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An Investigation of Parental PTSD: How and Why Parental Trauma Impacts the Parent and the Family Dynamic
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An Investigation of Parental PTSD: How and Why Parental Trauma Impacts the Parent and the Family Dynamic

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Abstract

Exposure to a traumatic event is associated with a number of adverse outcomes, including the development of posttraumatic stress disorder (PTSD). A significant number of adults currently living with PTSD also have at least one dependent child in their care. Yet, little is understood about how parental PTSD may impact parenting outcomes and the wider family dynamic, specifically from the parent's perspective. The aim of the current thesis was to gain a deeper understanding of the potential impacts of parental PTSD. Paper 1 presents a systematic review of the parental PTSD literature, investigating the association between parental PTSD and impaired parenting behaviours. While this review found evidence to suggest that parental PTSD may impair certain parenting outcomes, given the limitations of the studies reviewed, only tentative conclusions could be drawn. Paper 2 investigated parental symptoms of PTSD following a trauma experienced by their child (i.e., parental indirect trauma), as well as examining the cross-over effects of the parent's and child's mental health on one another. Building on this, in the same sample Paper 3 investigated the impact of parental PTSD, depression and anxiety following their child's trauma on observed parenting behaviours during two separate tasks. Some findings from Paper 3 were unexpected, highlighting our lack of understanding of parents' experiences following trauma exposure. Thus, Paper 4 comprised a qualitative study of UK parents with PTSD examining the perceptions of the consequences of their PTSD for their parenting outcomes. Taken together, findings from Papers 2, 3, and 4 offered multiple perspectives on how and why parental PTSD impacts parenting and family dynamics in a Western context. Paper 5 extended these findings to explore the experiences of parents living with PTSD and residing in a high adversity South African township. The overall findings highlight the multiple challenges that parental PTSD can present, and the complex interplay between parental experiences of trauma/PTSD and their parenting role.

Frequently cited abbreviations

Posttraumatic Stress Disorder	PTSD
Posttraumatic Stress	PTS
Posttraumatic Stress Symptoms	PTSS
Potentially traumatic event	PTE
Low-middle income country	LMIC
High income country	HIC
Cognitive Behavioural Therapy	CBT
Eye Movement Desensitisation Reprogramming	EMDR
Diagnostic Statistical Manual for Mental Disorders	DSM

Chapter 1. General Introduction

1.1 An Introduction to PTSD

It is estimated globally that 90% of individuals will experience a potentially traumatic event within their lifetime (Bosquet Enlow, Egeland, Carlson, Blood, & Wright, 2014). In the most recent edition of the Diagnostic Statistical Manual for Mental Disorders (DSM-5, American Psychiatric Association, 2013) it is recognised that these traumatic events can be direct (e.g., happening directly to the individual, such as assault or rape), or indirect (e.g., being witnessed by the individual, or learning about the trauma at a later date, such as one's child being admitted to hospital with a life-threatening illness). One possible outcome following exposure to a traumatic stressor is the development of posttraumatic stress disorder (PTSD). In a recent analysis of World Mental Health survey data from 24 countries (surveying over 68,000 respondents) it was found that 3.2 traumas occur per capita in the population; combined with 4% total conditional risk of PTSD, this equates to 12.9 lifetime episodes of PTSD being experienced per 100 people in the population (Kessler et al., 2017).

The current diagnostic criteria for PTSD (DSM-5, APA, 2013; see Table 1.1) require that adults are "exposed to actual or threatened death, serious injury, or sexual violence" (APA, 2013, p.271). As noted in the DSM-5, PTSD consists of four main symptom clusters that must all be present and have been experienced for more than one month for a diagnosis. The symptom clusters include; a) involuntary intrusive re-experiencing about the event; b) persistent and active avoidance of any reminders of the trauma; c) negative alternations to cognitions and mood (e.g., "the world is a bad place", "only bad things happen to bad people, therefore I must be a bad person"); and d) persistent hypervigilance or hyperarousal. In addition, symptoms need to cause clinically significant distress and/or interference on a daily basis, and to persist for at least 1 month or more in order for diagnostic criteria to be met. The severity of PTSD symptoms fluctuates over time, with periods of greater severity probably

reflecting sensitivity to co-occurring stressors, illness, and life transitions (Bisson, Cosgrove, Lewis, & Roberts, 2015; Kessler et al., 2017; Shalev, Liberzon, & Marmar, 2017), but overall PTSD shows a relatively chronic course. Thus, while mild and/or transient distress is considered normative following trauma, PTSD is a disturbing and debilitating disorder that can have detrimental impact to social and family functioning.

Considerable research has highlighted the negative impact PTSD can have on relationships, as symptoms of PTSD may impair the individuals' ability to develop and/or maintain healthy relationships (Galovski & Lyons, 2004; Lambert, Engh, Hasbun, & Holzer, 2012).

Table 1.1

Diagnostic criteria for PTSD taken from the Diagnostic and Statistical Manual of Mental Disorders (5th ed.)

Criterion	Symptom
A1	Exposure to actual or threatened death, serious injury, or sexual violence in one (or more) of the following ways: 1. Directly experiencing the traumatic event(s). 2. Witnessing, in person, the event(s) as it occurred to others. 3. Learning that the traumatic event(s) occurred to a close family member or friend. In cases of actual or threatened death of a family member or friend, the event(s) must have been violent or accidental. 4. Experiencing repeated or extreme exposure to aversive details of the traumatic event(s) (e.g., first responders collecting human remains; police officers repeatedly exposed to details of child abuse). Note: Criterion A4 does not apply to exposure through electronic media, television, movies, or pictures, unless this exposure is work related.
B	Presence of one (or more) of the following intrusion symptoms associated with the traumatic event(s), beginning after the traumatic event(s) occurred:
B1	Recurrent, involuntary, and intrusive distressing memories of the

traumatic event(s).

Note: In children older than 6 years, repetitive play may occur in which themes or aspects of the traumatic event(s) are expressed.

B2 Recurrent distressing dreams in which the content and/or affect of the dream are related to the traumatic event(s).

Note: In children, there may be frightening dreams without recognisable content.

B3 Dissociative reactions (e.g., flashbacks) in which the individual feels or acts as if the traumatic event(s) were recurring. (Such reactions may occur on a continuum, with the most extreme expression being a complete loss of awareness of present surroundings.)

Note: In children, trauma-specific re-enactment may occur in play.

B4 Intense or prolonged psychological distress at exposure to internal or external cues that symbolise or resemble an aspect of the traumatic event(s).

B5 Marked physiological reactions to internal or external cues that symbolise or resemble an aspect of the traumatic event(s).

C Persistent avoidance of stimuli associated with the traumatic event(s), beginning after the traumatic event(s) occurred, as evidenced by one or both of the following:

C1 Avoidance of or efforts to avoid distressing memories, thoughts, or feelings about or closely associated with the traumatic event(s).

C2 Avoidance of or efforts to avoid external reminders (people, places, conversations, activities, objects, situations) that arouse distressing memories, thoughts, or feelings about or closely associated with the traumatic event(s).

D Negative alterations in cognitions and mood that are associated with the traumatic event(s), beginning or worsening after the traumatic event(s) occurred, as evidenced by two or more of the following:

D1 Inability to remember an important aspect of the traumatic event(s), typically due to dissociative amnesia and not to other factors, such as head injury, alcohol, or drugs.

