboyer & Wallis, 2007). One of the challenges in conducting research exploring resilience, however, is the inconsistency in how it is defined and conceptualised (Southwick et al., 2011). Rutter (1985) introduced resilience as a psychological construct over three decades ago and described it as the ability to bounce back or cope despite substantial adversity. Following this, Masten (2005) related resilience to good outcomes despite threats to the individual's development. Historically, resilience was considered a static personal attribute however it is now considered that resilience is a dynamic process that evolves over an individual's life-span (Luthar & Cicchetti, 2000). This has important implications in understanding resilience as it can fluctuate during many periods of an individual's life (Gillespie, Chaboyer & Wallis, 2007). For the present study, Windle's (2011) definition developed from a range of disciplinary perspectives, will be adopted: "the process of negotiating, adapting to, or managing significant sources of stress or trauma" (p. 163).

Resilience theory has been applied to many different fields to address human development (Masten, 2007) that includes health professionals (Jones, 1991; Ablett & Jones, 2007). To date however, no theoretical model has been developed applying resilience theory to professionals in health-care. Ablett and Jones (2007) explored resilience and well-being amongst nurses in adult palliative care. The research identified ways of coping, job satisfaction and spirituality as the main themes that emerged from the data. Ablett and Jones' findings advance existing theoretical models of hardiness and sense of coherence that offer explanations of resilience. Hardiness relates to an individual's ability to make the best out of a situation whereas sense of coherence relates to an individual's perception of their life as meaningful (Antonovsky, 1987). Further research is needed to further develop theoretical understandings of resilience in this context.

Professionals in paediatric trauma services and resilience

Few studies have explored resilience amongst health professionals working in paediatric trauma services and those that have have predominantly used quantitative measures. McGarry et al., (2013) aimed to explore the impact of regular exposure to medical trauma amongst all health professionals working in a paediatric brain injury hospital. The research aimed to explore the relationship between psychological distress, resilience and coping skills. Results identified that repeated exposure to paediatric medical trauma placed health professionals at an increased risk of developing more symptoms of secondary traumatic stress, lower levels of resilience and reduced compassion satisfaction when compared with the general population. Participants who used adaptive coping were more able to reduce the psychological distress they experienced (McGarry et al., 2013). Similarly, Dalia, Abbas, Colville and Brierley (2013) explored resilience amongst health professionals within a paediatric intensive care unit (PICU). Results indicated that 83 percent of the participants had PTSD or symptoms of PTSD. Interestingly, the participants who had a

greater level of resilience experienced lower levels of psychological distress. The aforementioned quantitative studies highlight that levels of resilience and adaptive coping can reduce the psychological distress experienced by paediatric health professionals working in trauma services.

Kornhaber & Wilson (2011) qualitatively explored the role of resilience when considering coping amongst seven paediatric nurses in a burn injury unit. Their findings highlight the importance of building resilience to enable nurses to become emotionally hardened and detached from the patients' trauma. Despite this, little is understood about the impact of resilience in relation to coping for staff working in these areas (Fields, 2014). Zander and Hutton (2013) used a qualitative approach to explore the meaning of resilience for five paediatric oncology nurses. The purpose of their research was to explore the nurses' perceptions of the development of resilience and explore how this influenced their ability to manage work-related stressors. They found that resilience was a personal and multi-faceted concept for the participants and that resilience underpinned their work as nurses.

Previous qualitative studies have thus begun to develop a detailed understanding of how resilience is experienced by paediatric nurses that work in a particular medical speciality. Kornhaber and Wilson (2011) further advocate the importance of supporting staff to build and develop their individual resilience when working in paediatric services. An absence of research exploring the well-being of all health professionals in paediatric services is highlighted (McGarry et al., 2013; Mukherjee, Beresford, Glaser & Sloper, 2009). Therefore it is important that research including all members of the MDT that are exposed to medical trauma is conducted.

The current study

Given the limited research examining how health professionals manage distress within paediatric services (Kornhaber & Wilson, 2011; Zander & Hutton, 2013), the present study aimed to be exploratory in nature. It hoped to enhance what is already known about resilience amongst health professionals working within paediatric trauma services. The current study aimed to address the question: how do professionals working in paediatric trauma services understand and experience resilience? The findings will be used to develop a theoretical understanding of this construct which in turn can be used to develop guidance in supporting professionals working in these contexts.

Method

Design

The aim of the research was to explore the meaning and experience of resilience for professionals working a paediatric trauma setting. With this in mind, a qualitative, inductive, idiographic approach was chosen. Data were collected via semi-structured interviews (see Appendix 4-E for interview schedule) and Interpretative Phenomenological Analysis (IPA) was used to analyse the data. IPA was appropriate for the current research as it aligned with the research aims, in that it is designed to understand how people make sense of a personal experience (Smith et al., 2009). IPA is interpretative and involves a 'double hermeneutic', which involves the researcher interpreting the participants' understanding of their own experience (Smith et al., 2009).

Sampling and Participants

Health professionals who work within specialist trauma services within a paediatric hospital in the North-West of England were recruited to the study. IPA involves purposive

sampling of a small sample who share similar experiences and thus IPA studies typically recruit 6-10 participants (Smith et al., 2009). This approach was adopted for the current study. This sample size was appropriate for the current study as it aimed to recruit a homogeneous sample and all participants worked in the same hospital in similar roles. The current study aimed to recruit a larger sample to include a balance of both nursing and medical professionals however this was not achievable, thus a total of seven participants were recruited. Inclusion criteria included health professionals working in a medical role that directly treated patients with physical trauma as per Trauma Audit and Research Network (TARN) guidelines including burns, fractures and brain injuries. Trauma services provide specialised trauma care and rehabilitation for individuals that have serious injuries that are life changing/threatening (NHS Choices, 2016).

An email inviting potential participants to engage in the research (see Appendix 4-A) including a participant information sheet (see Appendix 4-C) was sent to eligible staff groups via the field supervisor. Participants were invited to indicate their interest by contacting the researcher directly via email. The recruitment process presented challenges in recruiting nurses due to the nature of their working patterns and difficulty taking time away from the ward due to the rapidly changing environment. Thus, two nurses who expressed interest were unable to take part in the research. A total of seven participants were recruited. The sample included three males and four females and was made up of six medical professionals and one nurse specialist (see Table 1 for participant characteristics).

Insert Table 1 here

Data Collection

A semi-structured interview guide (see Appendix 2E) was used to interview participants which was developed in accordance with existing research, the current study's aims and in line with IPA guidelines (Smith et al., 2009). The interview schedule consisted of initial broad open-ended questions that narrowed focus during the course of the interview and prompts were used throughout to further explore participants' experience. All interviews took place at the participants' place of work. Interviews were recorded using a digital audio recorder and subsequently transcribed verbatim; any identifiable information was removed or amended to protect anonymity. Interview lengths ranged from 47 to 111 minutes (mean 58 minutes).

Analysis

The data were analysed in line with guidance by Smith et al., (2009). With this in mind each recording was listened to at least once and the transcript was read several times. Following this, initial annotations were documented that included comments reflecting thoughts relating to content, language use and interpretative, conceptual comments (Smith et al., 2009). The transcript was then re-read and emerging themes were noted that captured both the transcript and the initial comments (see Appendix 2-A for a short section of a coded transcript). Following this, as recommended by Smith and colleagues, the emerging themes were written chronologically, cut out and merged together to develop a set of super-ordinate themes (see Appendix 2-B for final development of a superordinate theme). This was using: abstraction (collecting like-for-like and providing a new name for the concept), subsumption (an emergent theme becomes a super-ordinate theme), polarization (examine scripts for

opposing relationships), numeration (the frequency of a theme) and function (examining themes by their function). This process was conducted for each of the seven transcripts. Lastly, all emerging themes were then printed and clustered to create a set of related master themes (see Appendix 2-C).

Yardley's (2000) guidelines as recommended by Smith et al., (2009) were used to examine the quality of the research. Yardley highlights four principles in assessing the quality of qualitative research: sensitivity to context, commitment and rigour, transparency and coherence and impact and importance. Sensitivity to context was achieved through the researcher being guided throughout the research process by existing literature. Participant quotes in the write-up were also included which give participants a voice (Smith et al., 2009) and included an audit trail which allows the reader to verify interpretations. To ensure rigour and transparency of the results, one supervisor was involved in listening to audios and examining theme constructs. Impact and importance relates to the objectivity of the analysis and the socio-cultural impact of the findings (Yardley, 2000). With this in mind, clinical implications will be highlighted in the Discussion section.

Reflexivity is particularly important when conducting IPA research as the interpretations of the data relate to the researcher's beliefs and experiences (Smith, Jarman & Osborn, 1999). Thus, it is crucial the researcher is aware of subjective views and assumptions in order to be transparent in conducting the analysis. The researcher had previously worked in a clinical capacity at the recruitment site but had no prior interactions with the participants in the present study. The researcher also has a professional interest in resilience of health professionals within particular work contexts. In considering this, a reflective diary was kept throughout (see Appendix 2F for exert) this enabled the researcher to reflect on their journey

of the construct of resilience throughout the completion of the study. In addition, field notes made following each interview to consider the individual participant, and to ensure the participant's relationship to resilience was at the forefront of the researcher's mind.

Results

Analysis of the data resulted in four main themes: (i) Understanding resilience: "It is more self-awareness than anything", (ii) The journey of resilience: "Building the process of how to be resilient"; (iii) Relationships with others: "Having support, not living in isolation", (iv) The relationship between emotion and action: "You box it off but don't close it off". Each theme is presented below (see Table 2), illustrated using anonymised quotes from participants. Pseudonyms were used to protect anonymity.

Insert Table 2 here

Theme 1 - Understanding resilience: "It is more self-awareness than anything"

This theme described what is understood by resilience for the participants. For all participants this related to self-awareness; an awareness of the importance of developing their own sense of what their role is and therefore what they can and cannot do, both professionally and physically. Enhancing this awareness enabled participants to feel resilient which could be further developed over time.

Self-awareness of professional limitations was important for participants to feel satisfied in their job role: "having reasonable expectations rather than thinking you've got to

be the best, being happy that you know you've done your best in that situation" (Paul). It was also important for participants to separate themselves emotionally from emergency situations: "you're part of that triangle but you're not the focus of it. It's not your child, it's not your family". Alongside this, an awareness of the self during both positive and difficult situations was important. Through reflecting on external influences during positive situations, participants were able to use similar practices during difficulty: "you didn't put them in that situation...you haven't done anything wrong" (Katie). Detaching oneself from the situation in this way served as a protection strategy for the participant.

Participants described engaged in varying routines with patients and their families to maintain their ability to be resilient within the role. This was particularly prevalent throughout Kim's interview: she recalled a difficult emotional encounter with a bereaved patient's family member, a decade after their passing. Kim recalled a feeling of guilt during this encounter due to the family member's perception of how the child had been transported to the morgue. Kim was the only nurse recruited and relationships with patients and their family members were interwoven throughout the interview and thus emerged as particularly important for Kim's resilience within her work context. By contrast, Paul discussed how he was able to reflect on a patient death and described a sense of immediate emotional healing, so long as he felt he had done everything within his role that he could. This further highlights an awareness of the limitations of the professional's role that can influence resilience.

Similarly, awareness of one's own professional role enabled individuals to remain hopeful and optimistic during trauma situations (Will). Alice described: "there's very few occasions where you can't make anything better, even when someone dies, there's always a way of trying to put them on the right path to healing". Steven shared similar views and described how "if you do your best, irrespective of the outcome of it...helps me keep going and bouncing back". This captured the importance of seeking positivity from a particularly

difficult situation which appeared poignant for participants working in these settings in acknowledging the limitations of their professional role.

Participants described different approaches in how they developed and maintained resilience in their work environment through the use of "debriefs" or "reflective practice". Reflections enabled the participants to understand and process their emotions and reactions to a situation in a mutually disclosing and safe environment. Exploring emotions in this manner enabled participants to feel more resilient for future situations:

You know, you build your layers, this was really really bad, this is how we can be prepared next time it happens. What have we learnt for next time, what can we do? It's trying to erm be resilient, develop resilience at the time but also develop it for later (Alice).

An awareness of their physical limitations was also important in helping to maintain resilience by engaging in coping strategies, for example Alice described reducing her hours to reduce exhaustion. When unable to engage in coping strategies, participants described how their mental health would be affected in varying degrees. For example Alice described an increase in engaging in repetitive and ritualistic behaviours in order to manage her anxieties. In summary, this theme captures that self-awareness is central to how participants understand resilience.

Theme 2 - The journey of resilience: "Building the process of how to be resilient":

This theme also orientated towards how participants understand resilience. Participants described resilience as related to an understanding of the self and considered how this can develop over time; learning and growth related to becoming more self aware.

A fluid and evolving process: "Grow from it"

Participants described their individual journey of understanding how to be resilient in their job role. For many participants this related to coming to terms with patient mortality. Will described a personal journey of accepting patient death through visiting developing countries where children were extremely unwell and mortality was common: "it's a massive resilience test dealing with death and grief". Will experienced an acceptance of paediatric mortality through transitioning from helping all sick children to focusing on helping the children who could be saved. This relates to the awareness of limitations of the individual's professional role as previously discussed. This individual learning process of acceptance early on in his career enabled him to be a more effective and resilient health professional. Participants also described the importance of coming to terms with paediatric mortality and how "making peace with" experiences then enabled them to use the coping skills they had learnt in other difficult situations. Steven felt this made him more resilient as he was better "able to cope with more". This indicates the intrinsic relationship between resilience and coping in how participants felt that utilising internal adaptive coping strategies related to the individual feeling more resilient.

For many of the participants, individual growth within their professional role was key to developing resilience and Alice felt there was "always room to grow". A similar view was shared by Steven who felt "it's constantly evolving so it's not, it's not something that's static in my head". The fluidity of the concept related to aspects and challenges within individuals' lives that causes resilience to "flex up and down" (Katie).

The importance of reflection was also described by many of the participants when discussing growth and overcoming difficulties. For Will, reflection was a key theme throughout his interview. He felt that reflections were key to understanding and developing resilience. Alice described how improving an individual's resilience and coping "gives you the tools to get through aspects of your life". Thus for Alice, feeling resilient within her work

environment enabled her to apply her learning and development in overcoming challenges in other areas of her life. Reflection was described during the interviews as both an individual and a group task and participants described differences in their engagement in both. Reflection therefore enables the fluid process required for individuals to increase their resilience.

Learning and familiarity

Participants described an openness to continuous learning that was key for resilience, specifically when working in settings that changed so rapidly. Learning from both positive and difficult situations was also important:

[when considering different situations] whether that's good or bad because nothing is ever completely good, there is always something in there and you know you might have had to find yourself to find your way to that good thing, that still requires resilience (Alice).

Learning from situations also enabled Katie to continually develop professionally by considering if there were things that could have been done differently and using this awareness this to improve future practice. It was important for participants to have an awareness of their own limitations as Steven explained "we can't control life and death". This acceptance related to an awareness of their own learning, and the limitations to this. It further highlights the importance of paediatric mortality in considering what resilience means for the participants.

Experiencing unfamiliar situations created challenges for some of the participants. Will described beginning a new role in a new location and would commonly blame himself for situations that caused him to take longer to "bounce back" and feel "vulnerable".

Familiarity conversely enabled the participants to feel more able to manage the situation in that they were more prepared for the emotions and challenges they may encounter. This experience enabled participants to reflect on whether or not they felt they had the resilience to manage the situation: "over the years you've got that experience and you think, have I got that ability to handle that or will I be out of my depth there?" (Kim). For the participant, this related to self-awareness of whether they had the psychological resilience to overcome the situation. This was often related to whether the situation was familiar or unfamiliar and thus, participants developed emotional resilience. Katie described a similar experience and discussed how individuals may feel less resilient in unfamiliar situations and described "matching resilience" with the things you may be likely to face.

Participants described how observing and learning from colleagues enabled them to develop resilience towards particular work-related situations: "I kind of try and learn as much as I can...I can pick up on stuff from other people...different things and learning from different people, I think that's how it's made me change" (Steven). Learning from colleagues also built participants' resilience for situations that perhaps they may not have encountered yet (Will). Thus for participants working in paediatric trauma services, having supportive colleagues to discuss and process the specific role related challenges enabled them to develop their resilience. Having supportive colleagues also enabled participants to have opportunities to engage in other strategies that developed their resilience which included taking time away from the clinical area following an adverse outcome.

This theme captures the evolving nature of resilience; although all participants felt resilient at the time of completing the interview, they had an awareness that this continued to evolve over their career and this could fluctuate where participants engaged in new learning from changing circumstances. What was clearly powerful for the participants however was

the ability to learn from both experiencing and sharing experiences to guide and support them in future difficult situations.

Theme 3 - Relationships with others: "Having support, not living in isolation"

Significant attachments were highlighted as crucial for resilience for the participants. Relationships signified comfort, assurance and support whilst also creating distress for some participants. Alice eloquently captured that individuals "never work in isolation in any aspect of life" thus capturing the intrinsic nature of resilience and relationships.

Importance of relationships at work: "Supportive team that work together and share responsibilities"

Relationships with colleagues appeared fundamental for resilience for all participants within the work-place and were described by Paul as "a close knit family". Within inpatient paediatric settings, professionals seldom experience a situation alone and thus the importance of "sharing" was discussed throughout: "if you're in a supportive team it's working together, sharing responsibilities for things...much easier for you to deal with difficult situations and move on" (Katie). Sharing with others appeared to not only build close relationships but also shared the levels of responsibility during adversity. Both factors contributed towards resilience experienced by the individual. Conversely, Steven spoke about needing an increased level of individual resilience if the team was not working cohesively.

The importance of close relationships with colleagues was also related to having an awareness of their personal lives and how this may influence how they manage within their professional role. Participants also felt that through being open with colleagues, they could be experiencing "hell at home", but still be able to successfully do their job. Due to the long

hours worked and the intensity of the working environment, work relationships were akin to relationships with family members for the participants.

Relationships with patients and their families

This sub-theme related to relationships with patients and their families and how this influences resilience. Participants described relationships with patients and their families as being key to resilience during difficult situations. This was a particularly prevalent theme for Kim who described a journey of transition with patients' families early on in her career: "after a couple of situations like that where I got deeply involved and I found it was having an effect on me and my wellbeing...it was like a revelation really". This further captures the importance of self-protection and resilience. For Kim, keeping a professional distance enabled her to feel more resilient in all her relationships over the course of her career. She reflected during her interview that perhaps this would not have been possible without the "revelation", thus highlighting the importance of relationships in terms of resilience and longevity in her career. Participants in a medical role described a similar sense of 'stepping back' from patients during difficult outcomes. For Steven, his medical training enabled him to have the "mindset" to cope with a dying patient and Paul described a sense of familiarity that enabled him to "click the team into place and move on".