D2 Persistent and exaggerated negative beliefs or expectations about oneself,

		others, or the world (e.g., "I am bad," "No one can be trusted," "The world is completely dangerous," "My whole nervous system is permanently ruined").
	D3	Persistent distorted cognitions about the cause or consequence of the traumatic event(s) that lead the individual to blame himself/herself or others.
	D4	Persistent negative emotional state (e.g., fear, horror, anger, guilt, or shame).
	D5	Markedly diminished interest or participation in significant activities.
	D6	Feeling of detachment or estrangement from others.
	D7	Persistent inability to experience positive emotions (e.g., inability to experience happiness, satisfaction, or loving feelings).
E		Marked alterations in arousal and reactivity associated with the traumatic event(s), beginning or worsening after the traumatic event(s) occurred, as evidenced by two (or more) of the following:
	E1	Irritable behaviour and angry outbursts (with little or no provocation) typically expressed as verbal or physical aggression toward people or objects.
	E2	Reckless or self-destructive behaviour.
	E3	Hypervigilance.
	E4	Exaggerated startle response.
	E5	Problems with concentration.
	E6	Sleep disturbance (e.g., difficulty falling or staying asleep or restless sleep).
F		Duration of the disturbance (criteria B, C, D, and E) is more than 1 month.
G		The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.
H		The disturbance is not attributable to the physiological effects of a substance (e.g., medication, alcohol) or another medical condition.

Note. Taken from American Psychological Association. Diagnostic Statistical Manual of Mental Disorders (DSM-5). American Psychiatric Publishing. pp. 271-272.

In addition to the disturbing and debilitating symptoms of PTSD, the disorder is also associated with serious consequences that may lead to poor quality of life and increased use of health and other social services (Atwoli, Stein, Koenen, & McLaughlin, 2015). For example, recent epidemiological studies have reported that in more than 50% of cases, PTSD has been found to be co-morbid with other psychological disorders, such as depression, stress, anxiety, or substance abuse disorders (Shalev, Liberzon, & Marmar, 2017). Findings have also indicated that those with PTSD are at an increased risk of suicidal ideation and 2% of those diagnosed with PTSD are likely to attempt suicide (Bernal et al., 2007; Bisson et al., 2015; Shalev, Liberzon, & Marmar, 2017). As well as poor psychological outcomes, those with PTSD are also at increased risk of experiencing poor physical health. In two recent health surveys conducted across America and Canada, PTSD was found to be associated with chronic physical conditions, which included but were not limited to; heart disease, hypertension, arthritis, chronic pain conditions, respiratory conditions and gastrointestinal conditions (Pietrzak, Goldstein, Southwick, & Grant, 2012; Sareen et al., 2007). Thus, taken together, there is an overwhelming amount of evidence to suggest those with PTSD experience detrimental impacts on their psychological and physical health, as well as their social and emotional functioning, with consequences for the individual with PTSD, their family, as well as significant costs for wider society.

Given that not everyone who is exposed to a traumatic stressor will develop PTSD, research has identified multiple vulnerability factors that may increase the likelihood of an individual developing PTSD, such as prior history of trauma exposure, being female, little to no social support posttrauma, severity of trauma experienced as well as level of threat experienced during trauma, and lower socioeconomic status (Brewin, Andrews, & Valentine, 2000; Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995; Ozer, Best, Lipsey, & Weiss, 2008). While the identification of these individual differences aid in identifying those more at

risk for developing PTSD, several theoretical models have also been developed to aid our understanding of how PTSD symptoms in adults are developed and then subsequently maintained.

1.2. Theoretical Models of PTSD

The literature around theoretical models to explain the development and maintenance of PTSD symptoms is extensive. PTSD is thought to be maintained by a range of cognitive and behavioural strategies that the individual uses to control the current threat (Ehlers & Clark, 2008).

1.2.1 Behavioural models of PTSD

From a behaviourist standpoint, the development of PTSD can be explained through classical conditioning theories. Behavioural formulations, at their core, represent an extrapolation of Mowrer's (1960) *Two-Factor Learning Theory* for the development of simple phobias. Mowrer's model highlights the role of classical conditioning in causing neutral stimuli present during a fear episode to subsequently elicit a fearful response, and the role of escape/avoidance behaviours in maintaining that learned fear. In the context of PTSD, the trauma is assumed to be an extremely strong conditioning event which means that subsequently a range of trauma related cues will trigger fear reactions. Building upon the idea of behavioural avoidance as a maintaining factor, Keane, Zimering, and Caddell (1985), argued that if individuals attempt to distract themselves by blocking or suppressing memories of the trauma as they occur, which are common coping mechanisms in individuals with PTSD, this may also act as a barrier to the extinction of trauma-related distress. As such avoidance of the trauma stimuli typically results in an immediate reduction in fear, this coping response is positively reinforced, limiting further exposure to trauma cues and

maintaining PTSD symptoms. Although initial behavioural theories provide much insight into symptom clusters of PTSD and the effect these can potentially have (e.g., eliciting physiological and emotional arousal), they are limited in their scope of distinguishing PTSD from other anxiety related disorders, or accounting for other emotions linked to the trauma that are not fear.

Foa and colleagues (1986; 1993; 1998) expanded on early behavioural theories and introduced more cognitive components to models of PTSD. In applying Emotional Processing Theory to PTSD, Foa and Rothbaum (1998) proposed that the fear structure of PTSD involves a number of elements including conditioned associations that are both overly strong and overly generalised. With respect to the latter, the fear network includes conditioned reactions to both fear relevant and irrelevant stimuli; for example, for example, a survivor of a motor vehicle accident, may appropriately associates driving fast with fear but may also perceive blue cars as more dangerous as this was the colour of car that hit them (Foa & Rothbaum, 1998). Over time, this fear network may extend more widely to include increasingly peripheral cues, as additional stimuli become associated with fear reactions following triggering of the network. Emotional processing theory as applied to PTSD (e.g., Foa & Riggs, 1993; Foa & Rothbaum, 1998; Foa, Huppert, & Cahill, 2006) also posits that the fear structures of trauma survivors with PTSD include two basic dysfunctional cognitions that underlie the development and maintenance of PTSD. First, the world is completely dangerous (e.g., anyone could can harm me). Second, one's self is totally inadequate/unable to cope (e.g., I can't handle any stress, my PTSD symptoms mean that I am going crazy). These beliefs may lead the individual to feel increasingly vulnerable and overwhelmed, which may elicit avoidance of the traumatic stimuli in order to suppress these feelings or beliefs.

Upon review, Emotional Processing Theory provides a great deal of insight into important aspects of PTSD, as well as drawing attention to pre-trauma risk factors and post-trauma appraisals. Not only has this theory advanced our understanding of PTSD development and maintenance, but it has also provided a solid foundation from which clinicians can guide effective treatment. However, it has been argued that network models may be too simplistic to fully capture the complex, multi-layered nature of PTSD (Brewin & Holmes, 2003). For example, models that are fundamentally based on conditioning formulations struggle to explain phenomena such as delayed onset PTSD, or to encapsulate the role of emotions such as shame and guilt versus fear in underpinning distress in some trauma populations. In addition, Emotional Processing Theory is unable to account for the, sometimes contradictory phenomena of PTSD. For example, Foa and colleagues (1993; 1998) would argue that when elicited everything within the fear memory would be retrieved (e.g., information about the response and stimulus, as well as implied meaning). However, numerous studies have highlighted that for some individuals the trauma memory is fragmented, meaning that while some elements of the trauma are triggered in the way encapsulated by the model, other components may be difficult to recall with the same level of certainty or clarity.