Relationships outside work: "Having a good balance outside of work"

Having a good work-life balance was crucial for the participants in managing their resilience within their role. Participants described the importance of "switching off" from work stressors at home that then enabled them to be completely focused whilst at work (Steven). The importance of family was discussed throughout Steven's interview as particularly significant for his resilience: "I think if I got an emotional knock from the family

point of view then yeh my resilience would've been shattered". Will shared a similar view, highlighting how critical personal relationships are for resilience.

Participants also discussed significant changes to resilience after becoming a caregiver that commonly related to comparing their own children with children they were caring for and that was described as "another layer" of challenge within the role (Will). Steven described how this could be emotionally challenging but also encouraged him to be more driven in achieving a successful outcome with patients:

It batters your resilience a little because you feel emotionally in touch with the family and the individual kid...you are somehow thinking as a parent and a doctor at the same time. But when you resuscitate you have to switch off the parent bit...being a parent also affects you...that leads to you giving your best shot (Steven).

This theme highlights the importance of peer support for participants. It also highlights how critical personal relationships are for maintaining resilience. The theme also captures differences across participant roles when considering relationships with patients and their families and resilience. In summary, an intricate connection between differing relationships and resilience is captured.

Theme 4 - The relationship between emotion and action: "You box it off but don't close it off"

Participants described challenges with expressing emotion within their professional role. Participants described that expressing their emotions enabled them to display, understand and process emotions experienced during difficult situations. This impacted participants' resilience as through this, they felt able to off-load emotionally and move on to

another difficult situation. Related to this, an ability to manage and contain their emotions was crucial.

Alice described how resilience related to an expression of emotions as a "resolution of emotions". Similarly, Steven also described how sharing emotions with others was "mutually" helpful to make sense of and process the difficult situation. Expression of emotions elicited differences across participant roles as Kim, in her nursing role, explicitly described expressing emotions in front of patient families, whereas medical participants spoke about expression with colleagues. Participants commonly spoke about a need to focus on the immediate emergency situation and attend to emotions later: "sometimes it falls apart...you have to deal with what's in front of you and then pick up the pieces of your team later...park it for now and we'll talk about it later" (Alice). Thus for participants "compartmentalizing" emotions was crucial for resilience in their role (Katie). Participants described the specific agility of the professional role they worked in:

Within the span of 10 to fifteen minutes of leaving that scenario you have to switch off and switch on to something completely different...So for me, resilience is being able to do that without carrying it onto the next patient (Steven).

This highlights that emotional containment is important for the professional to continue providing acute care to the best of their abilities to the patient. Participants felt that "self-selecting" to work in paediatric settings helped to build their resilience when compared with other work settings: "it's not like working in adult A&E where you see adults die every single day. Most children get better, there is an acute stress but most of us actually thrive on that" (Jane). Thus, the very fact of "selecting" to work in such emotive settings could perhaps reduce the distress professionals experience and highlights the importance of supporting professionals when choosing their area of medical speciality. This highlights further the

individuality of resilience and the importance of self-awareness when considering resilience and working in this context.

In addition to adaptability, participants described the multiple demands often placed upon them and Will described how during a major trauma he felt responsible for the patient, their family and his colleagues. This "exhausted resilience" due to the "breadth" of the input required and led the participants to question "where do I manage to fit that in?" (Kim). Thus, managing multiple demands at any one time within their department required the participants to be "resilient and instil resilience onto other people" (Alice). For the participants, the aspect of competing demands was the essence of being resilient in many ways. The adaptability and flexibility required in the professional role was commonly experienced by the participants and appeared to be a process of learning to deal with not knowing "what's coming through the door". Therefore, as highlighted, it is crucial for professionals to transfer their learning from other similar situations in order for the individual to feel resilient when faced with uncertainty.

Interestingly, participants described an ultimate resilient approach related to experiencing both joyful and difficult emotions, however not allowing those emotions to affect their decision-making in a detrimental manner. This, Alice explained, would enable "clarity in processes and systems". This indicates that resilience involves an intricate balance between attachment and detachment from emotions when considering decision-making. This ability to temporarily compartmentalise emotions enabled the participants to have resilience during emergency situations and is particularly relevant for their professional role. The participants' descriptions of emotional management during emergency situations were akin to a fight or flight response whereby they would go to "auto pilot" and focus solely on their behaviours to get the desired outcome. Once they had reached 'safety' they allowed themselves time to focus on the emotions associated with the event: guilt, sadness, upset; this

could be a process lasting up to two weeks (Will). Some of the participants also described how other people had commented on this seemingly emotionless approach. This may relate to the above where the participant is able to shut off their emotions during times of crisis. It perhaps highlights a characteristic trait that is difficult for others not working in paediatric trauma settings to understand. This theme captures that managing the balance between emotional expression and containment is crucial for participants working in paediatric trauma settings.

Discussion

The aim of the current study was to explore experiences of health professionals working within paediatric trauma services. The findings were based on semi-structured interviews with seven health professionals who were caring for children with trauma related injuries in a paediatric hospital. Through IPA, four main themes were generated from the data relating to the professionals' experiences as described above. The findings support existing research relating to resilience and also add to our understanding by providing detailed insights into how paediatric health professionals working within trauma services experience and make sense of this phenomenon.

Participants' understanding of resilience supports existing research findings that suggest resilience relates to facing adversity (Windle, 2011), whilst also positively adapting to the adversity without a deterioration in emotional or physical well-being (Seery et al., 2010). The current findings further highlight the fluidity of the concept which has been identified in previous research (Gillespie, Chaboyer & Wallis, 2007). Self-awareness was considered crucial for resilience in the present study. This related to an awareness of the professional's limitations, both professionally and physically. This particular finding has previously been highlighted as important amongst other health professionals (Adamson,

Beddoe & Davys, 2012). Grant and Kinman (2012) proposed that self-awareness is linked with emotional intelligence and that emotional intelligence could be considered a characteristic of health professionals. Thus, it is perhaps unsurprising that an awareness of the self is commonly discussed in resilience research with health professionals. Previous quantitative research identified a relationship between resilience and optimism (McGarry et al. 2013). A relationship between resilience and 'forward thinking' was explored in the current study, which could be described as an aspect of optimism. Within the current study this appeared to be associated with an awareness of the professional's limitations within their specific role. Further exploration of the relationships between these concepts is warranted.

Participants in the current study felt resilient in their working environment, however despite this, participants also described the daily challenges they face. The following quote aptly reflects resilience for health professionals in this context: "resilience does not imply invincibility, but it does signal an ability to resist becoming overwhelmed to the point of extreme physical or psychological distress" (p. 4, Adamson, Beddoe & Davys, 2012). Professionals described how in their work setting they continue to be emotionally impacted by the trauma they witness, however they are able to temporarily compartmentalise this emotion, to prevent the care of patients being impacted.

The current study highlights the role of acceptance when considering resilience; professionals discussed the transition to acceptance through their experiences. The importance of acceptance-based interventions has previously been explored amongst individuals with a diagnosis of PTSD (Thompson, Arnkoff & Glass, 2011). Through adopting acceptance-based practice directly related to trauma, individuals experienced greater psychological adjustment, including increased resilience (Thompson, Arnkoff & Glass, 2011). Although this research explored acceptance amongst individuals who had directly experienced a traumatic event, it is acknowledged that professionals working in paediatric

inpatient settings are likely to experience vicarious trauma (Meadors, Lamson, Swanson, White, & Sira, 2010). It could therefore be suggested that organisations of paediatric trauma services could adopt mindfulness and other acceptance-based interventions in supporting the work-force. The author is not aware of any formal structures or guidelines that currently exist in relation to health professionals working in paediatric trauma services routinely engaging in mindfulness practice.

The current study advances the limited research related to resilience and health professionals. In summarising existing literature relating to resilience amongst all health professionals, McCann et al., (2013) reviewed the processes and characteristics that enhance resilience amongst health professionals. McCann and colleagues reviewed 159 journals that included: nurses, social workers, psychologists, counsellors and doctors. The review identified that maintaining a work-life balance was consistently related to resilience for all health professionals. This is an unsurprising finding in any working context but further highlights the importance of organisations and managers supporting and encouraging safer working practices. This is particularly pertinent for those professionals working within paediatric trauma services whose acute shift working does not promote a healthy balance as discussed by participants in the current study. It is worth noting that different factors were measured in the individual studies in McCann and colleagues' review, thus caution should be given in making wider generalisations.

In the current study resilient responses to managing work-place adversity included different coping strategies such as social support. Jensen et al., (2008) acknowledge that support from peers is crucial for health professionals' resilience. This could be in relation to needing to discuss and process difficult situations, outcomes and emotions with peers, as discussed in the current study. Reflection was considered essential in the development and maintenance of resilience. Work-based reflective practice has been acknowledged in previous

research as increasing professionals' self-awareness and experiential learning (Lillyman, 2010). Reflecting enabled professionals in the current study to overcome difficult emotions, engaging in this practice increased resilience and also enabled them to provide quality care to other patients. Rees (2013) found similar results when interviewing nursing students about their experience of reflective practice. Taken together, the importance of reflective practice is highlighted within paediatric trauma settings.

There is an absence of reflective models available to support health professionals, however Johns' (2000) reflective model could be applied in this context. The model highlights that professionals discuss a pertinent situation, reflect on their own beliefs and values and relate this to previous experiences. Through this, new approaches are identified for future situations. Johns' (2000) approach offers a loose structure, enables the processing of emotions and also applying learning to future situations, all of which were identified in the current study as pertinent to resilience. Reflective practice is considered important for the professional development of health professionals (Jayatilleke & Mackie, 2013). It is also recommended that NHS organisations prioritise the wellbeing of professionals (Royal College of Physicians, 2015). Despite this, no formal guidance exists for paediatric health professionals.

Clinical implications

As discussed, the current study emphasises the importance of reflective sessions to be made available for professionals working in these settings. It also highlights the need for professionals to take responsibility and be pro-active in attending and actively taking part in these sessions should they be available. The current study captured individual differences with regard to the professionals' responsivity to informal reflective sessions already in place. Will recommended making reflective sessions more structured. Although adding structure

would reduce the spontaneity of the conversations and may add rigidity to the process, adding structure could alleviate the individual's anxiety or uncertainty about attending the sessions. Developing guidelines that incorporate a loose reflective model similar to Johns' (2000) previously discussed, would mediate this challenge and provide guidance for practitioners within these settings. Implementing NICE guidance on interventions for staff well-being and engagement has been highlighted by professional bodies (Royal College of Physicians, 2015).

The individuality of developing resilience for professionals has been explored within the current study. With this in mind, it is imperative that organisations support, encourage and facilitate the protective strategies that professionals working in these settings engage in that promote their resilience. This is critical for the professionals, not only for the wellbeing of the professional but for the care of the patient (Barnett, Baker, Elman, & Schoener, 2007). Furthermore, as discussed in the current study, it is important to encourage longevity within the professional role. Without this support, professionals working in these settings may change professions or their working environment for one that is less emotionally demanding (DePanfillis & Zlotnik, 2008).

Lastly, this review highlighted the importance of self-awareness of paediatric health professionals not only choosing to work in these services, but to continue working in a way that protects their well-being. It is therefore suggested that senior health professionals working in paediatric trauma settings who have a supervisory role enable reflective sessions or discussions with staff in training for a particular professional qualification. This was discussed as an informal process in the current study. It is therefore recommended that staff interested in working in this context are encouraged to reflect on their interests in working in these settings and consider how they would protect their well-being.

Limitations and future research

A limitation of the current study related to an absence of non-medical professionals that took part. As discussed in the Method section, due to shift patterns and the unpredictable nature of trauma services, two nurses withdrew from participating in the research. Despite this however it also considered a strength of the current study as the study was able to elicit the understandings of senior medical personnel with several years' experience of working in paediatric trauma settings. Future research could however aim to explore resilience across all health professionals and include all specialities within a paediatric hospital. An absence of research exploring well-being amongst paediatric health professionals has previously been highlighted (McGarry et al., 2013; Mukherjee, Beresford, Glaser & Sloper, 2009). Therefore this approach would include a greater breadth of professionals across different specialties. This would further develop theoretical understandings of resilience of professionals working in this area.

Lastly, the current study was exploratory in nature involving a small sample size and therefore limits the applicability of the findings to wider paediatric health professionals. With this in mind, no claims are made that the experiences within the study can be applied to all paediatric health professionals working within trauma services. Rather, the study identified a detailed understanding of resilience for participants in the current study. A similar investigation across multiple paediatric hospitals would be beneficial and further develop theoretical understandings of resilience in these settings.

Conclusion

The current study explored how seven health professionals working in paediatric trauma services understand resilience within this context. The findings explore the

importance of self-awareness in understanding this phenomenon, particularly in considering the individual's professional and physical limitations. The importance of temporarily switching off emotions is highlighted in the current study. The findings also capture the value and complex impact of personal and professional relationships. The study highlights how professionals working in paediatric trauma service can be supported in maintaining and developing their individual levels of resilience.

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Tables/Figures

Table 1. Participant Characteristics

Participant	Role	Age Range (years)	Number of years working within paediatric inpatient services
Kim	Nurse Specialist	50-55	22
Steven	A&E Consultant	40-45	15
Katie	Neurosurgeon Consultant	35-40	11
Alice	A&E Consultant	40-45	10
Will	A&E Consultant	35-40	9
Paul	PICU Consultant	40-45	10
Jane	A&E Consultant	35-40	5

Table 2. Summary of themes

	Theme	Sub-themes
i	Understanding resilience: "It is more self-awareness than anything"	
ii	The journey of resilience: "Building the process of how to be resilient"	A fluid and evolving process: "Grow from it", Learning and familiarity
iii	Relationships with others: "Having support, not living in isolation"	Importance of relationships at work: "Supportive team that work together and share responsibilities", Relationships with patients and their families, Relationships outside work: "Having a good balance outside of work"
iv	The relationship between emotion and action: "You box it off but don't close it off"	

45 INT: so it sounds like the second debrief is helpful for people thinking about what they have
46 done thinking about their own resilience I'm trying to put to support in place

47 PART: yeah and often there are issues at all levels of people then we put more support in
48 place, we talk through in a one-to-one basis...

49 INT: is that something specific to the department?

50 PART: I think it's not specific to our department because most of our difficult situations we
51 have involve all the departments but I think we tend to try and take a lead on it, not every
52 particular job role are comfortable debriefing but that's the way I try to do it, some people try
53 to avoid it in the main, some people just do a half debrief it's just different personalities and
54 also depends on who is in there whether or not they actually want to come back as a
55 brief afterwards some people don't

56 INT: so it's a mixture of personalities and professions

57 PART: and different ways of coping

58 INT: that sounds really good... I'm going to jump back a little bit I suppose to think about
59 what resilience is as a concept so you've spoken about your definitions which is really
60 personal to you and if you were to think about what resilience person may look like an image
61 or if you could describe them is there anything that comes to mind?

62 PART: I'm trying to picture what I think it is.. I guess when people go into a situation
63 however difficult and face what they have to face and act in a professional responsible
64 way and I guess when I go into a major trauma I want to be there for the patient number one,
65 the family number two they come as a package and then be there for the staff at as well then
66 be prepared so that in half an hour then we have to do the same thing again with another
67 group of people. I think of a resilient person is a calm person trying to think calm
68 controlled and also well rounded so you see some people through your training who are very
69 calm and controlled but they have very reckless personalities outside that situation they don't
70 seem very together - they fly off the handle at different unexpected situations I don't think
71 they actually deal with the stuff so I think it to be resilient you have to do a good professional
72 job for the staff and the people your treating and be able to do it time after time after time in
73 a healthy way

74 INT: so it sounds like as you say that's kind of keep coming back to it over and over and be
75 well-rounded as well?

Commented [G1]: LANGUAGE: all levels - ages/professionals/cultures/gender

Commented [G2]: ANNOTATION: Everyone can experience challenges regardless of the role

Commented [G3]: REFLECTION: it is okay if you're not coping at work, everyone has difficulties at work so can affect everyone - normalising

Commented [G4]: THEMATIC: issues are identified from debrief - put more support in

Commented [G5]: THEMATIC: all teams involved in debrief

Commented [G6]: ANNOTATION: all sub-specialities are involved in the debrief

Commented [G7]: REFLECTION: debriefs are not well received and some people avoid - why? Avoidance of emotions? Interpersonal/team challenges?

Commented [G8]: ANNOTATION: debriefs are not supported by all team members

Commented [G9]: THEMATIC: different professionals, different coping styles

Commented [G10]: REFLECTION: considers self as resilient? Comparing self to resilient person?