1.2.2 Cognitive models of PTSD

Stress Response Theory (Horowitz, 1976, 1986) posits that following an initial fearful response to a traumatic stimulus, the individual attempts to integrate new information learned from the trauma with prior knowledge and experiences, with existing schemas typically being based around a benign world view. It was then, Horowitz (1976) argued, that the individual experiences a disconnect, whereby they are unable to consolidate their thoughts and memories of the trauma with their schemas prior to the trauma taking place. Given this

disconnect, Horowitz argued that two opposing processes are now in operation; the first aiming to protect the individual by actively suppressing thoughts and reminders of the trauma, and the second persistently encouraging the re-processing of the traumatic memories in order to integrate into existing schemas. Symptoms of PTSD are held to be a consequence of this ongoing dissonance, which will only resolve once existing schemas have accommodated to include the trauma. The original formulation of this model has some key limitations. For example, it has been observed that PTSD is likely to develop when traumatic events serve to confirm existing maladaptive schemas (with prior trauma being a key risk factor for PTSD), as well as when they disconfirm existing schemas organised around a benign/just world. Nonetheless, Horowitz's pioneering theory highlights a number of processes that still remain in more recent cognitive models, including the impact of trauma to an individual's beliefs about themselves and their wider environment, and has been built upon to include more symptom specific cognitive components in more recent models (Brewin et al., 1996; Brewin & Holmes, 2003).

Dual Representation Theory (Brewin et al., 1996)

Brewin, Dalgleish, and Joseph (1996) propose a distinction between trauma memories and ordinary memories, suggesting that the uncontrollable re-experiencing of trauma memories is caused by memories of the trauma dissociating from the ordinary memory systems. *Dual Representation theory* (Brewin et al., 1996) posits that two memory systems, situationally accessible memory (SAM) and the verbally accessible memory (VAM), operate in parallel, but depending on the situation, one system may take precedent over the other. After a traumatic event is experienced, sensory information will be stored in both systems. When information is stored within the SAM system, it is done so with limited contextual or temporal links; therefore, when information is recalled from the SAM, following a triggered

reminder of the trauma, it can give the individual a sense of 'nowness' as if the trauma is happening all over again, as if for the first time (Brewin, 2015; Ehlers, Hackmann, & Michael, 2004). If the individual consciously pays attention to and rehearses this information, it can be moved to the VAM system, which logically processes the information, reducing its emotive and sensory qualities. However, as specified by earlier models, individuals with PTSD will attempt to avoid consciously processing trauma-related information as it can be distressing, resulting in the information remaining in the SAM system, and thus maintaining the frequent re-experiencing of sensations from the trauma (Brewin, 2001; Brewin et al., 1996). While the Dual Representation Theory provides a comprehensive explanation of intrusive re-experiencing and wider trauma memory phenomena, it provides less information about other aspects of PTSD, such as emotional numbing. Further, although the theory highlights the importance of dissociation for interfering with memory encoding thus, increasing the risk of PTSD, the theory it redefines memory processes in the context of PTSD, rather than drawing on existing models of autobiographical memory.

The Cognitive Model of PTSD (Ehlers & Clark, 2000)

The Ehlers & Clark (2000) cognitive model of PTSD (see Figure 1.1) introduces the concept of the trauma survivor experiencing a sense of current threat, despite the knowledge that their trauma is in the past (Brewin & Holmes, 2003). This is held to arise from three, interlinked sets of processes. First, the cognitive model builds upon previous theoretical work by Foa and Rothbaum (1998) by identifying a wide range of negative appraisals the individual may have about themselves, their trauma and the world around them; for example negative appraisals of the self (e.g., "it was my fault"), the world (e.g., "the world is dangerous"), and trauma symptoms (e.g., "my brain is damaged"). Second, it is argued that in PTSD the trauma memory is stored in a primarily sensory (versus verbal) form, and is poorly

integrated with other autobiographical memories, meaning that it lacks an appropriate context (e.g., information around time and place). This combination of many sensory elements, lack of integration and lack of context means that trauma memories are prone to triggering by matching cues, often include original sensory impressions from the trauma, and have a sense of 'nowness', all of which contribute to a sense of current threat. Third, individuals with PTSD engage in several maladaptive cognitive and behavioural coping strategies, including thought suppression and rumination, which maintain and exacerbate post-trauma distress (Ehlers & Clark, 2000) and also prevent change in trauma memories and appraisals. There exists an abundance of empirical evidence to support elements of the cognitive model of PTSD, including the role of negative appraisals, trauma memory qualities, and thought suppression, and rumination (Ehlers, Maercker, & Boos, 2000; Halligan, Michael, Clark, & Ehlers, 2003; Mayou, Bryant, & Ehlers, 2001) in the development and maintenance of PTSD symptoms.

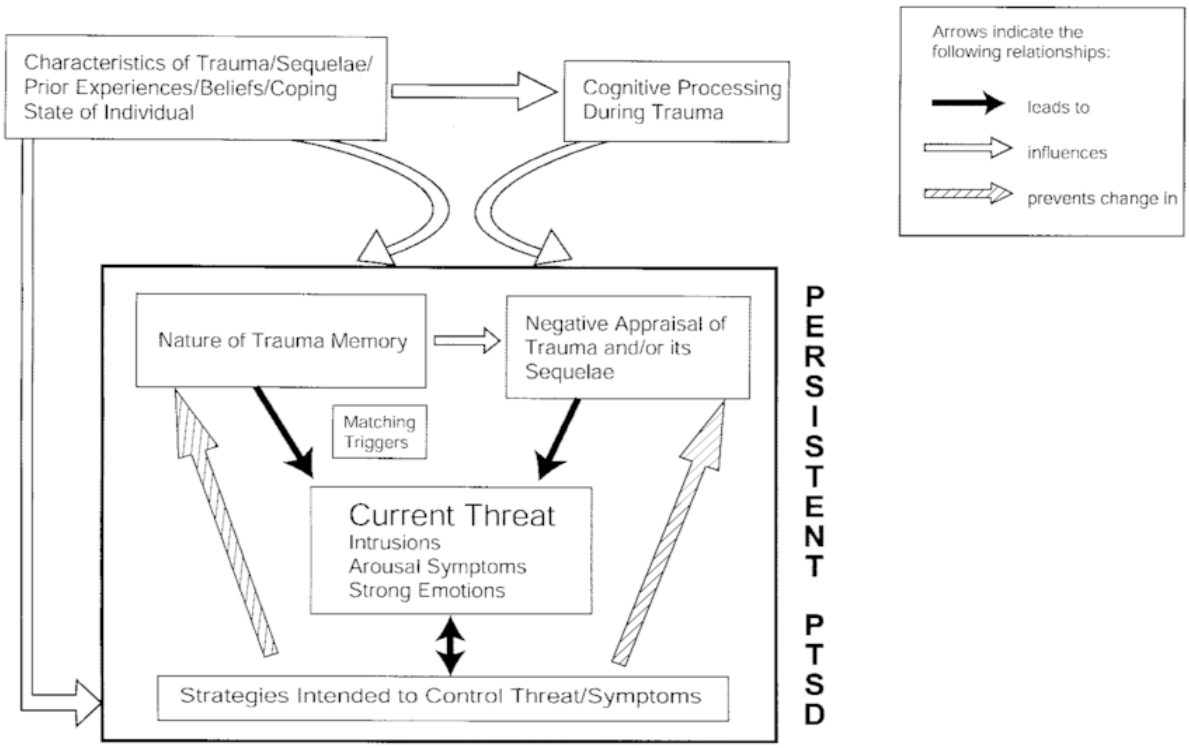

Figure 1.1. Ehlers and Clark's (2000) Cognitive Model of PTSD

1.3 Parenting Theories and Models

When applied to the context of trauma, Bronfenbrenner's (1979) social ecological theory suggests typically trauma is not experienced in isolation and that those closest to the individual may also experience subsequent impact. Consistent with this, it is well-established that PTSD can have detrimental consequences for an individual's relationships and social functioning (Lambert, Engh, Hasbun, & Holzer, 2012). A high percentage of adults who are currently living with PTSD will also have at least one biological child in their care (Lauterbach et al., 2007; Leen-Feldner, Feldner, Bunaciu, & Blumenthal, 2011); and the transition to parenthood may be a time during which new psychological responses to prior experiences of trauma occur (Christie et al., 2018; Epifanio, Genna, De Luca, Roccella, & La Grutta, 2015; Erdmans & Black, 2008). Therefore, understanding whether and how PTSD may impact parenting is important.

Becoming a parent is a major role taken on by most adults, as well as being a key transition point in their life. Parenthood is characterized by constant change, driven by the developmental stage of the child (O'Connor, 2002). Parenting behaviour has been of focal interest for developmental theorists for over half a century (Ainsworth & Bowlby, 1991; Belsky, 1984; Bowlby, 1969; Darling & Steinberg, 1993; Sears, Maccoby & Levin, 1957). Nonetheless, there exists no single defining theory of parenting (i.e., what it is and how it shapes the development of the child), which is arguably consistent with the multifaceted nature of the parenting role.

Research within the parenting field is primarily rooted in child socialisation outcomes (Ainsworth & Bowlby, 1991; Belsky, 1984; Darling & Steinberg, 1993; Sears, Maccoby & Levin, 1957), aiming to build an understanding of the processes whereby parents' childrearing practices and styles may shape their child's psychological, social and emotional developmental outcomes (Carson & Parke, 1996; Collins, Maccoby, Steinberg, Hetherington,

& Bornstein, 2000). Theories that are the most empirically supported are those that focus on how specific parenting practices affect particular child outcomes; for example, the impact of parental sensitivity on promoting a secure base for the child to explore their surroundings independently (Ainsworth & Bell, 1970; Ainsworth, Blehar, Waters, & Wall, 1978). However, as noted by O'Connor (2002), a negative consequence of this specificity is that generalisability of findings is limited; thus, meaning steps towards a 'grand unifying theory' of parenting still remain to be taken. Despite the absence of a singular or cohesive theory of how parental influence can be understood, there is considerable agreement within the literature as to how adequate (versus inadequate) parenting is defined (Collins et al., 2000; Berg-Nielsen, Vikan, & Dahl, 2002; O'Connor, 2002).

Socialisation research has characterised parenting behaviours into positive (e.g., warm and sensitive) and negative (e.g., hostile and unsupportive) practices (Sears et al., 1957; Collins et al., 2000), with particular reference to the parent-child relationship. In his review, O'Connor (2002) highlights key dimensions to the parent-child relationship, that including specific parenting practices such as warmth/support or sensitivity/responsiveness, vs. overprotectiveness, or hostility/rejection. In other studies of parenting behaviours, further domains have been highlighted, including parent-child communication, parenting stress and parenting satisfaction (Deater-Deckard, 2004; Darling & Steinberg, 1993; Gerard, 1994). Taken together these domains make up the complex picture of parenting, consistent with the multifaceted nature of this role, which can be influenced considerably by both internal and external factors (Cohen, Zerach & Solomon, 2011).

Berg-Neilsen and colleagues (2002) note that there are several determinants of negative parenting, which include everyday stresses, lack of social support from a spouse/partner or other family members, adverse economic circumstances, and marital discord. It is suggested that any number of these factors, or a combination of them, may lead

to a dysfunctional parenting style, which would involve anything the parent does, or fails to do, that may adversely impact on the child and their social, emotional or psychological development (Kendziora & O'Leary, 1993). Belsky (1984) noted "..it is of interest to learn that, while great effort has been expended studying the characteristics and consequences of parenting, much less attention has been devoted to studying why parents parent the way they do" (p.83). In his process model (see Figure 1.2) Belsky (1984) proposes that parenting can be directly influenced by determinants arising from within the individual parent (their personality and psychological wellbeing), from within the individual child (e.g., behaviours or the personality of the child), and from the wider social context in which the parent-child relationship exists (e.g., social networks, family networks, marital relationships). More specifically, Belsky's (1984) model argues that parent's own developmental histories, their child's characteristics, as well as their wider environment can impact on their personality and general psychological wellbeing, which can impact on parenting outcomes and subsequently on their child's development. Belsky (1984) believed that within the process model 'optimal parenting' (i.e., the successful production of competent offspring) can only be protected when the personal psychological wellbeing of the parent is preserved.

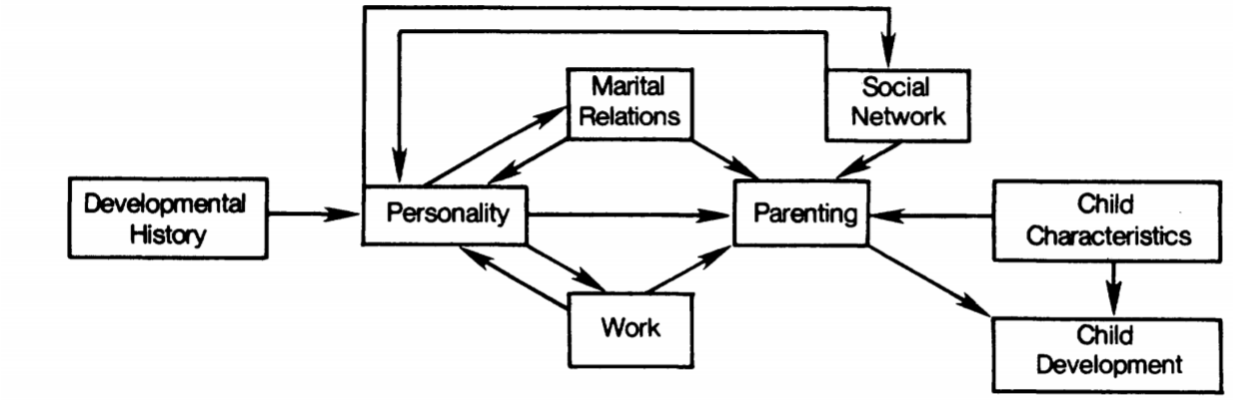

Figure 1.2. Belsky's (1984) process model of the determinants of parenting

More recently, within the parenting stress field, Deater-Deckard (2004) developed 'P-C-R' theory, in which he posits there are three separate domains that may contribute to high levels of parenting stress. The 'parent' domain (P=aspects of parenting stress that may emanate from the parent); the 'child' domain (C= parenting stress that may be caused by child behaviour); and the 'relationship' domain (R=parenting stress arising from within the parent-child relationship). P-C-R theory (Deater-Deckard, 2004) suggests that 'parent domain' stress has been most strongly associated with parental mental health difficulties, such as depression or anxiety. The theory also highlights that together the three domains can cause dysfunction in many aspects of parenting behaviours. Deater-Deckard's (2004) theory bears numerous similarities to Belsky's (1984) model, in that they draw attention common factors within the parent's environment that may have a detrimental impact on parenting behaviours (particularly including poor mental health within the parent).