Commented [G11]: THEMATIC: competing demands in trauma situation

Commented [G12]: REFLECTION: responsibility of professional to be split and attend to different needs at any one time - this means resilience

Commented [G13]: ANNOTATION: professional is required to attend to multiple demands within their professional role at any one time

Commented [G14]: ANNOTATION: resilience relates to being managing a situation in a calm approach in a trauma situation

Commented [G15]: THEMATIC: resilience = calm and controlled

Commented [G16]: REFLECTION: resilience is calm and controlled both at work and outside work - unconscious pressure on role to experience no challenge in personal/professional life - unattainable

Commented [G17]: ANNOTATION: resilience is repeatedly attending to competing demands in a healthy way

Example of participant major themes developing Theme II: **"Building the process of how to be resilient": The journey of resilience**

Participant	Major theme(s) for each participant	Summary of participant's contribution to theme 2
Jane	<p>Resilience as an individual and evolving concept</p> <p>Familiarity and adaptability</p>	<p>Jane spoke about the individuality of resilience and described how she felt resilience was an innate construct that related to the individual as opposed to the environment and described it as something "personal".</p> <p>Jane described the evolving and fluid nature of resilience in that "there may be a baseline for any one person but there are things that bring it up and down". For Jane, resilience changed over the course of time and this depended on the specific situation, the individual and their ability to engage in coping strategies. This appeared to relate to an individual's age in that as we grow older in age we have more experiences to learn from.</p> <p>Jane described resilience as being related somewhat to personal growth and adaptability. She described how being resilient you may still be impacted by the situations you experience, however you are able to "not let them affect you detrimentally". This related to the nature of the professional's role - Jane saw traumatic incidents daily in her department so for her resilience related to continuing to experience the patient's traumatic incident without this impacting her well-being. It appeared that this process for Jane became somewhat easier with the familiarity of the situations she encountered.</p> <p>Jane described an aspect of resilience related to adapting to their role to encourage longevity in their career. This aspect was different to the demands faced in the role but related to the transition of her career and anticipating how this may change over the next few decades. For Jane, it was important for her to adapt to these changes and evolve their role accordingly to remain resilient within her role - "the is not the same when your 35 as it is when your 55 you have to find a way..."</p>

Steven	Growth and learning to increase resilience	<p>This theme was not as prevalent for Steven as it was for other participants. Steven described the fluidity of resilience and described how all individuals have a level of resilience which can "flourish" dependent on what that individual does. This appeared related to the impacts that perhaps the individual does and does not have control over. Thus, the individual can chose to learn from situations, reflect, use support networks etc. However an individual can also experience a significant event that can impact their resilience such as bereavement of a family member.</p> <p>For Steven, learning from others was also crucial for developing resilience. This related to observing others coping strategies.</p>
Katie	Resilience: Reflection as key	<p>This theme captured the developing and fluid nature of resilience for Katie. She described how resilience is a fluid process that "flexes up and down" as it can be impacted by situations within an individual's personal life.</p> <p>Katie described for her resilience related to moving on from situations "as normal" and trying to improve herself. An ability to reflect on difficult feelings was important for resilience as she felt "reliving negative or blaming yourself" would "damage resilience".</p> <p>Within this theme Katie captured how resilience was related to overcoming and learning from both positive and negative situations. She described an evolving nature of resilience and described how an individual will go through "the process to be resilient" which related to overcoming specific and repeated challenges. Similarly, resilience related to familiarity for Katie; experiencing similar situations you develop confidence to "translate" the skills learnt to another situation which in turn develops an individual's resilience.</p>
Alice	Resilience as a process of learning	<p>Reflection was an integral aspect of learning for Alice that occurred either individually, one-to-one basis or within a group. Alice felt that regularly reflecting increases an individual's resilience. For Alice this related to developing an awareness of the different "tools" to increase an ability to overcome different situations. Reflection was related to an individual's ability not to internalise the particular outcome and attribute sole blame on the self and consider the influence of others, this skill appeared important during both good and negative outcomes. Alice acknowledged how this "learning" can be challenging during difficult situations and thus</p>

becoming familiar in engaging in this skill during "good" outcomes encourages this to occur during difficult outcomes. Alice described this as a "powerful model".

Alice described the importance of learning from others within this theme. This related to "sharing" within the team and Alice described it can "help that person and maybe myself" in normalising difficult emotions experienced. It also related to empathising with other team members.

Will

Reflecting: important yet challenging

Reflection was particularly important for Will in developing resilience. It was noted that Will first mentioned "debriefs" in his second response to the interview and when asked if he had anything further to add at the end of the interview he discussed how the organisation could improve debriefs. Will explicitly described how for him resilience develops from debriefs.

Individual and evolving construct

For Will reflecting appeared to signify personal growth that enabled professionals to continue working in the emotive settings and thus for him, was the core of understanding resilience in his work setting. An underlying sense of frustration was apparent when Will discussed other professionals and other departments lack of focus on debriefing as he stated "some people try to avoid it".

Will also described the importance of growing and learning and not "being damaged" by different situations. Will also described the importance of sharing with peers and stated "a lot of our learning comes from hearing other cases and thinking what would I do in that situation". It would be impossible for one professional to experience every possible trauma related situation throughout their career and thus learning and sharing creates a familiarity to even an unknown situation which seems to enable professionals to remain resilient.

Paul

Resilience: preparedness and evolutionary

Paul described a preparedness related to resilience; for Paul an ability to learn from different situations to improve his and his team's ability to deal with a similar situation was important. In order to do this the team must be able to vocalise their challenges they had experienced and feel "reassured" in their ability to manage it differently in the future.

Learning from others was key for Paul, Paul described that you can "learn to be resilient" and felt learning from people in personal and professional lives enabled this. For Paul learning related to observing their coping skills and asking them to "explain things".

A sense of "moving on" and "optimism" was important for Paul, he described on two occasions that resilience related to "making peace" with a situation. This appeared related to not being psychologically impacted by difficult situations and being able to "be ready for the next thing that happens". Again, for Paul resilience appeared related to preparedness of different situations.

Paul also described the fluidity of being resilient in that it can fluctuate daily depending on an individual's health, tiredness or stress levels.

Kim

Adaptability: Working through change and difference

Resilience as a process

Kim described the importance of feeling prepared in considering resilience. She described previous experiences early in her career of anxiety that was related to unknown situations that could occur at work. She described a process of becoming more familiar and learning from different situations.

Kim's role had changed somewhat over the course of her career and she described how her resilience had also changed, partly due to initial unfamiliarity/familiarity and partly due to specific change in her role. The change in Kim's role initially challenged her resilience however the importance of learning and being open to learning was highlighted. Kim described not having "fixed views" and thus was able to continually learn within her different roles.

Bold Text – Participant Superordinate Theme

Italic Text – Participant Emerging Theme

	Jane	Steven	Katie	Alice	Will	Paul	Kim
I. "It is more self-awareness than anything": Understanding resilience	Resilience as an individual and evolving concept <i>Resilience influenced by the self</i> <i>Resilience as an individual construct</i> <i>Importance of self awareness</i>	Resilience as individualised and evolving concept <i>Individual differences</i> <i>Individuality of construct</i> <i>Self assurance</i> <i>Self awareness</i> <i>Self protection</i> <i>Self motivating</i>	Awareness of self and others <i>Individual differences, influences and experiences</i> <i>Self awareness</i> <i>Self assurance</i>	Uniqueness of construct <i>Individual differences</i> Important to protect self <i>Prioritising demands</i> <i>Balance and self awareness</i> <i>Self awareness and process of</i>	Individual and evolving construct <i>Individualised concept</i> <i>Awareness of individual level of resilience and of coping</i> <i>Awareness of others</i> <i>Self confidence</i>	Awareness of difference between all <i>Individual and biological differences</i> <i>Awareness of differences in others</i> <i>Self satisfaction</i> <i>Self improvement</i> <i>Innate</i> <i>Managing expectations of self</i>	Self-awareness as key to resilience? <i>Self awareness</i> <i>Protecting the self/anxiety vulnerability</i> <i>Individual differences</i> <i>Self protection</i> <i>Awareness of differences of other professionals</i>
II. "Building the process of how to be resilient": The journey of resilience	Resilience as an individual and evolving concept Familiarity and adaptability <i>Resilience as an evolving concept</i> <i>Personal growth</i>	Growth and learning to increase resilience <i>Growth and moving forward</i> <i>Resilience as evolving concept</i> <i>Importance of learning from self and others</i>	Resilience: Reflection as key <i>Development and growth</i> <i>Moving forward</i> <i>Reflection</i> <i>Growth</i> <i>Learning</i>	Resilience as a process of learning <i>Awareness of differences with other professionals and departments</i> <i>Learning from self and others</i>	Reflecting: important yet challenging <i>Reflection is crucial for growth and relationships</i>	Resilience: preparedness and evolutionary <i>Preparedness</i> <i>Forward thinking</i> <i>Fluid, growing process</i> <i>Familiarity</i>	Adaptability: Working through change and difference <i>Uncertainty in role</i> <i>Learning</i> <i>Adapting to work environment</i>

*Experience and familiarity
Adaptive process*

*Evolving process
Transferrable skills*

*Growth
Flexibility
Process of learning
Self/ group
Reflection
Process of reflection
Reflection
process is long
Developing transferrable coping skills*

Individual and evolving construct
*Fluid process
Individual learning
Developed through experience

Importance of learning from peers*

*Unfamiliarity in role

Learning from others*

*Changes to profession/role

Resilience as a process
Learning process
Openness to learning
Familiarity and experience
Initial uncertainty
Evolving process;
protection*

Observing and learning from others

III. "Having support, not living in isolation": Relationships with others

Needing to protect emotional and physical wellbeing
*Supportive relationships with peers
Importance of socialising with peers
Relationships with patients family*

The power of external influences

The influence of relationships with others in personal and professional life
*Peer relationships crucial
Managing difficult relationships with patients and families
Parenthood and the challenges*

Importance of connections personally and professionally
*Importance of team support
Protecting and balancing relationships outside work*

You can't do it on your own
*Trusting and empathic relationships
Learning and sharing with team
Importance of team
Important for balance outside work*

Resilience and other people: you can't be resilient on your own
Supportive and supporting colleagues is crucial

Interpersonal relationships: challenging and restorative
*Relationships with team
Patient death
Balancing home and work life
Personal life restorative*

The influence of others
*Observing and learning from peers
Support from external other
Relationships with patients families*

Separation of home and work life
Comparing loves ones and patients
Relationships reduce perception of resilience
Family support

IV. "You box it off but don't close it off": The relationship between emotion and action

Needing to protect emotional and physical wellbeing
Needing to promote longevity in role
Managing emotional demands stress within role
Adaptability within role
Displaying emotions and ability to cope
Acceptance

Emotional regulation and management: what is best?
Shutting off emotionally for short term, action driven
Compartmentalising
Attend to emotion eventually
Reflection

The role obstructs resilience?
Agility/diversity in role
Multiple and competing demands

Process of managing emotional labour within the role
Shutting off emotions
Externalising
Compartmentalising

Chameleon within role
Adapting to helpful coping

Expression of self and emotions
Expressing emotions
Importance of expression
Flexibility in attending to emotions
Emotions and decision making

Overcoming role specific challenges

Managing difficult emotions in role
Acceptance and externalisation
Containment

Attending to different needs repeatedly
Keep coming back to help different people

Emotional and physical labour of role
Shutting off Demands of role
Shutting off emotionally
Emotional aspects of work
Importance of communication
Recognising emotions

Expressing emotion: is this resilient or not?
Detachment
Compartmentalising
Managing emotions in role
Openness/ displaying emotions
Containment

Author Guidelines: Qualitative Health Research (QHR)

4. Preparing your manuscript

4.1 Article Format (see previously published articles in QHR for style):

- Title page: Title should be succinct; list all authors and their affiliation; keywords. Please upload the title page separately from the main document.
 - Blinding: Do not include any author identifying information in your manuscript, including author's own citations. Do not include acknowledgements until your article is accepted and unblinded.
 - Abstract: Unstructured, 150 words. This should be the first page of the main manuscript, and it should be on its own page.
 - Length: QHR does not have a word or page count limit. Manuscripts should be as tight as possible, preferably less than 30 pages including references. Longer manuscripts, if exceptional, will be considered.
 - Methods: QHR readership is sophisticated; excessive details not required.
 - Ethics: Include a statement of IRB approval and participant consent. Present demographics as a group, not listed as individuals. Do not link quotations to particular individuals unless essential (as in case studies) as this threatens anonymity.
 - Results: Rich and descriptive; theoretical; linked to practice if possible.
 - Discussion: Link your findings with research and theory in literature, including other geographical areas and quantitative research.
 - References: APA format. Use pertinent references only. References should be on a separate page.
- Additional Editor's Preferences:

- Please do not refer to your manuscript as a "paper;" you are submitting an "article."
- The word "data" is plural.

4.2 Word processing formats Preferred formats for the text and tables of your manuscript are Word DOC or PDF. The text should be double-spaced throughout with standard 1 inch margins (APA formatting). Text should be standard font (i.e., Times New Roman) 12 point.

4.5 Journal layout In general, QHR adheres to the guidelines contained in the Publication Manual of the American Psychological Association ["APA"], 6th edition (ISBN 10:1-4338-0561-8, softcover; ISBN 10:1-4338-0559-6, hardcover; 10:1-4338-0562, spiral bound), with regard to manuscript preparation and formatting. These guidelines are referred to as the APA Publication Manual, or just APA. Additional help may be found online at <http://www.apa.org/>, or search the Internet for "APA format."

4.6 Reference style QHR adheres to the APA reference style. Click here to review the guidelines on APA to ensure your manuscript conforms to this reference style.

1. Can you tell me what resilience means to you?
 - *how does it develop?*
 - *where does it come from?*
 - *how would you define?*
 - *how would you conceptualise it? do you see it/hear it/sense it/is it a thought/an image?*
2. Can you describe a resilient person...
 - *how would they look, talk, do, behave, think*
 - *fantasies*
3. What do you think has influenced this understanding?
 - *experiences (personal and professional)*
 - *other people*
 - *memories*
4. How do you think people develop resilience?
 - *spirituality, personal competence, social competence, family cohesion, social resources, and personal structure*
5. Can you tell me what place resilience has in your life at the moment?
 - *Can you tell me a bit more about that?*
 - *do you feel resilient?*
 - *would you like to be more resilient?*
 - *how do you think you could develop resilience?*
6. What are the main differences between a resilient and non-resilient person?
 - *their appearance /thoughts/behaviour/professional work/mental health/physical health*
7. Can you talk to me about resilience and your job?
 - *what are the differences with other professions/friends*
 - *does this job require resilience? why/why not?*
 - *does resilience help? can you tell me more about that?*
8. Can you talk to me about stress and your job?
 - *what are the most stressful aspects if any?*
 -
9. Can you tell me about ways of managing stressors in your work?
 - *what helps/doesn't help?*
 - *why does this help?*
 - *would you consider yourself as effectively managing stress?*
 - *would there be anything else you would like to be able to do?*

August 2016 - *Why did I choose this topic? Resilience usually describes someone who has overcome a challenge in their life so the interviews and literature will be focusing on positivity and how they overcome this. I think choosing a positive topic will help me as I imagine my final year as a trainee will be managing different demands and my specialist placement is tricky. I consider myself an optimistic person so doing this research aligns with my values and personality. Thinking about staff's resilience and coping will be helpful in thinking about my future as a clinical psychologist. At this point I am not sure where I will be working but I imagine and hope that the findings from this study can be applied to other settings.*

October 2016 - *Literature review is challenging. I am on a study block and reading hundreds of journals daily about paediatric and neo-natal death. It seems silly approaching my supervisors but that's what they're there for – it is hard to switch off from the literature... could I keep writing about this? Will I become de-sensitised? Am I going through the 'resilient journey' with the literature? There are parallels between research paper and my own experience of conducting the research paper.*

November 2016: *I am surprised by the emotive content of the interview – I thought the interviews would focus on how they (the professional) managed working in difficult work settings. They have often spoke about their journey to resilience which has often meant they have gone through a difficult journey with a patient, a loved one etc. Although I knew resilience was 'overcoming adversity' perhaps I had not fully thought about this when thinking specifically about a health professional and what that they may look like. Some participants discuss quite emotional stories about patient bereavements in detail that I have found upsetting and how this has influenced them. The language they use is every day to a medical professional but is quite different to my own. For example "cutting the child's head open and being covered with blood", "I was meant to carry her to the morgue but I couldn't, her family think I did". Another participant spoke about a bereaved patient with my name. I thought about her after the interview and reflected on my own life as this patient's had been taken away from her – could we be the same age now? Could that have been me? These were fleeting thoughts reflecting on the sadness of the very fact mortality is a daily issue for these professionals. This is often not the case for clinical psychologists. We often support staff in overcoming bereavement and when working in these settings may support families who child passes but we are not frequently faced with mortality – would I be able to do this in paediatric services? I think having a detachment from the patient would enable me to do this, supporting the staff team but not supporting the family and child would enable me to support the staff to support the family.*

December 2016 – *I really enjoyed the interviews. All participants seem to really 'get' resilience – experienced/educated/good awareness perhaps? However this has made for really interesting data... got me thinking about resilience and how we conceptualise... is being resilient as a professional more than an individual construct?*

Chapter Three: Critical Appraisal

Reflecting on the Process of Conducting Resilience Research

Gemma Foat-Smith

Doctorate in Clinical Psychology

Division of Health Research, Lancaster University

Word Count: 4199 excluding title page and references

All correspondence should be sent to:

Gemma Foat-Smith
Doctorate in Clinical Psychology
Furness College
Lancaster University
Lancaster
LA1 4YT
g.foat-smith@lancaster.ac.uk

Aims of the Critical Appraisal

This critical appraisal aims to provide a reflection of the process of conducting research exploring resilience. It will focus on the reflexive process of undertaking the research and consider the conceptualisation of resilience. It will also consider the strengths and limitations of the research. I will begin by summarising the research in order to provide the necessary background information.

Summary of the research

The research I undertook aimed to explore experiences of resilience within paediatric trauma inpatient settings. The research hoped to understand how staff working in this context understand and experience resilience. Participants working in a medical role that directly treated children with physical trauma injuries were included in the research. Seven participants were recruited including six doctors and one nursing professional. Participants were interviewed at their place of work using a semi-structured interview guide and the data analysed using interpretative phenomenological analysis (IPA). The findings highlighted the importance of self-awareness in understanding resilience amongst professionals working in this context.

Background to choosing the thesis topic

I have always been particularly interested in the concept of resilience whilst working as a clinician. The role of trainee clinical psychologist commonly leads you to support individuals who have encountered some level of adversity in their life.. In my work this has varied from hearing harrowing accounts of childhood abuse in adult mental health services, to working alongside a family whose toddler had terminal cancer.

Shortly before commencing the thesis I ended a clinical post that was located within a paediatric hospital. My clinical role involved supporting children and their families who were diagnosed with life-changing/threatening illnesses, or were victim to traumatic incidents. Working in this setting caused me to consider my experiences prior to this placement quite differently, specifically I began to think about resilience in a different way. Working alongside children with physical health challenges I often felt powerless because I was unable to influence the cause of my client's distress i.e. their physical health condition. This sparked my interest in the research topic as I felt it was important for clinical practice to explore and understand the role of resilience for professionals working in these settings. This clinical setting became the recruitment site for the research.

Reflexivity

Reflexivity is defined as conscious self-awareness (Finlay, 2002a). It is commonly used within qualitative research and focuses on the self-awareness of the researcher in considering the dynamics between the researcher and the participants (Finlay, 2002). Reflexivity requires critical self-reflection of the researcher's social background, assumptions, positioning and behaviour, and how this may impact the research process (Finlay & Gough, 2003).

As I had an existing interest in the topic area, and had previously worked clinically in the recruitment site I felt it was important to reflect on how this may influence the collection and interpretation of the data (Finlay, 2002). Prior to conducting the research my understanding of resilience related to the literature available in that it related to overcoming adversity. I cannot recall directly asking a client about their individual experience of resilience and thus completing this research was the first experience of this. The research process enabled me consider resilience as both an individual and community construct. I

consider that individuals have an 'innate' ability to be resilient. This has previously been highlighted within existing literature and was also identified within the current study by participants. The current study explored this further when considering resilience for professionals and highlighted the importance of community resilience for professionals. This was evident by professionals who discussed a need for a greater level of individual resilience when the team do not work cohesively.

Engaging reflexively can be challenging at times but is crucial for the researcher to ascertain if there were any influences that may have impacted data collection or data analysis, potentially impacting the reliability of the research (Clancy, 2014). Given the interpretative nature of IPA, reflexivity is particularly pertinent during the research process (Shaw, 2010). Smith and Osborn (2008) describe the double hermeneutic dialogue involved in IPA as "participants are trying to make sense of their world; the researcher is trying to make sense of the participants trying to make sense of their world" (p. 58). Thus, awareness of the self and other, and the relationship between them is pertinent to the research (Shaw, 2010).

Existing relationship with the topic area

It was important that my role as a clinician and a researcher was separated throughout the research process. Although I had physical distance from my role as a clinician in the recruitment site, I had a pre-existing relationship with and perceptions of resilience in this work setting. In considering this I began engaging in the process of reflexive analysis the moment I developed the research idea (Finlay, 2002a). Using a reflective diary (Ballinger, 2003) I was able to bring my own understandings of resilience to the forefront of my mind and reflect on my personal and professional values and influences. This allowed me to consider my own interests in the research and ensure my own pre-conceptions of resilience in this work setting did not influence the research (Hertz, 1997).

Prior to commencing data collection and in the development stages, I reflected on my existing relationship with paediatric hospitals. As a child, I had been an inpatient in the recruitment site for a brief period which led to a diagnosis of asthma. This was later well controlled and required no further hospital treatment and my memories of being an inpatient were positive. More recently, and prior to beginning the research process, my young cousin was involved in a serious road accident which led to his sad death. One memory that remains around this difficult time was that of the professionals supporting him whilst in paediatric intensive care units (PICU). They were caring, warm, compassionate and freely expressed emotion with my family. Thus, my experiences of professionals in this setting, from a personal standpoint, have been wholly positive. I was able to consider how my previous personal experiences with professionals working in this area may have influenced my perceptions of my participants and how I felt they should engage with their patients. For example, my personal experience of being supported by professionals in this context is that they have shown emotion with patients' families. I was aware however that the professionals I interviewed may not develop similar relationships with their patients, it was important for me to not have this assumption or feel disappointment (from a patient perspective) if this was not the case.

It was also important for me to reflect on my own relationship with resilience. This was to ensure it had no influence on the research process, particularly during data collection and analysis. As a final year clinical psychology trainee, it would be fair to say I have developed resilience. This is in relation to getting onto the course and the inevitable competing demands involved in being a trainee clinical psychologist. However, the present study aimed to explore resilience in relation to a professional role that was considerably

different to a Psychologist's e.g. Psychologists working in these settings do not work shifts and are not ward based, as the professionals included in the present study were.

Reflecting on the different professional roles within a paediatric setting led me to think about how resilience may be somewhat different for ward-based professionals that work shifts than for those that do not. This awareness influenced my decision to include as participants only professionals working directly with children in a medical role were included. This approach meant the research targeted doctors, nurses and health-care assistants.

I felt that my relationship to the topic area was appropriate in that having a clinical role that was somewhat similar to the participants' meant that I had a relative understanding of resilience in this context. However, my role was also different as previously highlighted, which ensured the participant was the 'expert' throughout the process. An awareness of this relationship throughout the research process enabled me to remain sensitive to different aspects of the construct of resilience and remain open to discovering new meanings and discoveries for the individual participants.

My view of resilience as an individual construct corresponds to a social constructionist position. I believe that an individual's values and beliefs are developed through and given meaning by social experiences and influences, thus a social constructionist approach to the research was taken. I believe that learning comes from an array of cultures and sub-cultures, thus it is impossible for a researcher to fully interpret the 'truth'. Social constructionists highlight the co-construction of research that transforms the collection and analysis of the data (Finlay, 2002a). Therefore the researcher, participant and their relationship are active in the development of co-producing the research (Finlay & Gough, 2003). My epistemological position therefore drew me to adopting a qualitative approach and

specifically to the phenomenology of a person's unique experience and thus IPA was chosen for the present study.

Collecting and analysing data

Existing qualitative research exploring resilience amongst paediatric health professionals is scarce. To date, one published study using qualitative measures has explored paediatric nurses' experiences of resilience (Kornhaber & Wilson, 2011). Therefore an absence of richness and exploratory research was identified and a qualitative approach was chosen for the current study. Interviews as a method of data collection enable openness for participants and are recommended for research using IPA (Smith & Osborn, 2003). The research question aimed to explore experiences of an individual phenomenon; it was therefore important for me to be aware of the constructed nature of resilience during the data collection process. I was interested in participants' own understandings of resilience and therefore questions throughout the interview were open-ended. The interviews commenced with an introductory, question ("what does resilience mean to you?") which was used for each participant. I decided to use this question to open up the interview as it immediately created a focus in the concept of resilience without introducing emotive content, prior to developing a rapport with the individual participant. It gave participants flexibility in how they approached this question; some participants chose to define the construct more generally, some discussed resilience in relation to their work context, one participant acknowledged they had never really thought about resilience. This created space early on in the interview for them to explore and reflect openly about their understanding and development of the construct.

Questions following this were also fairly general, for example "how do you think people develop resilience?", which enabled participants to explore the phenomenon in a

direction that was pertinent to them. The interview schedule was primarily used as a framework for the interview and was not heavily relied upon. Prompts were used throughout the interviews to further explore a particular response given by the participant. Prompts were used to elicit further detail and to ensure I did not transmit my own assumptions about resilience during the interview process. This aspect of interviewing was not particularly challenging as I focused on using only prompts which reduced opportunity for my own values influencing the interview process. Summarising participant responses back to them also helped to ensure I had clarity on their intended meanings during the analysis of the data. The flexible interview approach was a particular strength of the study as participants led on to different explorations of the construct that perhaps would not have been elicited with a more structured approach. I was also aware of the research question throughout the interview and the schedule was used as a reference when the interviews veered too far from the research topic.

In phenomenological research, we are interested in how people understand and make sense of their experiences (Chapman & Smith, 2002). However, the 'sense-making' of the participant's experience is constructed in collaboration with the researcher through the interview process. Thus, the researcher's influences and characteristics can shape the development of the findings (Pezalla, Pettigrew, & Miller-Day, 2012) making research a dynamic process (Smith, 1996). With this in mind, a reflective diary was maintained to document thoughts and ideas throughout the interview process. Detailed field notes were made following each individual interview. Through this, I was able to pay particular attention to my beliefs about the interview process and the interpersonal dynamics and reactions with each participant that were crucial in the construction of the findings (Finlay, 2002a).

My professional role undoubtedly shaped my way of relating to the participants. I aimed for this to be conversational in style, developing an interpersonal connection with each participant (Pezalla et al., 2012). I believe this helped to facilitate the creation of a safe and open environment that generated greater depth to the data. Engaging in reflexive practice through the use of reflections following each interview enabled me to consider my relationship with each participant and bring any unconscious thoughts about the interviewee to my awareness. For example I noted after interviewing my first male participant that my interpersonal reflections were different than those of the previous female participants in that I felt I had developed a greater rapport with my female participants. I reflected further on other possible influencing factors and observed that we had a different interpersonal style of communicating which may also explain my reflections. Being aware of this interpersonal dynamic enabled me to pay close attention to this ensuring it did not influence the data analysis. Similarly, although I was aware of the importance of developing rapport, empathy can also be considered to have a detrimental impact on findings as a superficial friendship is formed (Tanggaard, 2007). Rapport could also be used to encourage participants to disclose things about themselves that they might not have anticipated disclosing at the point of giving their consent. With this in mind I ensured I always arrived earlier to the interview than the participant to ensure no relationship forming occurred with any participant when locating the interview room. My supervisor listened to a full audio of an early interview conducted and reflected that my interviewing style was appropriate for IPA analysis, engaging with the participant but not leading the content. Thus I continued with this interviewing approach throughout all interviews.

I felt that there were both advantages and disadvantages to having a different professional background to that of the participants. An advantage was that as I had worked in

a similar environment we had a shared knowledge of terminology that was being discussed. However, I was aware of not making assumptions about the language used by participants. Therefore, I would frequently ask the participant to elaborate and explain what they meant. Reflexivity is important for attending to power imbalances between the researcher and participant (Finlay, 2002). I was particularly aware of the potential for power to impact on the research process in different ways. Power dynamics were complex in the interviews as all the participants were unfamiliar to me and qualified, experienced practitioners and mostly medical doctors who I assumed to have higher status and therefore more powerful than me in both a personal and professional manner. In considering this, all interviews I conducted were held in a therapy room I had regularly used whilst working at the hospital. This familiarity helped me manage initial anxieties I had prior to contacting the participants. However as we had engaged in some email exchange in organising the interview. I felt I had developed initial rapport which reduced any anxieties prior to meeting the participant. I also reflected about the challenges of conducting research in this context in wanting the interviews to be conveniently located and timed for the participants which meant all participants were 'on shift' at the time of interviews. I was therefore aware of taking the participants away from their important work environments in which they are regularly responsible for life-and-death care. Although I did not explicitly discuss this with participants I ensured all interviews took place near to their working environment and the interview room had an accessible hospital phone should they need to be contacted.

I was also aware of a power imbalance in the other direction, through being the researcher within the interview. An example of this was with 'Katie' (pseudonym) who, when discussing the importance of being aware of other people's experiences and the challenges related to this said: "I'm sure you have learnt more about that than I have". My

response was to re-direct the interview and not draw attention to my knowledge of a particular area. This was partly to keep the focus on the interview but also to manage the balance of power between us by not wanting to appear superior, or more knowledgeable than my participant. However, on reflection I wondered whether perhaps I should have acknowledged and explored why her perceived limited knowledge about that topic was important for her.

Throughout data collection I was aware of my dual role as a clinician and a researcher. Engaging in reflexive practice enabled me to consider the challenge involved for scientist-practitioners in moving between working directly with clients and conducting research (Yanos & Ziedonis, 2006). I listened back to interview audios and reflected on my responses throughout the interviews. I aimed to ensure my open-ended questions were free from any assumptions (Pietkiewicz & Smith, 2014) and ensure I remained as a researcher throughout the interview process. I also found it challenging not to use the skills developed within my role as a clinician. One example of this was when a participant described a coping strategy she engaged in outside of work and began to feel slightly embarrassed after sharing. Although I was aware of my role as a researcher in the interview it felt important for me to reflect how important this strategy must be for her and how it appeared to signify containment when for her that was absent in her work environment. This was at the end of the interview and I felt it did not influence her remaining responses in any way but felt important to offer reassurance to the participant. I also felt that this was, in a small way, giving her something back for participating in the research by validating her coping strategy. Lastly, at the end of the interview I offered the opportunity for each participant to discuss any aspect in further detail and asked if there was anything they felt relevant to the interview that had not been discussed.

During the analysis one supervisor was involved in listening to audios and supported the final analysis. Having support from somebody external to the process ensured the analysis was not influenced by researcher bias (Carradice, Shankland & Beail 2002). I also examined the final themes against the transcripts to ensure the analysis was a true reflection of the original data and the authenticity of the professionals' experiences was retained. The analysis process was completed over several weeks which enabled me to keep a reflective diary on the process of the analysis. It also enabled me to return to the analysis after a short period to re-examine the development of the analysis. It is important to reflect that my individual position will have influenced the analysis of the data to some extent. A researcher of a different profession, culture, gender or age may have interpreted the data differently or captured in a different manner than the way they are presented here. My relationship with the topic area grew as my knowledge of the topic did, critically examining my responses and the dynamics throughout the research process encouraged me to remain sensitive to the data.

Post-research reflections on the topic area

The research process highlighted the importance of self-awareness to me. Interestingly, this was identified as a significant aspect of resilience for the participants in the present study, and was also significant in my role as a researcher. I began the research process with beliefs and ideas about what I might find and what the research process would be like. Engaging in reflexive practices from the first moment I developed the research idea enabled me to recognise and separate my own assumptions and beliefs about resilience to prevent them affecting the integrity of the research. In the development stages of the research I chose what I believed to be a 'positive' research topic. However, I came to see my initial assumptions about the research area as naive, and completing the research has enabled me to develop a more sophisticated understanding of the topic area. I have learnt that resilience

involves an individual having internal and external strategies to overcome challenges. I have learnt that to be 'resilient' we must firstly be self-aware. This enables us to have an awareness of our limitations to prevent burnout, it enables us to understand what strategies support us during times of difficulty and creates a general awareness of the importance of protecting our own well-being.

The current study adopted a definition of resilience that was developed by a psychologist (Windle, 2011) based on its usage in a range of disciplines. This definition was appropriate for the current study, however it is worth considering that using a different definition of resilience might have influenced the participants' understanding of the construct. Thus the results of the research are likely to have been influenced by the way in which resilience was conceptualised from the outset.

I also reflected on how resilience is conceptualised and spoken about within different domains. Resilience is often described as 'overcoming adversity' however for the professionals in the current study, and other emotive work settings, the particular types of 'adversity' they have to overcome will probably occur repeatedly. Therefore the individual will experience other similar challenges and so resilience is affected in the individual's ongoing emotional and behavioural responses to these situations. In considering this, resilience in these contexts perhaps could be more accurately described as 'repeatedly facing' as opposed to 'overcoming' adversity. Professionals described an inability to not be emotionally impacted by a tragic outcome thus they are unable to 'overcome' this. Rather, individuals described an ability to continue working with children with trauma related injuries in such a way that they are able to temporarily close off their emotions and engage in behaviours that protect their well-being. Therefore, reconceptualising resilience as an ability to 'repeatedly face challenge with limited impact on emotional or physical well-being' may be

more suitable for professionals that work in settings that support both children and adults with physical and emotional trauma difficulties. The conceptualised construct of resilience warrants further research to further explore and apply it in different settings.

Considering resilience in this way has implications for my clinical practice. When working alongside professionals and when supporting clients with an array of difficulties I am more aware on the individuality of their ability to overcome a single, or repeated challenge than perhaps I was before beginning the research process. I will also consider the importance of repeatedly facing challenges within my clinical work and when working alongside other professionals. I am more self-aware of my physical and psychological limitations as a result of the research which has also given me a greater confidence to seek support if I consider a task or situation is too challenging or has the potential to negatively impact my well-being. As a Trainee Clinical Psychologist I have always been aware of the importance of this however undertaking this research has made this more explicit and put it to the forefront of my mind, a skill which I think will encourage longevity within my career as a clinical psychologist.

Exploring stress and coping amongst paediatric health professionals was identified as a suitable literature review for the research. This resulted in reading hundreds of articles related to paediatric death. I found this particular aspect of the research journey difficult particularly reading extensively about neo-natal deaths. I engaged in regular supervision at this time and reflected on the emotive topic. I also reflected on my ability as a clinician and researcher to recognise my professional and personal limitations (HCPC, 2015). Reflecting on our professional limitation also relates to the current research study that highlighted that resilience is related to developing the awareness of what you can and cannot do within your role. Reflecting on this particular challenge became one of the reasons to use neo-natal babies

as exclusion criteria in the literature review. This was alongside a justification that the review focused on professionals' stress and coping when caring for children thus it felt appropriate to use unborn children as an exclusion criterion for the review.

Conclusion

I began the research process with an existing understanding as to what 'being resilient' meant in a personal and professional context. Conducting the research has enabled me to think about resilience as both an individual and group construct and consider the different individual factors that can influence this that relate to both awareness and limitations. The research was conducted within a paediatric health setting however I have developed a greater understanding of individual resilience for professionals that can be applied to professionals working in both physical and mental health settings. The research process has also highlighted the importance of separating our own beliefs and the importance of reflecting upon these throughout the research process, particularly when working in a dual researcher/clinician role.

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Chapter Four: Ethics Application

Ethics Application and Appendices

Gemma Foat-Smith

Doctorate in Clinical Psychology

Division of Health Research, Lancaster University

All correspondence should be sent to:

Gemma Foat-Smith
Doctorate in Clinical Psychology
Furness College
Lancaster University
Lancaster
LA1 4YT
g.foat-smith@lancaster.ac.uk

Welcome to the Integrated Research Application System

IRAS Project Filter

The integrated dataset required for your project will be created from the answers you give to the following questions. The system will generate only those questions and sections which (a) apply to your study type and (b) are required by the bodies reviewing your study. Please ensure you answer all the questions before proceeding with your applications.

Please complete the questions in order. If you change the response to a question, please select 'Save' and review all the questions as your change may have affected subsequent questions.

Please enter a short title for this project (maximum 70 characters)

Staff experiences in paediatric trauma services

1. Is your project research?

Yes No

2. Select one category from the list below:

- Clinical trial of an investigational medicinal product
- Clinical investigation or other study of a medical device
- Combined trial of an investigational medicinal product and an investigational medical device
- Other clinical trial to study a novel intervention or randomised clinical trial to compare interventions in clinical practice
- Basic science study involving procedures with human participants
- Study administering questionnaires/interviews for quantitative analysis, or using mixed quantitative/qualitative methodology
- Study involving qualitative methods only
- Study limited to working with human tissue samples (or other human biological samples) and data (specific project only)
- Study limited to working with data (specific project only)
- Research tissue bank
- Research database

If your work does not fit any of these categories, select the option below:

Other study

2a. Please answer the following question(s):

- a) Does the study involve the use of any ionising radiation? Yes No
- b) Will you be taking new human tissue samples (or other human biological samples)? Yes No
- c) Will you be using existing human tissue samples (or other human biological samples)? Yes No

3. In which countries of the UK will the research sites be located? (Tick all that apply)

- England
- Scotland

- Wales
 Northern Ireland

3a. In which country of the UK will the lead NHS R&D office be located:

- England
 Scotland
 Wales
 Northern Ireland
 This study does not involve the NHS

4. Which applications do you require?

IMPORTANT: If your project is taking place in the NHS and is led from England select 'IRAS Form'. If your project is led from Northern Ireland, Scotland or Wales select 'NHS/HSC Research and Development Offices' and/or relevant Research Ethics Committee applications, as appropriate.

- IRAS Form
 Confidentiality Advisory Group (CAG)
 National Offender Management Service (NOMS) (Prisons & Probation)

For NHS/HSC R&D Offices in Northern Ireland, Scotland and Wales the CI must create NHS/HSC Site Specific Information forms, for each site, in addition to the study wide forms, and transfer them to the PIs or local collaborators.

For participating NHS organisations in England different arrangements apply for the provision of site specific information. Refer to IRAS Help for more information.

Most research projects require review by a REC within the UK Health Departments' Research Ethics Service. Is your study exempt from REC review?