Taken together these models help us understand the complex, multifaceted nature of parenting styles and practices. The models highlight that there are a number of determinants of parenting, which may give rise to a dysfunctional parenting style. However, both Belsky (1984) and Deater-Deckard (2004) identify the psychological wellbeing of the parent as being of the utmost importance in maintaining positive parental influence. Parental psychological wellbeing must be healthy/functioning above all other determinants; for example, even if the child's behaviour is challenging or if the parent's environment is dysfunctional, if their psychological wellbeing is positive then parenting behaviours will not change dramatically as a result of the other two dysfunctional components. However, if a parent's mental health is impaired then it is assumed that all other components will suffer (Belsky, 1984).

1.3.1 Parenting in the context of parental mental health difficulties

Depression in caregivers has received considerable research attention in recent decades (England & Sim, 2009). The research surrounding maternal depression has linked it

to difficulties across multiple parenting domains, including the parent-child relationship (Goodman et al., 2011). In particular, maternal depression has been associated with unresponsive, inattentive and intrusive parenting styles, as well with more critical, withdrawn and irritable maternal behaviour (DiLillo & Damashek, 2003). A meta-analysis of this research (Lovejoy, Graczyk, O'Hare, & Neuman, 2000) found reliable evidence of moderate associations between maternal depression and both hostile negative parenting (e.g., negative affect, coercive, hostile behaviour) and withdrawn parenting (e.g., unresponsive, ignoring), as well as a small inverse association with positive parenting behaviours (e.g., engagement and showing affection). While fathers have been less well researched, there is some evidence to suggest that paternal depression also decreases the extent of parental involvement with child rearing practices (Cohen, Zerach, & Solomon, 2011). Overall, research in the field of parental depression underscores the importance of parental mental health when focusing on parenting outcomes.

In addition to depression, stress and anxiety have also been identified as major determinants of qualities of parenting (Belsky and Jaffee, 2006; Deater-Dekard, 2004). In a recent study, Pereira, Barros, Mendonça, and Muris (2013) examined the potential associations between maternal and paternal parenting behaviours and child anxiety. Findings suggested that maternal trait anxiety was significantly associated with child anxiety (r = 0.42), and paternal overprotection and control was also found to be associated with child anxiety (r = 0.58). These findings are consistent with recent reviewed evidence highlighting the potential role of parenting behaviours in the development and maintenance of child anxiety (Waite, Whittington, & Creswell, 2014).

Overall, evidence from this section has sought to support ideas put forward by theoretical parenting models (Belsky, 1984; Deater-Deckard, 2004) which highlight the association between parental mental health and dysfunctional parenting. As can be seen from

evidence provided, depression and anxiety have received considerable research focus, that provides empirical support for the link between these mental health issues and poor parenting. In contrast to the relatively large body of evidence relating to parental depression/anxiety, the link between PTSD and parenting is less well established. Given considerable evidence that PTSD can seriously negatively alter behaviour and can have substantial impact on social and family functioning (J. R. Davidson, 2000), further study of the interplay between PTSD and parenting is warranted.

1.4 Parental trauma and PTSD

When considering the impact of trauma exposure, empirical evidence details the changes experienced by those who have experienced a trauma and have subsequently developed PTSD. PTSD can have a substantial impact on behaviour, as well as on psychological and social functioning. As such, it has been proposed that symptoms associated with PTSD, such as increased anger, reduced affect, and disruptions to attention and memory may lead to unresponsive and impaired parenting behaviours; which include parents being withdrawn, avoidant, irritable and hostile (Bosquet-Enlow., 2011). In addition, it is suggested particular PTSD symptom clusters may have specific consequences for parenting behaviours. For example, detachment from or avoidance of others may cause a breakdown in parent-child communication; and emotional numbing may undermine the parent-child bond. Despite the limited availability of empirical evidence in this area, it has been argued that it is at least *theoretically* justifiable to consider that parental PTSD may impact negatively on parenting behaviours (Berg-Nielson et al., 2008; McDonald et al., 2011). A full review of the current evidence base and the limitations of our understanding in this area is provided in Chapter 2).

Currently, studies within the field of parental PTSD predominantly focus on gaining a better understanding of the transmission of psychopathological symptoms from the parent to

the child; and on examining how this 'ripple effect' may cause negative outcomes for the child in a variety of contexts including social, emotional, behavioural and psychological (Rosenheck & Nathan, 1985). Over 30 years ago, Rosenheck and Nathan (1985) suggested that psychological reverberations of trauma could potentially be seen in the next generation. Figley (1995) termed this 'intergenerational transmission', the prospect of psychopathological symptoms being transmitted from one generation to the next. More recently, research has suggested that a potential mechanism of this transmission of psychopathology is, at least in part, via parenting behaviours (Dekel & Goldblatt, 2008; Field, Muong, & Sochanvimean, 2013; Kellerman, 2001). For example, Brand and colleagues (2011) have drawn attention to the rearing environment that traumatised mothers may create for their children, such as children being exposed increased levels of stress or difficult family dynamics, suggesting this may cause their children to become more easily distressed by novel situations, and impair their ability to regulate their own emotions during stressful situations. Notably, the focus of research in this area is on potential consequences of parental PTSD for the child's outcomes, and investigation of parental PTSD from the parent's perspective has been limited.

A second limitation lies in the type of populations that have been included in parental PTSD research. First, there is a tendency to focus on specific trauma types, with military trauma and birth trauma being most often studied. Secondly, recent research has suggested that despite the recognition that trauma exposure is a global issue, research investigating trauma and PTSD is mainly conducted in high income countries (HICs; Fodor et al., 2014; Purgato & Olff, 2015). The authors note that while over 80% of the world's population lives in low-middle-income countries (LMICs), only 20% of mental health resources are being utilised within these countries (Patel & Prince, 2010; Purgato & Olff, 2015). Moreover, evidence gathered from epidemiological studies has found that in LMICs such as South

Africa, lifetime traumatic event prevalence is estimated to be 73.8%, which is higher than figures found in Europe and Japan (ranging between 54-64%; Atwoli et al., 2017; Darves-Bornoz et al., 2008; Kawakami et al., 2014). Those living in LMICs, may be exposed to persistent, on-going trauma, such as community violence, which may mean living in a consistently unsafe environment (Carey, Stein, Zungu-Dirwayi, & Seedat, 2003). In sum, the current evidence base is limited in its generalizability, with little understanding what challenges are faced by parents those who have experienced other types of trauma, or those living in LMICs and high-risk contexts, especially parents that have experienced trauma themselves.