- Yes No

4b. Please confirm the reason(s) why the project does not require review by a REC within the UK Health Departments Research Ethics Service:

- Projects limited to the use of samples/data samples provided by a Research Tissue Bank (RTB) with generic ethical approval from a REC, in accordance with the conditions of approval.
 Projects limited to the use of data provided by a Research Database with generic ethical approval from a REC, in accordance with the conditions of approval.
 Research limited to use of previously collected, non-identifiable information
 Research limited to use of previously collected, non-identifiable tissue samples within terms of donor consent
 Research limited to use of acellular material
 Research limited to use of the premises or facilities of care organisations (no involvement of patients/service users as participants)
 Research limited to involvement of staff as participants (no involvement of patients/service users as participants)

5. Will any research sites in this study be NHS organisations?

- Yes No

5a. Are all the research costs and infrastructure costs (funding for the support and facilities needed to carry out research e.g. NHS Support costs) for this study provided by a NIHR Biomedical Research Centre, NIHR Biomedical Research Unit, NIHR Collaboration for Leadership in Health Research and Care (CLAHRC), NIHR Patient Safety Translational Research Centre or a Diagnostic Evidence Co-operative in all study sites?

Please see information button for further details.

Yes No

Please see information button for further details.

5b. Do you wish to make an application for the study to be considered for NIHR Clinical Research Network (CRN) Support and inclusion in the NIHR Clinical Research Network Portfolio?

Please see information button for further details.

Yes No

The NIHR Clinical Research Network provides researchers with the practical support they need to make clinical studies happen in the NHS e.g. by providing access to the people and facilities needed to carry out research "on the ground".

If you select yes to this question, you must complete a NIHR Clinical Research Network (CRN) Portfolio Application Form (PAF) immediately after completing this project filter question and before submitting other applications. Failing to complete the PAF ahead of other applications e.g. HRA Approval, may mean that you will be unable to access NIHR CRN Support for your study.

6. Do you plan to include any participants who are children?

Yes No

7. Do you plan at any stage of the project to undertake intrusive research involving adults lacking capacity to consent for themselves?

Yes No

Answer Yes if you plan to recruit living participants aged 16 or over who lack capacity, or to retain them in the study following loss of capacity. Intrusive research means any research with the living requiring consent in law. This includes use of identifiable tissue samples or personal information, except where application is being made to the Confidentiality Advisory Group to set aside the common law duty of confidentiality in England and Wales. Please consult the guidance notes for further information on the legal frameworks for research involving adults lacking capacity in the UK.

8. Do you plan to include any participants who are prisoners or young offenders in the custody of HM Prison Service or who are offenders supervised by the probation service in England or Wales?

Yes No

9. Is the study or any part of it being undertaken as an educational project?

Yes No

Please describe briefly the involvement of the student(s):
To be completed as a thesis for doctorate in clinical psychology.

9a. Is the project being undertaken in part fulfilment of a PhD or other doctorate?

Yes No

10. Will this research be financially supported by the United States Department of Health and Human Services or any of its divisions, agencies or programs?

Yes No

11. Will identifiable patient data be accessed outside the care team without prior consent at any stage of the project (including identification of potential participants)?

Yes No

DRAFT

Integrated Research Application System
Application Form for Research involving qualitative methods only

IRAS Form (project information)

Please refer to the *E-Submission* and *Checklist* tabs for instructions on submitting this application.

The Chief Investigator should complete this form. Guidance on the questions is available wherever you see this symbol displayed. We recommend reading the guidance first. The complete guidance and a glossary are available by selecting [Help](#).

Please define any terms or acronyms that might not be familiar to lay reviewers of the application.

Short title and version number: (maximum 70 characters - this will be inserted as header on all forms)
 Staff experiences in paediatric trauma services

Please complete these details after you have booked the REC application for review.

REC Name:
 No REC Study

REC Reference Number:
 [REDACTED]

Submission date:
 07/09/2016

PART A: Core study information
1. ADMINISTRATIVE DETAILS
A1. Full title of the research:

Staff experiences in paediatric trauma services: Exploring perceptions of resilience when dealing with distress

A2-1. Educational projects

Name and contact details of student(s):

Student 1

	Title Forename/Initials Surname
	Miss Gemma Foat-Smith
Address	Administration Office Furness College Lancaster University, Lancaster
Post Code	LA1 4YG
E-mail	g.foat-smith@lancaster.ac.uk
Telephone	07557260854
Fax	

Give details of the educational course or degree for which this research is being undertaken:

Name and level of course/ degree:
 Doctorate in Clinical Psychology

Name of educational establishment:
Lancaster University

Name and contact details of academic supervisor(s):

Academic supervisor 1

	Title	Forename/Initials	Surname
	Dr	Suzanne	Hodge
Address	Room C21 Furness College Lancaster University, Lancaster		
Post Code	LA1 4YG		
E-mail	s.hodge@lancaster.ac.uk		
Telephone	01524 592712		
Fax			

Please state which academic supervisor(s) has responsibility for which student(s):
Please click "Save now" before completing this table. This will ensure that all of the student and academic supervisor details are shown correctly.

Student(s)	Academic supervisor(s)
------------	------------------------

Student 1 Miss Gemma Foat-Smith	<input checked="" type="checkbox"/> Dr Suzanne Hodge
--	--

A copy of a current CV for the student and the academic supervisor (maximum 2 pages of A4) must be submitted with the application.

A2-2. Who will act as Chief Investigator for this study?

- Student
 Academic supervisor
 Other

A3-1. Chief Investigator:

	Title	Forename/Initials	Surname
	Miss	Gemma	Foat-Smith
Post	Trainee Clinical Psychologist		
Qualifications	Clinical Psychologist in training		
ORCID ID			
Employer	Lancashire Care NHS Foundation Trust		
Work Address	Administration Office Furness College Lancaster University, Lancaster		
Post Code	LA1 4YG		
Work E-mail	g.foat-smith@lancaster.ac.uk		
* Personal E-mail	gemmafoatsmith@gmail.com		
Work Telephone	07557260854		

* Personal Telephone/Mobile 07557260854

Fax

** This information is optional. It will not be placed in the public domain or disclosed to any other third party without prior consent.*

A copy of a current CV (maximum 2 pages of A4) for the Chief Investigator must be submitted with the application.

A4. Who is the contact on behalf of the sponsor for all correspondence relating to applications for this project?

This contact will receive copies of all correspondence from REC and HRA/R&D reviewers that is sent to the CI.

	Title	Forename/Initials	Surname
	Miss	Debbie	Knight
Address	B58 Bowland Main		
	Lancaster University		
	Lancaster		
Post Code	LA1 4YT		
E-mail	ethics@lancaster.ac.uk		
Telephone	01524592605		
Fax			

A5-1. Research reference numbers. Please give any relevant references for your study:

Applicant's/organisation's own reference number, e.g. R & D (if available):

Sponsor's/protocol number:

Protocol Version:

Protocol Date:

Funder's reference number:

Project website:

Additional reference number(s):

Ref.Number	Description	Reference Number
------------	-------------	------------------

Registration of research studies is encouraged wherever possible. You may be able to register your study through your NHS organisation or a register run by a medical research charity, or publish your protocol through an open access publisher. If you have registered your study please give details in the "Additional reference number(s)" section.

A5-2. Is this application linked to a previous study or another current application?

Yes No

Please give brief details and reference numbers.

2. OVERVIEW OF THE RESEARCH

To provide all the information required by review bodies and research information systems, we ask a number of specific questions. This section invites you to give an overview using language comprehensible to lay reviewers and members of the public. Please read the guidance notes for advice on this section.

A6-1. Summary of the study. Please provide a brief summary of the research (maximum 300 words) using language easily understood by lay reviewers and members of the public. Where the research is reviewed by a REC within the UK Health Departments' Research Ethics Service, this summary will be published on the Health Research Authority (HRA) website following the ethical review. Please refer to the question specific guidance for this question.

The study aims to explore perceptions of resilience of staff working in paediatric trauma services. Using semi-structured interviews the study aims to explore staff's understanding and experiences of resilience.

The study will conduct the research within paediatric services that treat patients with physical trauma as per Trauma Audit and Research Network (TARN) inclusion criteria such as burns, fractures and brain injuries.

In the first instance the study will be conducted at [REDACTED]. Staff that work directly with clients who have received a physical trauma and who work in a medical role are eligible to take part in the study.

The study will last until May 2017. The study aims to recruit between 6-10 participants. It is anticipated that each participant will engage in one semi-structured interview.

A6-2. Summary of main issues. Please summarise the main ethical, legal or management issues that have arisen from your study and say how you have addressed them.

Not all studies raise significant issues. Some studies may have minor issues which can be identified and managed routinely. Others may present significant issues requiring attention by a research ethics committee or other review body (as appropriate to the issue). Studies that present a minor issue should also consider any other organisational or legal issues. You should try to consider all types of issues that may need to be considered.

Purpose and Design

The study is an explanatory study that will explore perceptions of resilience and the experiences of staff working in paediatric trauma services. The study will adopt a qualitative method and data will be collected through the use of semi-structured interviews. The data will be analysed using Interpretive Phenomenological Analysis (IPA). IPA focuses on the personal meaning participants give to their experiences and therefore this approach fits well with the research question of the study.

In keeping with a service that involves a commitment to care, the trauma service is involved in the development of the study. The ethical approval the trauma service has aided the researcher in the development of the study and the researcher will meet.

Recruitment and inclusion/exclusion criteria

Participants will be recruited from paediatric trauma services who consent to take part in the research. In the first instance recruitment will be from the paediatric trauma services at the Royal Children's Hospital. Participants that meet the inclusion criteria and do not wish to take part will be informed of this. The study aims to interview 6-10 participants. Participants will be recruited from services that treat patients with physical trauma as per Trauma Audit and Research Network (TARN) inclusion criteria such as burns, fractures and brain injuries. Participants will be professionals working in a medical role (such as doctors, nurses and health care assistants) in the ward environments that work directly with clients with physical trauma. Participants that do not work in trauma services or do not work directly with trauma cases will not be included in this research.

Consent

Participants will be provided with a written information sheet. Prior to completing the interview the lead researcher will read through this and answer any questions the participant may have. If the participant wishes to continue with the interview the lead researcher will read through the consent form and ask the participant to sign to illustrate they consent to take part.

Risks, Burdens and Benefits

During completion of the interview there is a possibility that participants may discuss personal experiences of distress and difficult topics. The principal researcher's main role whilst conducting the interviews is as a researcher, not a clinician. It will therefore be highlighted in the participant information sheet that if difficulties arise for staff they would be strongly advised to seek support from their GP or staff support services. If difficult topics do arise during the interview however the researcher will further explore this to support the individual and ensure the participant is safe. Participants will also be offered an additional debrief should they consent or require this. The additional debrief would be for those participants who disclose experiencing emotional distress during the interview, or for those participants

the researcher feels may benefit from this. The additional verbal debrief would aim to be provided whilst staff await support from other staff support groups or services and would be facilitated by a clinical psychologist.

All participants will be provided with a debriefing sheet at the end of the interview that will provide details of the staff support groups available within the trust such as Occupational Health Services and [REDACTED] provides counselling for all staff related to difficulties both in and outside of work. The debriefing sheet will also provide details of support services available outside NHS i.e. mind, Anxiety UK, Cruse Bereavement Care, C.A.L.L Mental Health Helpline and Samaritans.

There is not direct benefit for participants being involved in this research. It is anticipated that participation in the research could be a positive and empowering experience for participants.

Confidentiality

The research will adhere to the Caldicott Principles as well the information/data policy and procedures of Alder Hey NHS Trust.

For all participants who agree to participate, the researcher will ensure that the information they provide is anonymised and securely stored in accordance with legislation and in following NHS policies and procedures.

Conflict of Interest

There is no anticipated conflict of interest for the researcher of the study.

What will happen at the end of the study?

Participants who agree to take part will be asked if they would like a summary of the findings. This will be delivered to participants by August 2017.

3. PURPOSE AND DESIGN OF THE RESEARCH

A7. Select the appropriate methodology description for this research. Please tick all that apply:

- Case series/ case note review
- Case control
- Cohort observation
- Controlled trial without randomisation
- Cross-sectional study
- Database analysis
- Epidemiology
- Feasibility/ pilot study
- Laboratory study
- Metanalysis
- Qualitative research
- Questionnaire, interview or observation study
- Randomised controlled trial
- Other (please specify)

A10. What is the principal research question/objective? Please put this in language comprehensible to a lay person.

The main aim of this study is to develop an understanding of resilience amongst staff working in paediatric trauma services. The principal research question is: How do staff working in paediatric trauma services understand and experience resilience?

A11. What are the secondary research questions/objectives if applicable? Please put this in language comprehensible to a lay person.

N/A

A12. What is the scientific justification for the research? Please put this in language comprehensible to a lay person.

Previous research has highlighted an array of psychological difficulties that staff experience working in paediatric trauma services. Research has also highlighted that levels of resilience can influence the amount of distress experienced by the individual. Despite this, there is an absence amongst the literature exploring resilience of staff working in trauma services.

A13. Please summarise your design and methodology. It should be clear exactly what will happen to the research participant, how many times and in what order. Please complete this section in language comprehensible to the lay person. Do not simply reproduce or refer to the protocol. Further guidance is available in the guidance notes.

The research aims to explore the concept of resilience and explore the experiences of staff working within this area. With this in mind, a qualitative methodology will be employed, employing semi-structured interviews to collect data from between 6-10 participants.

The lead researcher will prepare an email including an information pack inviting participants to take part in the research. This will be sent to the relevant staff groups by the field supervisor. The email will request that if the participant is interested in the study to contact the lead researcher either a University email address or a telephone issued by Lancaster DClinPsy admin team. When contact is made the lead researcher will ensure the inclusion criteria have been met and can answer any questions the participant may have.

If the individual decides to take part in the research, a mutually convenient time will be arranged for the researcher and participant to meet. Interviews will take place on site at [REDACTED] within a space away from their ward area. It is anticipated interviews will be conducted throughout October 2016. Each participant will be requested to meet with the researcher on one occasion, this will last approximately one hour.

Following this, it is hoped that data analysis will be conducted throughout November 2016. The report will initially be draft written, with two supervisors providing feedback which will ensure consistency of themes and eliminate researcher bias. A final report to be completed by May 2017.

A14-1. In which aspects of the research process have you actively involved, or will you involve, patients, service users, and/or their carers, or members of the public?

- Design of the research
- Management of the research
- Undertaking the research
- Analysis of results
- Dissemination of findings
- None of the above

Give details of involvement, or if none please justify the absence of involvement.

Currently at [REDACTED] there is a trauma co-ordinator who is responsible for chairing and attending all meetings and co-ordinating the trauma pathway. Prior to submitting ethical approval, the researcher liaised with the trauma co-ordinator for a consultation focusing on the interview schedule and participant information sheet. Both documents were updated following feedback and comments.

4. RISKS AND ETHICAL ISSUES

RESEARCH PARTICIPANTS

A15. What is the sample group or cohort to be studied in this research?

Select all that apply:

- Blood
- Cancer
- Cardiovascular
- Congenital Disorders
- Dementias and Neurodegenerative Diseases
- Diabetes
- Ear
- Eye
- Generic Health Relevance
- Infection
- Inflammatory and Immune System
- Injuries and Accidents
- Mental Health
- Metabolic and Endocrine
- Musculoskeletal
- Neurological
- Oral and Gastrointestinal
- Paediatrics
- Renal and Urogenital
- Reproductive Health and Childbirth
- Respiratory
- Skin
- Stroke

Gender: Male and female participants

Lower age limit: 18 Years

Upper age limit: No upper age limit

A17-1. Please list the principal inclusion criteria (list the most important, max 5000 characters).

Participants will be deemed suitable for inclusion in the study if they meet the following criteria: they work in services that treat patients with physical trauma as per Trauma Audit and Research Network (TARN) inclusion criteria such as burns, fractures and brain injuries. They are professionals working in a medical role such as consultants, doctors, nurses and health care assistants working in the ward environment. They work directly with children and young people.

A17-2. Please list the principal exclusion criteria (list the most important, max 5000 characters).

Participants will not be suitable for the research if they do not work within trauma services and/or they do not work directly with trauma cases.

RESEARCH PROCEDURES, RISKS AND BENEFITS

A18. Give details of all non-clinical intervention(s) or procedure(s) that will be received by participants as part of the research protocol. These include seeking consent, interviews, non-clinical observations and use of questionnaires.

Please complete the columns for each intervention/procedure as follows:

1. Total number of interventions/procedures to be received by each participant as part of the research protocol.
2. If this intervention/procedure would be routinely given to participants as part of their care outside the research, how many of the total would be routine?
3. Average time taken per intervention/procedure (minutes, hours or days)
4. Details of who will conduct the intervention/procedure, and where it will take place.

Intervention or procedure	1	2	3	4
Email to participants inviting them to take part in the study	1		5 minutes	Participants ████████████████████ ████████████████████
A further conversation with potential participants to read through the information sheets.	1		30 minutes	Gemma Foat-Smith ████████████████████ ████████████████████ ████████████████████
Obtaining informed consent	1		5 minutes	Gemma Foat-Smith ████████████████████ ████████████████████ ████████████████████
A 1:1 interview with the researcher. This will include spending time ensuring the participant understands the information sheet and answering any questions	1		1 hour	Gemma Foat-Smith ████████████████████ ████████████████████ ████████████████████
Debrief	1		10 minutes	Gemma Foat-Smith ████████████████████ ████████████████████ ████████████████████

A21. How long do you expect each participant to be in the study in total?

After gaining informed consent, the participant will be required to be in the study for one hour.

A22. What are the potential risks and burdens for research participants and how will you minimise them?

For all studies, describe any potential adverse effects, pain, discomfort, distress, intrusion, inconvenience or changes to lifestyle. Only describe risks or burdens that could occur as a result of participation in the research. Say what steps would be taken to minimise risks and burdens as far as possible.

Although this study aims to explore participants' resilience when working in a difficult work environment, it could be hypothesised that some participants may find it difficult discussing their work environment. This potential risk is highlighted in the Participant Information Sheet and it will be discussed with participants prior to obtaining informed consent. The researcher will make every effort to support the participant during the interview. In addition to this, a one-off debrief will be made available for participant and details of different support groups will be highlighted in the debrief.

A23. Will interviews/ questionnaires or group discussions include topics that might be sensitive, embarrassing or upsetting, or is it possible that criminal or other disclosures requiring action could occur during the study?

Yes No

If Yes, please give details of procedures in place to deal with these issues:

Due to the nature of the participants' work environment, there is a possibility that interview discussions will be sensitive/upsetting. Each participants can access a one-to-one debrief with a clinical psychologist following the interview if they wish. Participants will also be provided with details NHS staff support and counselling services and alternative support groups available to them.

A24. What is the potential for benefit to research participants?

There is no direct benefit for participants from being involved in this research. It is anticipated that participation in the research could be a positive and empowering experience for participants.

A26. What are the potential risks for the researchers themselves? (if any)

There are no potential risks identified for the lead researcher.

RECRUITMENT AND INFORMED CONSENT

In this section we ask you to describe the recruitment procedures for the study. Please give separate details for different study groups where appropriate.

A27-1. How will potential participants, records or samples be identified? Who will carry this out and what resources will be used? For example, identification may involve a disease register, computerised search of GP records, or review of medical records. Indicate whether this will be done by the direct healthcare team or by researchers acting under arrangements with the responsible care organisation(s).

The clinical psychologist who is the field supervisor to this research has access to all staff groups within [REDACTED] and therefore will identify the staff groups that meet the inclusion criteria.

A27-2. Will the identification of potential participants involve reviewing or screening the identifiable personal information of patients, service users or any other person?

Yes No

Please give details below:

A28. Will any participants be recruited by publicity through posters, leaflets, adverts or websites?

Yes No

If Yes, please give details of how and where publicity will be conducted, and enclose copy of all advertising material (with version numbers and dates).

Posters advertising the study will be displayed within staff rooms of the areas where participants are based that meet the inclusion criteria.

A29. How and by whom will potential participants first be approached?

Potential participants will be contacted via a work email that is written by the lead researcher and emailed from the field supervisor's email account. Posters will also be available in staff rest rooms in the areas where staff work that meet the inclusion criteria. Posters will detail the study and include details of the lead researcher.

A30-1. Will you obtain informed consent from or on behalf of research participants?

Yes No

If you will be obtaining consent from adult participants, please give details of who will take consent and how it will be done, with details of any steps to provide information (a written information sheet, videos, or interactive material). Arrangements for adults unable to consent for themselves should be described separately in Part B Section 6, and for children in Part B Section 7.

If you plan to seek informed consent from vulnerable groups, say how you will ensure that consent is voluntary and fully informed.

Participants will be provided with a written information sheet. Prior to completing the interview the lead researcher will read through this and answer any questions the participant may have. If the participant wishes to continue with the interview the lead researcher will read through the consent form and ask the participant to sign to demonstrate they consent to take part.

If you are not obtaining consent, please explain why not.

Please enclose a copy of the information sheet(s) and consent form(s).

A30-2. Will you record informed consent (or advice from consultees) in writing?

Yes No

A31. How long will you allow potential participants to decide whether or not to take part?

Potential participants will be given up to two weeks after being provided with information.

A33-1. What arrangements have been made for persons who might not adequately understand verbal explanations or written information given in English, or who have special communication needs? (e.g. translation, use of interpreters)

If potential participants experience communication difficulties that impede their ability to fully understand during the consenting process the researcher will spend additional time with this individual using alternative explanations.

Participants recruited for this study will be NHS employees and thus it is anticipated that all participants will be able to understand written information in English.

A35. What steps would you take if a participant, who has given informed consent, loses capacity to consent during the study? Tick one option only.

- The participant and all identifiable data or tissue collected would be withdrawn from the study. Data or tissue which is not identifiable to the research team may be retained.
- The participant would be withdrawn from the study. Identifiable data or tissue already collected with consent would be retained and used in the study. No further data or tissue would be collected or any other research procedures carried out on or in relation to the participant.
- The participant would continue to be included in the study.
- Not applicable – informed consent will not be sought from any participants in this research.
- Not applicable – it is not practicable for the research team to monitor capacity and continued capacity will be assumed.

Further details:

CONFIDENTIALITY

In this section, personal data means any data relating to a participant who could potentially be identified. It includes pseudonymised data capable of being linked to a participant through a unique code number.

Storage and use of personal data during the study

A36. Will you be undertaking any of the following activities at any stage (including in the identification of potential participants)? (Tick as appropriate)

- Access to medical records by those outside the direct healthcare team
- Access to social care records by those outside the direct social care team
- Electronic transfer by magnetic or optical media, email or computer networks
- Sharing of personal data with other organisations
- Export of personal data outside the EEA
- Use of personal addresses, postcodes, faxes, emails or telephone numbers
- Publication of direct quotations from respondents
- Publication of data that might allow identification of individuals
- Use of audio/visual recording devices
- Storage of personal data on any of the following:
 - Manual files (includes paper or film)
 - NHS computers
 - Social Care Service computers
 - Home or other personal computers
 - University computers
 - Private company computers
 - Laptop computers

Further details:

Recording devices will be used to record the interview to allow the researcher to transcribe. Qualitative output will have anonymised quotations from participants.

Throughout the study consent forms will be kept in a locked cupboard. After the study is completed consent forms will be scanned and stored on a secure file space on the University server. Hard copies will then be destroyed.

All other data will be stored on a secure personal file space on the University server. Following completion of the study the data will be securely stored by the DClinPsy admin team.

A37. Please describe the physical security arrangements for storage of personal data during the study?

All interviews will be recorded on a Dictaphone that is property of Lancaster University. Following the interview the audio recordings will be saved onto a secure space on the University's server. All audio recordings will then be transcribed verbatim and deleted, any identifying information that may arise in the interview will be deleted and/or anonymised. The principal researcher will be responsible for all data; all paper copies will be kept in a locked cabinet at the researcher's home and all electronic data will be saved onto a secure space on the University server prior to being deleted following transcription. Following completion of the study all paper copies of consent forms will be scanned and securely transferred, along with electronic files of the interview transcripts and other data, to the DClinPsy research co-ordinator via University supported electronic file transfer software. The original consent forms will then be destroyed as confidential waste. The electronic files will be retained by the DClinPsy research co-ordinator for 10 years. After this time all information will be destroyed.

A38. How will you ensure the confidentiality of personal data? Please provide a general statement of the policy and procedures for ensuring confidentiality, e.g. anonymisation or pseudonymisation of data.

As stated above, all data will be anonymised and securely stored. The researcher will adhere to Lancaster University and the National Health Service policies and procedures, all of which adhere to national guidelines and the requirement of the Data Protection Act.

A40. Who will have access to participants' personal data during the study? Where access is by individuals outside the direct care team, please justify and say whether consent will be sought.

The chief investigator (Gemma Foat-Smith) will be the only individual to have access to data containing participants' personal information. The academic supervisor to the study (Suzanne Hodge) will have access to one or more interview recordings and to anonymised data, in order to provide supervisory support during data collection and analysis.

Storage and use of data after the end of the study

A41. Where will the data generated by the study be analysed and by whom?

Data will be analysed primarily by Gemma Foat-Smith, with additional support by Suzanne Hodge. The analysis will take place at the lead researcher's home.

A42. Who will have control of and act as the custodian for the data generated by the study?

	Title	Forename/Initials	Surname
	Professor	Bill	Sellwod
Post	Programme Director, Doctorate in Clinical Psychology, Lancaster University		
Qualifications	PhD		
Work Address	Division of Health Research Furness College, Lancaster University Lancaster		
Post Code	LA1 4YG		
Work Email	b.sellwood@lancaster.ac.uk		
Work Telephone	01524 593998		
Fax			

A43. How long will personal data be stored or accessed after the study has ended?

- Less than 3 months
 3 – 6 months
 6 – 12 months
 12 months – 3 years
 Over 3 years

A44. For how long will you store research data generated by the study?

Years: 10
 Months: 0

A45. Please give details of the long term arrangements for storage of research data after the study has ended. Say where data will be stored, who will have access and the arrangements to ensure security.

Following completion of the study all paper copies of consent forms will be scanned and securely transferred, along with electronic files of the interview transcripts and other data, to the DClinPsy research co-ordinator via University supported electronic file transfer software. The original consent forms will then be destroyed as confidential waste. The electronic files will be retained by the DClinPsy research co-ordinator for 10 years. After this time all information will be destroyed.

INCENTIVES AND PAYMENTS

A46. Will research participants receive any payments, reimbursement of expenses or any other benefits or incentives for taking part in this research?

Yes No

A47. Will individual researchers receive any personal payment over and above normal salary, or any other benefits or incentives, for taking part in this research?

Yes No

A48. Does the Chief Investigator or any other investigator/collaborator have any direct personal involvement (e.g. financial, share holding, personal relationship etc.) in the organisations sponsoring or funding the research that may give rise to a possible conflict of interest?

Yes No

NOTIFICATION OF OTHER PROFESSIONALS

A49-1. Will you inform the participants' General Practitioners (and/or any other health or care professional responsible for their care) that they are taking part in the study?

Yes No

If Yes, please enclose a copy of the information sheet/letter for the GP/health professional with a version number and date.

PUBLICATION AND DISSEMINATION

A50. Will the research be registered on a public database?

Yes No

Please give details, or justify if not registering the research.

Registration of research studies is encouraged wherever possible.

You may be able to register your study through your NHS organisation or a register run by a medical research charity, or publish your protocol through an open access publisher. If you are aware of a suitable register or other method of publication, please give details. If not, you may indicate that no suitable register exists. Please ensure that you have entered registry reference number(s) in question A5-1.

A51. How do you intend to report and disseminate the results of the study? Tick as appropriate:

- Peer reviewed scientific journals
- Internal report
- Conference presentation
- Publication on website
- Other publication
- Submission to regulatory authorities
- Access to raw data and right to publish freely by all investigators in study or by Independent Steering Committee

on behalf of all investigators

No plans to report or disseminate the results

Other (please specify)

A52. If you will be using identifiable personal data, how will you ensure that anonymity will be maintained when publishing the results?

Careful consideration will be taken to ensure anonymity will be maintained when publishing any results. All participants will have a pseudonym assigned and any identifiable information will be removed from transcripts.

A53. Will you inform participants of the results?

Yes No

Please give details of how you will inform participants or justify if not doing so.

Following the interview, participants will be asked if they would like a summary of the findings. This will be provided by August 2017.

Information about publication arrangements will be included in the participant information sheet.

5. Scientific and Statistical Review

A54. How has the scientific quality of the research been assessed? Tick as appropriate:

- Independent external review
- Review within a company
- Review within a multi-centre research group
- Review within the Chief Investigator's institution or host organisation
- Review within the research team
- Review by educational supervisor
- Other

Justify and describe the review process and outcome. If the review has been undertaken but not seen by the researcher, give details of the body which has undertaken the review:

The scientific quality of the research has been assessed through the use of an internal peer-review process within the DClinPsy staff team.

For all studies except non-doctoral student research, please enclose a copy of any available scientific critique reports, together with any related correspondence.

For non-doctoral student research, please enclose a copy of the assessment from your educational supervisor/ institution.

A59. What is the sample size for the research? How many participants/samples/data records do you plan to study in total? If there is more than one group, please give further details below.

Total UK sample size: 10

Total international sample size (including UK):

Total in European Economic Area:

Further details:

The sample of 10 will be taken from NHS employees working within trauma services at [REDACTED] in the first instance.

A60. How was the sample size decided upon? If a formal sample size calculation was used, indicate how this was done, giving sufficient information to justify and reproduce the calculation.

A sample size of 10 participants has been chosen as this is in keeping with the qualitative methods being used. Data from ten participants should allow theoretical sufficiency to be achieved.

A62. Please describe the methods of analysis (statistical or other appropriate methods, e.g. for qualitative research) by which the data will be evaluated to meet the study objectives.

Interpretative Phenomenological Approach (IPA) will be used to analyse the interviews. IPA aims to make sense of the participant's lived experiences. IPA is concerned with the meaning each participant gives to that experience.

6. MANAGEMENT OF THE RESEARCH

A63. Other key investigators/collaborators. Please include all grant co-applicants, sub-grant authors and other key members of the Chief Investigator's team, including non-doctoral student researchers.

Title Forename/Initials Surname	Dr Clare Dixon
Post	Clinical Tutor
Qualifications	PhD
Employer	Lancaster University
Work Address	Furness College, Lancaster University Lancaster
Post Code	LA1 4YG
Telephone	015245934
Fax	
Mobile	
Work Email	clare.dixon@lancaster.ac.uk

A64. Details of research sponsor(s)

A64-1. Sponsor

Lead Sponsor

Status: NHS or other organisation Academic Pharmaceutical industry Medical device industry Local Authority Other social care provider (including voluntary sector or private organisation) Other

If Other, please specify:

Contact person

Commercial status:

Name of organisation Lancaster University
 Given name Debbie
 Family name Knight
 Address B58 Bowland Main, Lancaster University
 Town/city Lancaster
 Post code LA1 4YT
 Country UNITED KINGDOM
 Telephone 01524592605
 Fax
 E-mail ethics@lancaster.ac.uk

Is the sponsor based outside the UK?

Yes No

Under the Research Governance Framework for Health and Social Care, a sponsor outside the UK must appoint a legal representative established in the UK. Please consult the guidance notes.

A65. Has external funding for the research been secured?

- Funding secured from one or more funders
 External funding application to one or more funders in progress
 No application for external funding will be made

What type of research project is this?

- Standalone project
 Project that is part of a programme grant
 Project that is part of a Centre grant
 Project that is part of a fellowship/ personal award/ research training award
 Other

Other – please state:

A66. Has responsibility for any specific research activities or procedures been delegated to a subcontractor (other than a co-sponsor listed in A64-1)? Please give details of subcontractors if applicable.

Yes No

A67. Has this or a similar application been previously rejected by a Research Ethics Committee in the UK or another country?

Yes No

Please provide a copy of the unfavourable opinion letter(s). You should explain in your answer to question A6-2 how the reasons for the unfavourable opinion have been addressed in this application.

A68-1. Give details of the lead NHS R&D contact for this research:

	Title	Forename/Initials	Surname
[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]

Fax
Mobile

Details can be obtained from the NHS R&D Forum website: <http://www.rdforum.nhs.uk>

A69-1. How long do you expect the study to last in the UK?

Planned start date: 03/10/2016
 Planned end date: 31/05/2017
 Total duration:
 Years: 0 Months: 7 Days: 29

A71-1. Is this study?

Single centre
 Multicentre

A71-2. Where will the research take place? (Tick as appropriate)

England
 Scotland
 Wales
 Northern Ireland
 Other countries in European Economic Area

Total UK sites in study

Does this trial involve countries outside the EU?

Yes No

A72. Which organisations in the UK will host the research? Please indicate the type of organisation by ticking the box and give approximate numbers if known:

NHS organisations in England 1
 NHS organisations in Wales
 NHS organisations in Scotland
 HSC organisations in Northern Ireland
 GP practices in England

- GP practices in Wales
- GP practices in Scotland
- GP practices in Northern Ireland
- Joint health and social care agencies (eg community mental health teams)
- Local authorities
- Phase 1 trial units
- Prison establishments
- Probation areas
- Independent (private or voluntary sector) organisations
- Educational establishments
- Independent research units
- Other (give details)

Total UK sites in study:

1

A73-1. Will potential participants be identified through any organisations other than the research sites listed above?

Yes No

A74. What arrangements are in place for monitoring and auditing the conduct of the research?

Regular and frequent contact will be made throughout the research with the academic supervisor including telephone, email and face to face meetings. These will occur atleast once a month.

A76. Insurance/ indemnity to meet potential legal liabilities

Note: in this question to NHS indemnity schemes include equivalent schemes provided by Health and Social Care (HSC) in Northern Ireland

A76-1. What arrangements will be made for insurance and/or indemnity to meet the potential legal liability of the sponsor(s) for harm to participants arising from the management of the research? Please tick box(es) as applicable.

Note: Where a NHS organisation has agreed to act as sponsor or co-sponsor, indemnity is provided through NHS schemes. Indicate if this applies (there is no need to provide documentary evidence). For all other sponsors, please describe the arrangements and provide evidence.

- NHS indemnity scheme will apply (NHS sponsors only)
- Other insurance or indemnity arrangements will apply (give details below)

Lancaster University legal liability cover will apply

Please enclose a copy of relevant documents.

A76-2. What arrangements will be made for insurance and/ or indemnity to meet the potential legal liability of the sponsor(s) or employer(s) for harm to participants arising from the design of the research? Please tick box(es) as applicable.

Note: Where researchers with substantive NHS employment contracts have designed the research, indemnity is provided

through NHS schemes. Indicate if this applies (there is no need to provide documentary evidence). For other protocol authors (e.g. company employees, university members), please describe the arrangements and provide evidence.

- NHS indemnity scheme will apply (protocol authors with NHS contracts only)
- Other insurance or indemnity arrangements will apply (give details below)

Lancaster University liability cover will apply

Please enclose a copy of relevant documents.

A76-3. What arrangements will be made for insurance and/ or indemnity to meet the potential legal liability of investigators/collaborators arising from harm to participants in the conduct of the research?

Note: Where the participants are NHS patients, indemnity is provided through the NHS schemes or through professional indemnity. Indicate if this applies to the whole study (there is no need to provide documentary evidence). Where non-NHS sites are to be included in the research, including private practices, please describe the arrangements which will be made at these sites and provide evidence.

- NHS indemnity scheme or professional indemnity will apply (participants recruited at NHS sites only)
- Research includes non-NHS sites (give details of insurance/ indemnity arrangements for these sites below)

Please enclose a copy of relevant documents.

A78. Could the research lead to the development of a new product/process or the generation of intellectual property?

- Yes No Not sure

PART C: Overview of research sites

Please enter details of the host organisations (Local Authority, NHS or other) in the UK that will be responsible for the research sites. For further information please refer to guidance.

Investigator identifier	Research site	Investigator Name
IN1	<input checked="" type="radio"/> NHS site <input type="radio"/> Non-NHS site	[REDACTED]
	Country: England	[REDACTED]
	Organisation	[REDACTED]



PART D: Declarations**D1. Declaration by Chief Investigator**

1. The information in this form is accurate to the best of my knowledge and belief and I take full responsibility for it.
2. I undertake to abide by the ethical principles underlying the Declaration of Helsinki and good practice guidelines on the proper conduct of research.
3. If the research is approved I undertake to adhere to the study protocol, the terms of the full application as approved and any conditions set out by review bodies in giving approval.
4. I undertake to notify review bodies of substantial amendments to the protocol or the terms of the approved application, and to seek a favourable opinion from the main REC before implementing the amendment.
5. I undertake to submit annual progress reports setting out the progress of the research, as required by review bodies.
6. I am aware of my responsibility to be up to date and comply with the requirements of the law and relevant guidelines relating to security and confidentiality of patient or other personal data, including the need to register when necessary with the appropriate Data Protection Officer. I understand that I am not permitted to disclose identifiable data to third parties unless the disclosure has the consent of the data subject or, in the case of patient data in England and Wales, the disclosure is covered by the terms of an approval under Section 251 of the NHS Act 2006.
7. I understand that research records/data may be subject to inspection by review bodies for audit purposes if required.
8. I understand that any personal data in this application will be held by review bodies and their operational managers and that this will be managed according to the principles established in the Data Protection Act 1998.
9. I understand that the information contained in this application, any supporting documentation and all correspondence with review bodies or their operational managers relating to the application:
 - Will be held by the REC (where applicable) until at least 3 years after the end of the study; and by NHS R&D offices (where the research requires NHS management permission) in accordance with the NHS Code of Practice on Records Management.
 - May be disclosed to the operational managers of review bodies, or the appointing authority for the REC (where applicable), in order to check that the application has been processed correctly or to investigate any complaint.
 - May be seen by auditors appointed to undertake accreditation of RECs (where applicable).
 - Will be subject to the provisions of the Freedom of Information Acts and may be disclosed in response to requests made under the Acts except where statutory exemptions apply.
 - May be sent by email to REC members.
10. I understand that information relating to this research, including the contact details on this application, may be held on national research information systems, and that this will be managed according to the principles established in the Data Protection Act 1998.
11. Where the research is reviewed by a REC within the UK Health Departments Research Ethics Service, I understand that the summary of this study will be published on the website of the National Research Ethics Service (NRES), together with the contact point for enquiries named below. Publication will take place no earlier than 3 months after issue of the ethics committee's final opinion or the withdrawal of the application.