There are several clinical reasons for investigating the link between parental PTSD and impaired parenting outcomes. Gaining an understanding of how parental PTSD may impact parenting outcomes and family dynamic may provide clearer insight into what the most effective and appropriate support looks like, when is the optimum time to intervene and what areas are parents finding most difficult to cope with. As has been demonstrated in the literature, the impact of trauma exposure and PTSD does not occur in isolation and is often experienced by those in the trauma survivors' close proximity (Bronfenbrenner, 1979; Juth, Silver, Seyle, Widyatmoko, & Tan, 2015; Salmon & Bryant, 2002). The potential detrimental outcome that children may experience as a consequence of their parents' PTSD is of interest to clinicians to try and prevent, or at least curtail any further negative impact (Galovski & Lyons, 2004; Horesh & Brown, 2018). Further clinical implications of the current thesis findings will be elaborated upon in the discussion section.

1.5 Aims of the current thesis

To date, there is limited evidence relating to the experiences of parents with PTSD, particularly considering their own experiences as parents as well as their family dynamic. The parental PTSD literature has focused largely on the negative outcomes parental PTSD may

have on the developing child, rather than on the parent. In addition, the available evidence is mainly quantitative, with little focus on qualitive, in-depth exploration of lived experiences. Lastly, there has been little evidence collected from parents living in high-risk, non-Western contexts. Therefore, the aim of the current thesis was to explore the lived experiences of parents who have developed PTSD following trauma exposure both in Western and non-Western contexts; gaining a more in-depth understanding of the parent-perceived impact of PTSD on parenting, as well as the day-today challenges faced by parents living with PTSD.

The following specific research questions were addressed:

1. What is the state of the current evidence base relating to the impact of parental PTSD on parenting behaviour?
2. Do parental PTSD symptoms show associations with observed parenting behaviour, and/or child PTSD symptoms?
3. How does parental PTSD impact parenting behaviours and the family dynamic from the perspective of the parent?
4. Do parents with PTSD that live in high-income, low-risk contexts experience different impacts to their parenting compared to parents living in low-income, high-risk contexts?

1.6. Summary of Methodological Approaches and Samples

To achieve these aims, a mixed methodological approach was utilised. In addition, an embedded design was utilised (J. W. Creswell & Zhang, 2009), whereby the qualitative and quantitative aspects of the research were collected and analysed separately, but were both used to address similar questions. Schutt (1996) argues that good research should always employ multiple methods of investigation; and that answers can always be enriched by

approaching research questions from multiple perspectives. It could be argued that in order to address the proposed research questions effectively, a mixed methods approach is best, as using quantitative methods alone will not appropriately address experiences of parents who have experienced trauma. Quantitative methods may establish the "what", relating to the existence of associations between parental PTSD and parenting, whereas qualitative methods will address the "why" and the "how" (Pope & Mays, 2006). As such bringing together both quantitative and qualitative methods will provide a richer, and more in-depth insight into parents' experiences following trauma.

This PhD contains four empirical chapters; two quantitative and two qualitative studies, utilising three different samples, which include:

a) UK parents who have been exposed to an indirect trauma, whereby their child was taken to an Accident and Emergency department following an accidental injury. Specifically, the data used and reported in Papers 2 and 3, derived from a longitudinal study that collected data from 132 families, who had a child aged between 7 and 12 years that had been admitted to an accident and emergency department following a single incident trauma. Paper 2 utilised longitudinal data from four weeks, 3 months and six months post-trauma in order to examine the mutual predictive effects of parent and child post trauma symptoms. Paper 3 utilised data generated from video-taped interactions between parent and child during two different tasks carried out four-weeks post-trauma, in order to examine associations between parental posttrauma symptoms and parenting behaviour.

b) UK parents who had been exposed to a variety of different traumas, identified through a clinical registry that was developed by clinicians at Cardiff University. The registry was part of a larger initiative linked with the National Centre for Mental Health

(NCMH), which aimed to gather a collection of phenotyped samples for mental health research, including that on PTSD. The registry worked to recruit adult participants who had a history of PTSD via NHS services across Wales, who were willing to be contacted about future research projects. Findings from qualitative interviews conducted with this sample are reported in Paper 4.

c) Parents in a high-risk country (South Africa) who have been exposed to multiple traumatic events. Parents were members of a community in Khayelitsha, a township located outside of Cape Town. A mixture of opportunity and snowball sampling was used in order to identify and recruit parents (Heckathorn, 2011; Robinson, 2013). Findings from qualitative interviews with this sample are reported in Paper 5.

1.7. Outline of Papers

The five papers included in this thesis aim to investigate the impact of parental PTSD on parenting outcomes through a multi-methodological approach. The intention of each paper is to address gaps in the literature and advance our current understanding of how and why parental PTSD impacts on the parent as well as the family dynamic. In the following section, an overview of the specific aims and research questions of each paper has been provided.

1.7.1. Paper 1: The Impact of Parental Posttraumatic Stress Disorder on Parenting – A Systematic Review

Previous research has demonstrated a growing interest in the field of parental PTSD, with particular focus on how PTSD may impact on parenting outcomes. However, currently the literature is fragmented. Therefore, Paper 1 reports a systematic review conducted in order to examine the current evidence base within the parental PTSD field, regarding the question of whether or not parental PTSD has an impact on parenting outcomes.

1.7.2. Paper 2: Investigating the Development and Maintenance of Posttraumatic Stress Symptoms in Parent-Child Dyads Following a Child's Accidental Injury: A Longitudinal Study

Results from Paper 1 suggest a predominant focus on samples of parents who have directly experienced a trauma, but little is understood about indirect trauma; if parents are vulnerable to developing PTSD following their child's direct exposure to trauma, what the impact of the trauma on the child's mental health may have on the parent, and how this may impact parenting outcomes. Theoretical models (Cook & Kenny, 2005; Deater-Deckard, 2004) have suggested a potential bi-directional influence of mental health; whereby, the parent's mental health may influence the child's psychological outcomes and the child's mental health may also affect the parent's psychological outcomes. Findings from Paper 1 also highlighted a gap in understanding about the impact to parental mental health following an indirect trauma. Therefore, Paper 2 conducted a cross-lagged regressive model in order to examine the cross-over effects of the parent and child's mental health on one another over a six-month period, following a child's accidental injury requiring admittance to an accident and emergency department.

1.7.3. Paper 3: Investigating the Effect of Parent Mental Health on Observed Parenting Behaviours Following Child Trauma Exposure

Findings from Paper 2 highlight that parents are vulnerable to developing mental health difficulties following an indirect trauma, and that these are relevant to child adjustment. However, it is unclear how parent mental health may impact on parenting behaviours following trauma in this context. Findings from Paper 1 highlight that research within the parental PTSD field has quantitative self-report measures to investigate a correlative relationship between parental mental health and impaired parenting behaviours. However, self-report measures may not always produce the most accurate information. Therefore, Paper 3 sought to investigate the impact of parental mental health on parenting

behaviours across two tasks; a trauma-focused narrative discussion between the parent and the child, and a non-trauma specific problem-solving task.