Contact point for publication*(Not applicable for R&D Forms)*

NRES would like to include a contact point with the published summary of the study for those wishing to seek further information. We would be grateful if you would indicate one of the contact points below.

Chief Investigator

- Sponsor
- Study co-ordinator
- Student
- Other – please give details
- None

Access to application for training purposes *(Not applicable for R&D Forms)*

Optional – please tick as appropriate:

I would be content for members of other RECs to have access to the information in the application in confidence for training purposes. All personal identifiers and references to sponsors, funders and research units would be removed.

This section was signed electronically by Miss Gemma Foat-Smith on 06/09/2016 13:19.

Job Title/Post: Trainee Clinical Psychologist
Organisation: Lancaster University
Email: g.foat-smith@lancaster.ac.uk

DRAFT

D2. Declaration by the sponsor's representative

If there is more than one sponsor, this declaration should be signed on behalf of the co-sponsors by a representative of the lead sponsor named at A64-1.

I confirm that:

1. This research proposal has been discussed with the Chief Investigator and agreement in principle to sponsor the research is in place.
2. An appropriate process of scientific critique has demonstrated that this research proposal is worthwhile and of high scientific quality.
3. Any necessary indemnity or insurance arrangements, as described in question A76, will be in place before this research starts. Insurance or indemnity policies will be renewed for the duration of the study where necessary.
4. Arrangements will be in place before the study starts for the research team to access resources and support to deliver the research as proposed.
5. Arrangements to allocate responsibilities for the management, monitoring and reporting of the research will be in place before the research starts.
6. The duties of sponsors set out in the Research Governance Framework for Health and Social Care will be undertaken in relation to this research.

Please note: The declarations below do not form part of the application for approval above. They will not be considered by the Research Ethics Committee.

7. Where the research is reviewed by a REC within the UK Health Departments Research Ethics Service, I understand that the summary of this study will be published on the website of the National Research Ethics Service (NRES), together with the contact point for enquiries named in this application. Publication will take place no earlier than 3 months after issue of the ethics committee's final opinion or the withdrawal of the application.
8. Specifically, for submissions to the Research Ethics Committees (RECs) I declare that any and all clinical trials approved by the HRA since 30th September 2013 (as defined on IRAS categories as clinical trials of medicines, devices, combination of medicines and devices or other clinical trials) have been registered on a publically accessible register in compliance with the HRA registration requirements for the UK, or that any deferral granted by the HRA still applies.

This section was signed electronically by Miss Gemma Foat-Smith on 06/09/2016 13:19.

Job Title/Post: Trainee Clinical Psychologist
Organisation: Lancaster University
Email: g.foat-smith@lancaster.ac.uk

D3. Declaration for student projects by academic supervisor(s)

1. I have read and approved both the research proposal and this application. I am satisfied that the scientific content of the research is satisfactory for an educational qualification at this level.
2. I undertake to fulfil the responsibilities of the supervisor for this study as set out in the Research Governance Framework for Health and Social Care.
3. I take responsibility for ensuring that this study is conducted in accordance with the ethical principles underlying the Declaration of Helsinki and good practice guidelines on the proper conduct of research, in conjunction with clinical supervisors as appropriate.
4. I take responsibility for ensuring that the applicant is up to date and complies with the requirements of the law and relevant guidelines relating to security and confidentiality of patient and other personal data, in conjunction with clinical supervisors as appropriate.

Academic supervisor 1

This section was signed electronically by Dr Suzanne Hodge on 06/09/2016 17:26.

Job Title/Post: lecturer
Organisation: Lancaster University
Email:

DRAFT

Research Protocol

Title

Staff experiences in paediatric trauma services: Exploring perceptions of resilience when dealing with distress.

Name of applicant

Gemma Foat-Smith (Trainee Clinical Psychologist)

Principal investigator

Introduction

Pockett (2003) reports that health-care professionals are repeatedly exposed to trauma through witnessing medical trauma, performing medical procedures and supporting people at the end of their life. Repeated exposure to trauma can result in burnout, compassion fatigue and vicarious trauma and secondary traumatic stress (STS) (Zander & Hutton, 2013). All these terms are used to describe the effects of occupational exposure to another person's trauma (McGarry et al., 2013). Recent statistics from 2013-2015 highlight that ambulance staff (6.78%), closely followed health-care assistants (6.58%) and nurses (5.19%) have the highest rates of sickness within the NHS (Horan, 2015). This may indicate that repeated exposure to trauma is contributing towards reduced physical and mental well-being in healthcare professionals.

Some qualitative research has been conducted to explore the impacts on professionals of working within paediatric trauma services. Robins, Meltzer and Zelikovsky (2009) explored the impact of exposure to traumatic aspects (illness, injury and medical treatment) of working in a paediatric hospital. Results identified that 39 percent of the participants were at moderate to extremely high risk for developing compassion fatigue and 21 percent were at

moderate to high risk for reaching burnout. The results were associated with longer duration of employment and difficulties maintaining carer boundaries. Sekol and Kim (2014) assessed job satisfaction, burnout, compassion satisfaction and work-related stress amongst paediatric nurses. Results identified that nurses working in the haematology and oncology unit reported lower levels of burnout and nurses in the surgical unit reported higher levels of burnout. Furthermore, Czalia, Moss and Mealer (2012) explored the prevalence of post-traumatic stress disorder (PTSD) amongst nurses in a paediatric hospital. 21 percent of participants had PTSD symptoms. Research also identified that 'symptoms of PTSD' impacted participants' professional and personal lives. This highlights the levels of psychological distress amongst staff working in paediatric trauma services.

Windle (2011) describes resilience as the capacity to positively adapt and cope, despite adversity. It is also suggested that individuals are not born resilient (Walsh, 2003), this is a capacity that develops over an individual's life (Gillespie, Chaboyer & Wallis, 2007). Resilience has been identified as an essential characteristic for nurses (Kornhaber & Wilson, 2011). Ablett and Jones (2007) argue that resilience is an important coping strategy in overcoming psychological distress in the workplace.

McGarry and colleagues (2013) aimed to explore the impact of regular exposure of paediatric medical trauma on MDT's and explore the relationship between psychological distress, resilience and coping skills. Results identified that participants experienced more symptoms of secondary traumatic stress, less resilience and compassion satisfaction. Participants used optimism, sharing and non-productive coping strategies. Non-productive coping was associated with more secondary traumatic stress, burnout, PTSD, anxiety, depression and stress. Resilience was positively associated with optimism. Results also identified that staff working in the profession more than 25 years used more non-productive coping strategies, less sharing and had more symptoms of depression. Additionally, Dalia,

Abbas, Colville and Brierley (2013) explored whether resilience is related to burnout and explored different coping strategies. This research was conducted within a UK paediatric and neonatal intensive care unit setting and recruited doctors, nurses and health care professionals. Results indicated that 83 percent of the participants recruited for the study had post-traumatic stress disorder (PTSD) or symptoms of PTSD. Results indicated that the participants that had greater levels of resilience reduced the psychological distress they experienced. This provides preliminary evidence that levels of resilience can provide a mediating relationship between the psychological distresses experienced in the work-place.

Zander and Hutton (2013) used a qualitative approach to explore the concept of resilience amongst paediatric oncology nurses. They found that resilience was a personal and multi-faceted concept for the participants and that resilience underpinned their work as nurses. Kornhaber and Wilson (2011) further advocate the importance of building resilience in paediatric services in supporting staff to become emotionally hardened and detached from the trauma they witness within the workplace. This highlights the importance of resilience and the need for more qualitative research to be conducted to develop a better understanding of it. McGarry and colleagues (2013) also highlight that there is limited research exploring the well-being of MDTs within paediatric services.

The current study

The current study will be an exploratory study focusing on exploring perceptions of resilience of staff working in paediatric trauma services. The research question for the study is: How do staff working in paediatric trauma services understand and experience resilience?

Method

Design

The research aims to explore the concept of resilience and explore the experiences of staff working within this area. With this in mind, a qualitative methodology will be employed. The data will be collected through the use of semi-structured interviews and then analysed using Interpretive Phenomenological Analysis (IPA). IPA is an in-depth, detailed method of analysis that focuses on the meaning participants give to their experiences (Smith & Osborn, 2007). This approach fits well with the research question for this study as it aims to explore the meaning of resilience given by staff working in trauma services in a children's hospital. IPA will therefore enable the researcher to deconstruct the personal meaning the participants give to this common experience.

Participants

Participants will be staff who work in specialist paediatric trauma services. In the first instance, recruitment will take place in a regional specialist children's hospital in the North of England. Participants that meet the inclusion criteria and consent to take part will be included in the research. The study aims to interview 6-10 participants.

Participants will be deemed suitable for inclusion in the study if they meet all the following criteria:

- Staff working in services that treat patients with physical trauma as per Trauma Audit and Research Network (TARN) inclusion criteria such as burns, fractures and brain injuries.
- Professionals working in a medical role (consultants, doctors, nurses and health care assistants) in the ward environments.
- Staff that work directly with children and young people.

Exclusion criteria:

- Staff not working in trauma services.
- Staff that do not work directly with trauma cases.

Currently at XX there is a trauma co-ordinator who is responsible for chairing and attending all meetings and co-ordinating the trauma pathway. Prior to submitting ethical approval, the researcher liaised with the trauma co-ordinator for a consultation focusing on the interview schedule and participant information sheet. Both documents were updated following feedback and comments.

Materials

A semi-structured interview schedule (see attached 'Interview Schedule') will be used to conduct face to face interviews.

Procedure

Following ethical approval the researcher will prepare an email (please see 'Information Email') inviting potential participants to engage in the research. This will be sent to the field supervisor who will forward on to relevant staff groups. Potential participants will be provided with an information pack inviting them to take part and a participant information sheet. The cover letter will request that if the participant is interested in the study to contact the lead researcher either a University email address or a telephone issued by Lancaster DClinPsy admin team.

When contact is made with the lead researcher they will verbally ensure the inclusion criteria have been met. The researcher will answer any questions the potential participant may have. If the individual decides to take part in the research, a mutually convenient time will be arranged for the researcher and participant to meet. Initially, interviews take place at the

participant's workplace. This can ensure participant's anonymity is protected and may also be more convenient for the participant as it their work base.

An alternative interview location will also be offered to the participant if they wish to conduct their interview off site. This will be a quiet location that ensures the interview will not be overheard. The researcher will adhere to the lone working policies when working as a researcher if this occurs. At the start of each interview the researcher will talk through the participant information sheet (see attached 'Participant Information Sheet'), answer any outstanding questions and gain informed consent. Consent will be recorded on the consent form (see attached 'Consent Form') and signed by the participant. The interview will then be conducted using the interview schedule (see attached 'Interview Schedule') and will last for approximately 60 minutes. All interviews will be recorded digitally.

After completion of the interview the researcher will talk through the information sheet with the participant, specifically focusing on what happens with their data and the process of removing their data. The researcher will also ask the participant if there is a pseudonym they would like to be used to refer to them throughout the report and if they would like a summary of the findings of the study.

All interviews will be recorded on a Dictaphone that is property of Lancaster University. Following the interview the audio recordings will be saved onto a secure space on the University's server. All audio recordings will then be transcribed verbatim and deleted, any identifying information that may arise in the interview will be deleted and/or anonymised. The principal investigator will be responsible for all data; all paper copies will be kept in a locked cabinet at the researcher's home and all electronic data will be saved onto a secure space on the University server prior to being deleted following transcription. Following completion of the study all paper copies of consent forms will be scanned and

securely transferred, along with electronic files of the interview transcripts and other data, to the DClinPsy research co-ordinator via University supported electronic file transfer software. The original consent forms will then be destroyed as confidential waste. The electronic files will be retained by the DClinPsy research co-ordinator for 10 years. After this time all information will be destroyed.

Proposed Analysis

The qualitative responses collected will be analysed using Interpretative Phenomenological Analysis (IPA). IPA is a phenomenological qualitative approach and aims to explore how participants make sense of their personal and social world through a dynamic process with the researcher (Smith & Osborn, 2007). IPA explores the meanings of particular experiences of the participant however IPA considers that the researcher cannot do this directly or completely. The approach involves a two-stage interpretation process as the participants are trying to make sense of their world and the researcher is trying to make sense of the participants making sense of their world (Smith & Osborn, 2007).

Practical & Ethical Issues

During completion of the interview there is a possibility that participants may discuss personal experiences of distress and difficult topics. The principal investigator's main role whilst conducting the interviews is as a researcher, not a clinician. It will therefore be highlighted in the participant information sheet that if difficulties arise for staff they would be strongly advised to seek support from their GP or staff support services. If difficult topics do arise during the interview however the researcher will further explore this to support the individual and ensure the participant is safe. Participants will also be offered an additional debrief should they consent or require this. The additional debrief would be for those participants who disclose experiencing emotional distress during the interview, or for those

participants the researcher feels may benefit from this. The additional verbal debrief would aim to be provided whilst staff await support from other staff support groups or services and would be facilitated by a clinical psychologist.

All participants will be provided with an information sheet at the beginning of the interview that will provide details of the staff support groups available within the trust such as Occupational Health Services and a specific staff service that provides counselling for all staff related to difficulties both in and outside of work. The debriefing sheet will also provide details of support services available outside NHS i.e. mind, Anxiety UK, Cruse Bereavement Care, C.A.L.L Mental Health Helpline and Samaritans.

Timescale

The project (data collection) will start following ethical approval and approval from the relevant NHS Trust (via the Health Research Authority integrated view procedure). It is anticipated that data collection will begin October 2016 and end December 2016. The project will end May 2017. A summary of the results will be fed back to the participants following completion of the write up and therefore the researcher aims to provide this by August 2017.

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APPENDIX 4-A**Information email for participants**

Hi,

My name is Gemma Foat-Smith and I am a Trainee Clinical Psychologist at Lancaster University.

I will shortly be conducting research at [REDACTED] and I wanted to provide you with some information about the research with the hope you would be interested to take part.

The research aims to explore your experiences of working with young people who have a traumatic injury. I am particularly interested to hear about the role resilience might have. Resilience can be described as your ability to bounce back when faced with challenges.

If you choose to take part I would need approximately one hour of your time at a time that is convenient for you. During this time we will discuss your experiences of working in this setting.

We can meet in a location that ensures you anonymity in taking part in the research and all your responses given during the interview will be anonymised. The findings of the research will be written up as part of my doctoral thesis and may also be submitted for publication. This write-up will include quotes from participants' interviews, however these will be anonymised, so no one will be able to identify you or anyone else.

If you are interested in taking part please email me on g.foat-smith@lancaster.ac.uk. I can answer any questions you may have and discuss the research in more detail. Alternatively you can contact [REDACTED] who is supervising the project if you would like more information.

Many thanks for your time,

Gemma

**APPENDIX 4-B****Research Poster Invitation**

Interested in research?

My name is Gemma Foat-Smith and I will shortly be conducting research at [REDACTED] and I wanted to provide you with some information with the hope you may wish to take part.

The research aims to explore your experiences of working with young people who have a traumatic injury. I am particularly interested to hear about the role resilience might have. Resilience can be described as your ability to bounce back when faced with challenges.

If you choose to take part I would need approximately one hour of your time at a time that is convenient for you. During this time we will discuss your experiences of working in this setting. We can meet in a location that ensures you anonymity in taking part in the research and all your responses given during the interview will be anonymised.

If you are interested in taking part please email me on g.foat-smith@lancaster.ac.uk. I can answer any questions you may have and discuss the research in more detail.

Thank you for your time.

APPENDIX 4-C

Participant Information Sheet

My name is Gemma Foat-Smith and I am conducting this research as a student in the Doctorate in Clinical Psychology programme at Lancaster University.

What is the study about?

The aim of the study is to explore staff's experiences of resilience who work in trauma services in a paediatric hospital. I am interested in understanding more about the concept of resilience when working in these settings. I am interested in finding out about the different approaches staffs use to cope when working in this emotive and challenging work setting.

Why have I been approached?

You have been approached because you currently work directly with young people who have received a traumatic physical injury. I am interested in finding out about your experiences of working in this setting.

Do I have to take part?

No, you do not have to take part. Taking part in this research is voluntary.

What will I be asked to do if I take part?

If you think you would like to take part, please contact me on my email address (g.foat-smith@lancaster.ac.uk). We can discuss the research in more detail and I can answer any questions you may have. If you decide to take part, I will then arrange to conduct an interview with you at a time and place that is convenient for you. This interview will last approximately one hour and in it I will ask some questions to learn more about what resilience means to you and your experiences of resilience and your job. All interviews will be audio recorded; I will then type them up and delete the recordings. You can take a break at any point during the interview. If you change your mind about participating in the research, it is requested that you inform the researcher within two weeks of completing your interview to ensure all data is removed. After this time all data will be analysed and thus will be more difficult.

Will my information be identifiable?

All information you provide will be anonymised. The data collected for this study will be stored securely and only the researcher conducting this study and her academic supervisor will have access to the data:

- Audio recordings will be deleted once the interviews have been typed up.
- The files on the computer can only be accessed by Gemma and the computer will be password protected.
- At the end of the study, an electronic copy of all the research information will be kept securely in a password protected file for ten years. This will be kept securely by the Doctorate in Clinical Psychology admin team. At the end of this period, they will be destroyed.

- The typed version of your interview will be made anonymous by removing any identifying information including your name. This means if direct quotes are used in reports of publications of the study, your name will not be attached to them.
- All your personal data will be confidential and will be kept separately from your interview responses.

What will happen to the results?

The results will be written up as part of my doctoral thesis. If you wish, I can provide you with a summary of the findings of the research. This research may also be submitted for publication in an academic or professional journal.

Are there any risks?

Although the interview is not aimed at exploring personal distress or difficulties you may have, you may find yourself talking about experiences that have been upsetting. If you experience any distress during or following participation you are encouraged to inform the researcher who can provide details of support following the interview.