1.7.4. Paper 4: Qualitative Study Investigating UK Parents' Experiences of Trauma Exposure

Some unexpected findings from Paper 3 emphasise the lack of understanding around the lived experiences of parents with PTSD; with little insight into how parents feel their PTSD has impacted them, their parenting and their wider family dynamic. Findings from Paper 1 also highlighted the lack of qualitative exploration of parent's experiences following trauma. Paper 4 sought to explore the experience of a group of trauma exposed parents residing in the UK, classified as a low-risk context using qualitative interviews to gain a more in-depth understanding of the challenges faced by a heterogenous trauma sample of parents with PTSD.

1.7.5. Paper 5: The Impact of Parental Trauma on Mental Health and Parenting: A Qualitative Study in a High Adversity South African Community

Papers 2, 3 and 4 provide a good understanding of how and why parental PTSD impacts parents and their parenting, with samples of parents reside in a high-income country, low risk context. However, a lack of research studying parents residing in more potentially high-risk contexts, particularly within low-middle income countries (LMICs).

To address this gap, Paper 5 reports a qualitative investigation of parents' experiences of trauma and PTSD within a South African township. The aim of the paper was to gain a more in-depth understanding of how parental trauma had impacted the parent and their parenting for parents living in a high-risk, LMIC environment.

Chapter 2.

Paper 1: The Impact of Parental Posttraumatic Stress Disorder on Parenting: A Systematic Review

Manuscript is published in the European Journal of Psychotraumatology

Chapter Rationale

Thus far in the parental posttraumatic stress literature, studies have focused on reviewing the literature from one specific type of trauma (e.g., military or refugee populations) in order to understand whether PTSD as a result of that trauma exposure has a subsequent impact on parenting behaviours. However, this limits our understanding of how PTSD is likely to impact parenting behaviours across trauma populations. Therefore, Paper 1 aimed to synthesise all available evidence on parental PTSD, not limited by trauma type, in order to understand more generally whether parental PTSD has an impact on parenting.

Statement of Authorship

This declaration concerns the article entitled:			
The Impact of Parental Posttraumatic Stress Disorder on Parenting: A Systematic Review			
Publication status (tick one) **Draft manuscript** [ ] **Submitted** [ ] **In review** [ ] **Accepted** [ ] **Published** [X]			
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Candidate's contribution to the paper (provide details, and also indicate as a percentage)	The candidate contributed to / considerably contributed to / predominantly executed the… **Formulation of ideas:** Hope Christie made considerable contributions to the formulation of ideas of this study (85%). **Design of methodology:** Hope Christie made considerable contributions towards the methodological design of the current study (70%). **Experimental work:** The experimental work, including the literature searching, acquiring data, analysis and interpretation of data was predominantly conducted by Hope Christie (85%). **Presentation of data in journal format:** Hope Christie was predominantly responsible for presenting the data into a journal format (90%).		
Statement from Candidate	This paper reports on original research I conducted during the period of my Higher Degree by Research candidature.		
Signed		**Date**	

The Impact of Parental Posttraumatic Stress Disorder on Parenting: A Systematic Review

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Abstract

Posttraumatic stress disorder (PTSD) is a serious and debilitating disorder that can develop following exposure to a traumatic event. Where parents develop PTSD, it may have an impact on their parenting role. The objective of this review was to review on the existing evidence base on parental PTSD, examining whether parental PTSD has an impact on key parenting domains. A comprehensive web-based search identified 27 quantitative studies that examined parental PTSD in relation to parenting domains. Several parenting domains were investigated including: parenting satisfaction, parenting stress, the parent-child relationship, and specific parenting practices. Sample sizes ranged from 19 to 3931 parents. A range of parental traumas were investigated, including traumatic birth experiences, military trauma, and intimate partner violence. Findings indicated associations between parental PTSD and several domains of parenting, but there were inconsistencies across studies. Findings suggested that parental PTSD is associated with impaired functioning across a number of parenting domains, including increased levels of parenting stress, lower parenting satisfaction, less optimal parent-child relationships, and more frequent use of negative parenting practices, such as overt hostility and controlling behaviours. However, methodological limitations across the literature as a whole limited the potential to infer causal impacts of PTSD on parenting. Further study is also needed to advance our current understanding around the impact of different trauma types on parenting domains.

Introduction

Posttraumatic stress disorder (PTSD) may develop following a traumatic event, and is estimated to have a lifetime prevalence of 7.8% (Kessler et al., 1995). A considerable number of adults who develop PTSD are also parents with dependent children (Lauterbach et al., 2007; Leen-Feldner et al., 2011). Psychological difficulties in adults may impair parenting capabilities. PTSD in particular can cause negative alterations to an individual's behaviour, including increased anger and reactivity, as well as social withdrawal (APA, 2013). Further, as highlighted by a wealth of research, trauma has the potential to impact across generations which may also cause subsequent psychological, social and emotional difficulties in children (Berg-Nielsen, Vikan, & Dahl, 2002; van Ee, Kleber & Jongmans, 2016). As such, it is essential to understand the potential consequences of PTSD for parental functioning. Recent syntheses of relevant aspects of the literature have considered the potential detrimental role of parental PTSD from several standpoints, including in refugee families (van Ee et al., 2016); for military veterans and their families (Creech & Misca, 2017); and in relation to children's outcomes in the context of parental PTSD (Morris, Gabert-Quillen & Delahanty, 2012; Leen-Feldner et al., 2013; Lambert, Holzer & Hasbun, 2012). However, there remains a lack of a comprehensive and critical synthesis of the parental PTSD literature relating to possible impacts on parenting domains that cuts across trauma populations. An understanding of whether impacts of parental PTSD are present that generalize across different trauma types is thereby limited.

The aim of the current systematic review was to examine the evidence base in the field of parental PTSD in order to address the research question: what impact does parental PTSD have on parenting domains and the parent-child relationship? Given the relatively preliminary stage of literature in this area, a broad definition of parenting domains was applied (Berg-Nielsen, Vikan, & Dahl, 2002; Collins, Maccoby, Steinberg, Hetherington, &

Bornstein, 2000; O'Connor, 2002; Sears, Maccoby, & Levin, 1957). Thus, we included studies that indexed: the parent's behaviour towards their child (e.g. warmth/support, hostility, overprotection); the quality of the parent child-relationship (including attachment styles, and bonding impairments); and the parent's thoughts and feelings about their own parenting ability (parenting satisfaction versus stress).

Method

A protocol for the review was published via PROSPERO (registration number: CRD42016040175).

Literature Search Strategy

Searches were conducted using PubMED, PsycInfo, PsycNet, and Published International Literature of Traumatic Stress (PILOTS) for articles published between 1980 (when PTSD was first introduced in the DSM) and December, 2017.

The following search terms were used: 'posttraumatic stress disorder*' OR 'post-traumatic stress disorder*' OR 'post traumatic stress disorder' OR 'PTSD', AND 'parent*' OR 'parental*' OR 'mother*' OR 'father*' OR 'maternal*' OR 'paternal*' OR 'caregiver*'. The search terms were broad in order to conduct a comprehensive search of the research field. In addition, reference lists of relevant review papers and book chapters were manually searched for articles that may not have been identified in the literature search. Four key authors were also contacted to request any further published or unpublished studies that could potentially be included. A Preferred Reporting Items for Systematic Reviews and Meta-Analyses (Moher, Liberati, Tetzlaff, Altman, & Group, 2009) flowchart is provided in Figure 2.1.