Are there any benefits to taking part?

Although you may find taking part interesting there are no direct benefits from taking part.

Who has reviewed the project?

This study has been reviewed by [REDACTED] and University of Lancaster Faculty of Health and Medicine Research Ethics Committee.

Where can I obtain further information about the study if I need it?

If you have any questions about the study, please contact the main researcher, Gemma Foat-Smith (g.foat-smith@lancaster.ac.uk).

Complaints

If you wish to make a complaint or raise concerns about any aspect of this study and do not want to speak to the researcher, you can contact:

Name: Professor Bill Sellwood

Title: Programme Director, Doctorate in Clinical Psychology

Address:

Division of Health Research

Furness College

Lancaster University

Lancaster

LA1 4YG

Email: b.sellwood@lancaster.ac.uk

Telephone: 01524 593998

If you wish to speak to someone outside of the Clinical Psychology Programme, you may also contact:

Name: Professor Roger Pickup

Title: Associate Dean for Research

Address: Faculty of Health and Medicine

Division of Biomedical and Life Sciences

Lancaster University
Lancaster
LA1 4YG
Email: r.pickup@lancaster.ac.uk
Telephone: 01524 593746

What if I need to speak to someone after completing the interview?

If you feel it would be helpful to talk to someone after our interview a session is available with a clinical psychologist employed by [REDACTED]. This session may be helpful if you experience distress or difficult feelings and would like to explore these further.

If you don't feel this would be helpful, but you do need further support following the above session, there are staff support groups available within [REDACTED]. The [REDACTED] provides counselling for all staff related to difficulties inside and outside work. They can be contacted on: [REDACTED]. Occupational Health Services are also available on: [REDACTED].

There are also other services available outside NHS: Mind (0300 123 3393), Anxiety UK (08444 775 774), Cruse Bereavement Care (0808 808 1677), CALL Mental Health Helpline (0800 132 737) and Samaritans (116 123).

Thank you for taking the time to read this information sheet.

APPENDIX 4-D
Consent Form**Study Title: Staff experiences in paediatric trauma services: Exploring perceptions of resilience when dealing with distress**

We are asking if you would like to take part in a research project. This project aims to explore your experience of resilience.

Before you consent to participating in the study we ask that you read the participant information sheet and mark each box below with your initials if you agree. If you have any questions or queries before signing the consent form please speak to the principal investigator, Gemma Foat-Smith

- | | |
|--|--------------------------|
| 1. I confirm that I have read the information sheet and fully understand what is expected of me within this study | <input type="checkbox"/> |
| 2. I confirm that I have had the opportunity to ask any questions and to have them answered. | <input type="checkbox"/> |
| 3. I understand that my interview will be audio recorded and then made into an anonymised written transcript. | <input type="checkbox"/> |
| 4. I understand that audio recordings will be kept until the research project has been examined. | <input type="checkbox"/> |
| 5. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my medical care or legal rights being affected. | <input type="checkbox"/> |
| 6. I understand that once I have completed my interview I have two weeks to inform the researcher if I wish to remove all of my data from the study. | <input type="checkbox"/> |
| 7. I understand that the information from my interview will be pooled with other participants' responses, anonymised and may be published. | <input type="checkbox"/> |
| 8. I consent to information and quotations from my interview being used in reports, conferences and training events. | <input type="checkbox"/> |
| 9. I understand that any information I give will remain anonymous unless it is thought that there is a risk of harm to myself or others, in which case the principal investigator will need to share this information with her supervisor. | <input type="checkbox"/> |
| 10. I consent to Lancaster University keeping written transcriptions of the interview for 10 years after the study has finished. | <input type="checkbox"/> |
| 11. I consent to take part in the above study. | <input type="checkbox"/> |
| | <input type="checkbox"/> |

Name of Participant _____ Signature _____ Date _____

Name of Researcher _____ Signature _____ Date _____

APPENDIX 4-E
Participant Debrief Sheet

Thank you for taking the time to complete my study.

What was the study about?

This study was an investigation exploring perceptions of resilience within a paediatric trauma setting.

What happens next?

The results of the interviews will be summarised and a report will be written. A summary of these findings can be provided, if you would like a copy please let me know. This report may also be submitted for publication in an academic or professional journal.

What I want to remove my information?

Please speak with me to remove your information from this study. All efforts will be made to remove all identifiable information from the report.

What if I need to speak to someone after completing the interview?

If you feel it would be helpful to talk to someone after our interview a session is available with a clinical psychologist employed by [REDACTED]. This session may be helpful if you experience distress or difficult feelings and would like to explore further.

If you don't feel this would be helpful, or you need further support following the above session, there are staff support groups available within [REDACTED]. The [REDACTED] provides counselling for all staff related to difficulties inside and outside work. They can be contacted on: [REDACTED]. Occupational Health Services are also available on: [REDACTED].

There are also other services available outside NHS: Mind (0300 123 3393), Anxiety UK (08444 775 774), Cruse Bereavement Care (0808 808 1677), CALL Mental Health Helpline (0800 132 737) and Samaritans (116 123).

What if I am unhappy with any aspect of the research?

If you wish to make a complaint or raise concerns about any aspect of this study and do not want to speak to the researcher, you can contact:

Name: Professor Bill Sellwood

Title: Programme Director, Doctorate in Clinical Psychology

Address:

Division of Health Research

Furness College

Lancaster University
Lancaster
LA1 4YG
Email: b.sellwood@lancaster.ac.uk
Telephone: 01524 593998

If you wish to speak to someone outside of the Clinical Doctorate Programme, you may also contact:

Name: Professor Roger Pickup
Title: Associate Dean for Research
Address: Faculty of Health and Medicine
Division of Biomedical and Life Sciences
Lancaster University
Lancaster
LA1 4YG

Thank you again for your cooperation with this project.

APPENDIX 4-E
Interview schedule

1. Can you tell me what resilience means to you?
 - *how does it develop?*
 - *where does it come from?*
 - *how would you define?*
 - *how would you conceptualise it? do you see it/hear it/sense it/is it a thought/an image?*
2. Can you describe a resilient person...
 - *how would they look, talk, do, behave, think*
 - *fantasies*
3. What do you think has influenced this understanding?
 - *experiences (personal and professional)*
 - *other people*
 - *memories*
4. How do you think people develop resilience?
 - *spirituality, personal competence, social competence, family cohesion, social resources, and personal structure*
5. Can you tell me what place resilience has in your life at the moment?
 - *Can you tell me a bit more about that?*
 - *do you feel resilient?*
 - *would you like to be more resilient?*
 - *how do you think you could develop resilience?*
6. What are the main differences between a resilient and non-resilient person?
 - *their appearance /thoughts/behaviour/professional work/mental health/physical health*
7. Can you talk to me about resilience and your job?
 - *what are the differences with other professions/friends*
 - *does this job require resilience? why/why not?*
 - *does resilience help? can you tell me more about that?*
8. Can you talk to me about stress and your job?
 - *what are the most stressful aspects if any?*
 -
9. Can you tell me about ways of managing stressors in your work?
 - *what helps/doesn't help?*
 - *why does this help?*
 - *would you consider yourself as effectively managing stress?*
 - *would there be anything else you would like to be able to do?*



Applicant: Gemma Foat-Smith
Supervisor: Suzanne Hodge
Department: Health Research
FHMREC Reference: [REDACTED]

23 August 2016

Dear Gemma

Re: Staff experiences in paediatric trauma services: Exploring perceptions of resilience when dealing with distress

Thank you for submitting your research ethics amendment application for the above project for review by the **Faculty of Health and Medicine Research Ethics Committee (FHMREC)**. The application was recommended for approval by FHMREC, and on behalf of the Chair of the Committee, I can confirm that approval has been granted for this research project.

As principal investigator your responsibilities include:

- ensuring that (where applicable) all the necessary legal and regulatory requirements in order to conduct the research are met, and the necessary licenses and approvals have been obtained;
- reporting any ethics-related issues that occur during the course of the research or arising from the research to the Research Ethics Officer at the email address below (e.g. unforeseen ethical issues, complaints about the conduct of the research, adverse reactions such as extreme distress);
- submitting details of proposed substantive amendments to the protocol to the Research Ethics Officer for approval.

Please contact me if you have any queries or require further information.

Tel:- 01542 592838

Email:- fhmresearchsupport@lancaster.ac.uk

Yours sincerely,

A handwritten signature in black ink that reads "Diane Hopkins".

Dr Diane Hopkins
Research Integrity and Governance Officer, Secretary to FHMREC.



Health Research Authority

Miss Gemma Foat-Smith
Administration Office
Furness College
Lancaster University, Lancaster
LA1 4YG

Email: hra.approval@nhs.net

26 September 2016

Dear Ms Foat-Smith,

Letter of HRA Approval

Study title: Staff experiences in paediatric trauma services: Exploring perceptions of resilience when dealing with distress

IRAS project ID: [REDACTED]

Sponsor: Lancaster University

I am pleased to confirm that HRA Approval has been given for the above referenced study, on the basis described in the application form, protocol, supporting documentation and any clarifications noted in this letter.

Participation of NHS Organisations in England

The sponsor should now provide a copy of this letter to all participating NHS organisations in England.

Appendix B provides important information for sponsors and participating NHS organisations in England for arranging and confirming capacity and capability. **Please read *Appendix B* carefully**, in particular the following sections:

- *Participating NHS organisations in England* – this clarifies the types of participating organisations in the study and whether or not all organisations will be undertaking the same activities
- *Confirmation of capacity and capability* - this confirms whether or not each type of participating NHS organisation in England is expected to give formal confirmation of capacity and capability. Where formal confirmation is not expected, the section also provides details on the time limit given to participating organisations to opt out of the study, or request additional time, before their participation is assumed.
- *Allocation of responsibilities and rights are agreed and documented (4.1 of HRA assessment criteria)* - this provides detail on the form of agreement to be used in the study to confirm capacity and capability, where applicable.

Further information on funding, HR processes, and compliance with HRA criteria and standards is also provided.

It is critical that you involve both the research management function (e.g. R&D office) supporting each

organisation and the local research team (where there is one) in setting up your study. Contact details

and further information about working with the research management function for each organisation can be accessed from www.hra.nhs.uk/hra-approval.

Appendices

The HRA Approval letter contains the following appendices:

- A – List of documents reviewed during HRA assessment
- B – Summary of HRA assessment

After HRA Approval

The attached document “*After HRA Approval – guidance for sponsors and investigators*” gives detailed guidance on reporting expectations for studies with HRA Approval, including:

- Working with organisations hosting the research
- Registration of Research
- Notifying amendments
- Notifying the end of the study

The HRA website also provides guidance on these topics and is updated in the light of changes in reporting expectations or procedures.

Scope

HRA Approval provides an approval for research involving patients or staff in NHS organisations in England.

If your study involves NHS organisations in other countries in the UK, please contact the relevant national coordinating functions for support and advice. Further information can be found at <http://www.hra.nhs.uk/resources/applying-for-reviews/nhs-hsc-rd-review/>.

If there are participating non-NHS organisations, local agreement should be obtained in accordance with the procedures of the local participating non-NHS organisation.

User Feedback

The Health Research Authority is continually striving to provide a high quality service to all applicants and sponsors. You are invited to give your view of the service you have received and the application procedure. If you wish to make your views known please email the HRA at hra.approval@nhs.net. Additionally, one of our staff would be happy to call and discuss your experience of HRA Approval.

HRA Training

We are pleased to welcome researchers and research management staff at our training days – see details at <http://www.hra.nhs.uk/hra-training/>

Your IRAS project ID is [REDACTED]. Please quote this on all correspondence.

Yours sincerely,

[REDACTED]

Email: hra.approval@nhs.net

Copy to: *Miss Debbie Knight, Sponsor contact*

[REDACTED]

Appendix A - List of Documents

The final document set assessed and approved by HRA Approval is listed below.

<i>Document</i>	<i>Version</i>	<i>Date</i>
Copies of advertisement materials for research participants [Advertising material]		
Evidence of Sponsor insurance or indemnity (non NHS Sponsors only)		
Interview schedules or topic guides for participants [Interview Schedule]	1	24 August 2016
IRAS Application Form [IRAS_Form_07092016]		07 September 2016
IRAS Application Form XML file [IRAS_Form_07092016]		07 September 2016
Letter from sponsor [Lancaster University approval]	1	24 August 2016
Letters of invitation to participant [Invitation email for participants]	1	24 August 2016
Other [SOA]	1.0	21 September 2016
Other [SOE]	1.0	21 September 2016
Other [Participant debrief sheet]	1	24 August 2016
Participant consent form [Consent Form]	1	24 August 2016
Participant information sheet (PIS) [Participant Information Sheet]	1	24 August 2016
Research protocol or project proposal [Protocol]	1	24 August 2016
Summary CV for Chief Investigator (CI) [CV CI]	1	24 August 2016
Summary CV for supervisor (student research) [CV Supervisor]	1	24 August 2016

Appendix B - Summary of HRA Assessment

This appendix provides assurance to you, the sponsor and the NHS in England that the study, as reviewed for HRA Approval, is compliant with relevant standards. It also provides information and clarification, where appropriate, to participating NHS organisations in England to assist in assessing and arranging capacity and capability.

For information on how the sponsor should be working with participating NHS organisations in England, please refer to the, *participating NHS organisations, capacity and capability and Allocation of responsibilities and rights are agreed and documented (4.1 of HRA assessment criteria) sections in this appendix.*

The following person is the sponsor contact for the purpose of addressing participating organisation questions relating to the study:

Ms Gemma Foat-Smith
 g.foat-smith@lancaster.ac.uk
 07557260854

HRA assessment criteria

Section	HRA Assessment Criteria	Compliant with Standards	Comments
1.1	IRAS application completed correctly	Yes	No comments
2.1	Participant information/consent documents and consent process	Yes	No comments
3.1	Protocol assessment	Yes	No comments
4.1	Allocation of responsibilities and rights are agreed and documented	Yes	Statement of Activities and Schedule of Events has been provided for use with the participating organisation.
4.2	Insurance/indemnity arrangements assessed	Yes	Where applicable, independent contractors (e.g. General Practitioners) should ensure that the professional indemnity provided by their medical defence organisation covers the activities expected of them for this research study

Section	HRA Assessment Criteria	Compliant with Standards	Comments
4.3	Financial arrangements assessed	Yes	There is no external funding for this study. As per the Statement of Activities there are no funds distributed to participating organisations.
5.1	Compliance with the Data Protection Act and data security issues assessed	Yes	Chief Investigator has confirmed that no study materials will be taken to private homes and will instead all be kept electronically on secure sponsor server.
5.2	CTIMPS – Arrangements for compliance with the Clinical Trials Regulations assessed	Not Applicable	Not Applicable
5.3	Compliance with any applicable laws or regulations	Not Applicable	Not Applicable
6.1	NHS Research Ethics Committee favourable opinion received for applicable studies	Not Applicable	Not Applicable
6.2	CTIMPS – Clinical Trials Authorisation (CTA) letter received	Not Applicable	Not Applicable
6.3	Devices – MHRA notice of no objection received	Not Applicable	Not Applicable
6.4	Other regulatory approvals and authorisations received	Not Applicable	Not Applicable

Participating NHS Organisations in England

This provides detail on the types of participating NHS organisations in the study and a statement as to whether the activities at all organisations are the same or different.

This is a single site, qualitative methods, and student study with only one site type. Study includes staff only and aims to explore perceptions of resilience of staff working in paediatric trauma services. The chief investigator will interview staff who work directly with patients that have received a physical trauma and analyse their responses.

The Chief Investigator or sponsor should share relevant study documents with participating NHS organisations in England in order to put arrangements in place to deliver the study. The documents should be sent to both the local study team, where applicable, and the office providing the research management function at the participating organisation. For NIHR CRN Portfolio studies, the Local

LCRN contact should also be copied into this correspondence. For further guidance on working with participating NHS organisations please see the HRA website.

If chief investigators, sponsors or principal investigators are asked to complete site level forms for participating NHS organisations in England which are not provided in IRAS or on the HRA website, the chief investigator, sponsor or principal investigator should notify the HRA immediately at hra.approval@nhs.net. The HRA will work with these organisations to achieve a consistent approach to information provision.

Confirmation of Capacity and Capability

This describes whether formal confirmation of capacity and capability is expected from participating NHS organisations in England.

Participating NHS organisations in England that are recruiting and interviewing staff **will be expected to formally confirm their capacity and capability to host this research.**

- Following issue of this letter, participating NHS organisations in England may now confirm to the sponsor their capacity and capability to host this research, when ready to do so. How capacity and capability will be confirmed is detailed in the *Allocation of responsibilities and rights are agreed and documented (4.1 of HRA assessment criteria)* section of this appendix.
- The [Assessing, Arranging, and Confirming](#) document on the HRA website provides further information for the sponsor and NHS organisations on assessing, arranging and confirming capacity and capability.

Principal Investigator Suitability

This confirms whether the sponsor position on whether a PI, LC or neither should be in place is correct for each type of participating NHS organisation in England and the minimum expectations for education, training and experience that PIs should meet (where applicable).

Statement of Activities indicates that Chief Investigator will be the responsible personnel at the participating organisation which is appropriate for this study type.

GCP training is not a generic training expectation, in line with the [HRA statement on training expectations](#).

HR Good Practice Resource Pack Expectations

This confirms the HR Good Practice Resource Pack expectations for the study and the pre-engagement checks that should and should not be undertaken

The Chief Investigator will require a Letter of Access in order to visit the participating organisation and undertake staff interviews.

Other Information to Aid Study Set-up

This details any other information that may be helpful to sponsors and participating NHS organisations in England to aid study set-up.

- The applicant has indicated that they do not intend to apply for inclusion on the NIHR CRN Portfolio.

To:

Foat-Smith, Gemma

Cc:

Attachments:

[Statement of activities.docx \(93 KB\)\[Open as Web Page\]](#)

Dear Gemma,

RE: Staff Experiences in Paediatric Trauma Services: Exploring Perceptions of Resilience when Dealing with Distress

IRAS: [REDACTED] Confirmation of Capacity and Capability at [REDACTED]

This email confirms that [REDACTED] has the capacity and capability to deliver the above referenced study. Please find attached our agreed Statement of Activities as confirmation.

We agree to start this study on **13th October 2016**.

The Local Collaborator for this study at [REDACTED] is [REDACTED] and data collection activities will be led by yourself.

When you recruit your first participant at [REDACTED] can you please email me to let me know this date. In addition, can you please send me your recruitment data for [REDACTED] at the end of each month.

If you wish to discuss anything further, please do not hesitate to contact me.

Kind regards,

[REDACTED]