The first author conducted the literature search, screened articles and extracted data. Two authors (HC and FAC) discussed the inclusion and exclusion of 25 randomly selected papers, from any stage of the screening process, in order to assess reliability, consistency and academic rigour. Cohen's kappa indicated a substantial level of agreement between raters (k = 0.684, p = 0.001). Any disagreements were discussed with two additional authors, following which a consensus was reached. Following a consensus agreement on inclusion or exclusion of articles, the first author then revisited previously excluded articles in order to ensure that no other articles previously excluded should now be included.

Eligibility Criteria

Studies were included if they: a) had used a measure of parenting; b) used a validated measure of PTSD; and c) included parents who had PTSD during their offspring's childhood, with childhood defined as 0-18 years of age. Studies were excluded if they: a) did not have *either* a comparator group that did not have PTSD *or* correlational evidence of associations between PTSD symptom severity and parenting outcome scores; b) had recruited parents based on knowledge that they were abusing their children (as selection of sample based on serious parenting concerns would clearly introduce bias); c) recruited parents on the basis of another disorder being present (i.e., PTSD was only studied when comorbid with another specific problem), as this precludes conclusions about potential for causal impact of PTSD in particular.

All included articles underwent a quality assessment using the Hawker's Checklist (Hawker, Payne, Kerr, Hardey, & Powell, 2002), which is designed to limit bias that may be introduced while synthesizing evidence. The checklist provides a standardized list in order to score and rate the overall quality of papers based on nine categories, on a scale of 0 (poor quality) to 4 (good). We used eight of the nine categories, covering clarity (e.g., "was there a

good background and clear statement of the aims of the research?"), quality of the results, and the generalizability and transferability of findings (e.g., "Has the context and setting been described sufficiently to allow comparison with other contexts and settings?"). Ratings relating to title and abstract clarity were excluded, as they were judged not to provide a relevant indication of quality in the current synthesis. Results of these assessments can be found alongside the study characteristics in the results section, presented as a proportion of the total possible score of 32 (see Hawker et al., 2002 for more information).

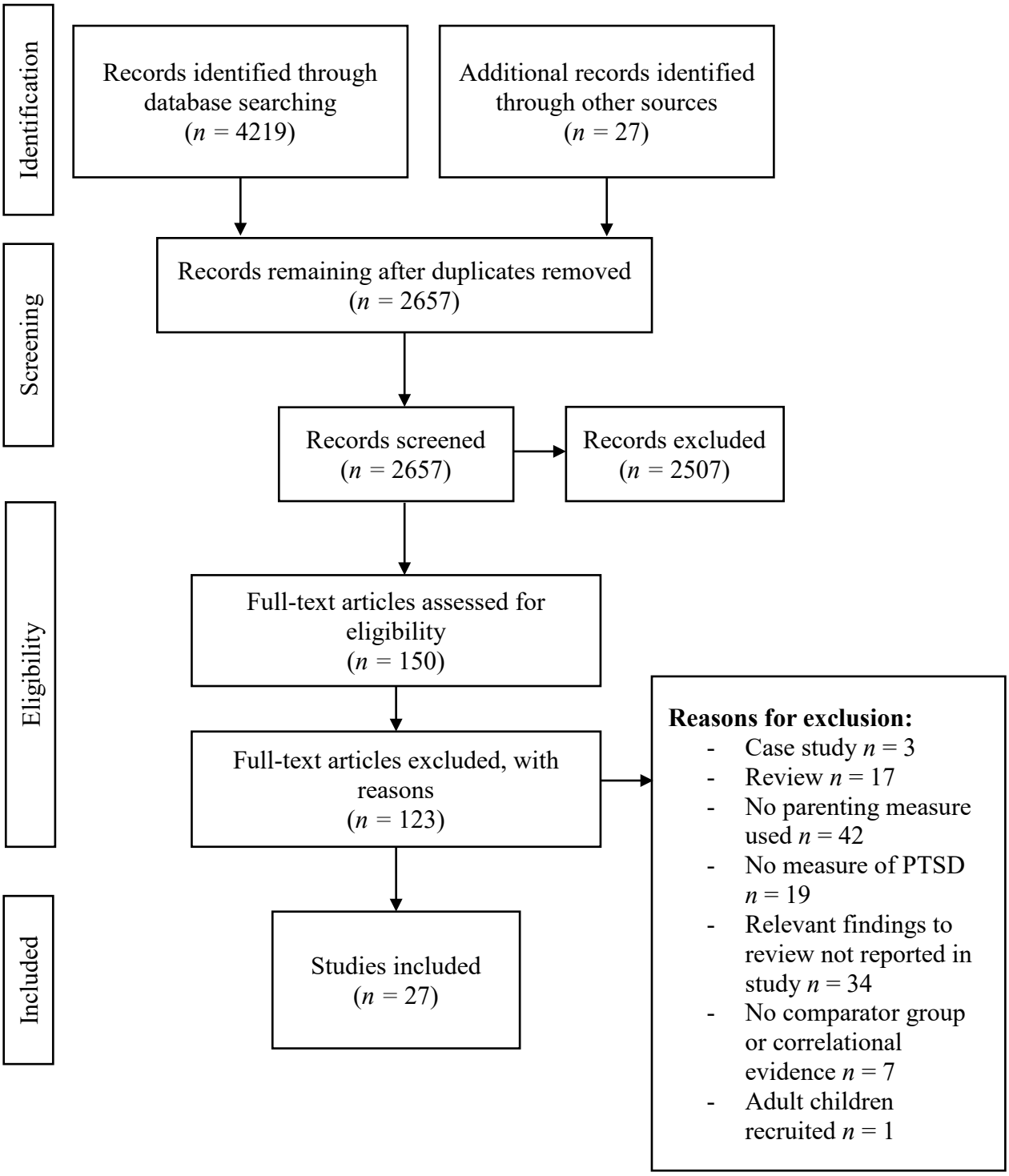

Figure 2.1. Flow chart of study selection process

Results

Overview of Reviewed Studies

The 27 studies identified investigated parenting domains including: parenting satisfaction and stress, the parent-child relationship (both bonding and attachment), and a range of specific parenting practices (e.g. overprotection and hostility), each of which are discussed in detail below. All studies were quantitative, with sample sizes ranging from 19 to 3931. Parental traumas included birth experiences (k=6 studies), military trauma (k = 9), intimate partner violence (IPV; k = 3), learning that their child had been maltreated (k = 1), and unspecified mixed traumas (k = 8). A comprehensive summary of each study can be found in Table 2.1.

Table 2.1

Summary of studies included in review.

Reference (Study type)	**Sample size**	**Age years (*M*, range)**	**Comparator group(s)**	**Parenting outcome**	**Measures**	**Trauma Type**	**Quality Score**
1. Ayers et al. 2007 (Cross-sectional)	64 couples	32.4	Severe PTSD symptoms *n*= 4 couples	Bonding	Adapted IES, BMIIS	Birth	47%
2. Berz et al. 2008 (Cross-sectional)	60 mothers	49.1	Correlational study	Satisfaction	M-PTSD, Parenting Satisfaction Scale	Military	63%
3. Bosquet Enlow et al. 2014 (Cross-sectional)	45 dyads (mothers)	27.04	Elevated PTSD symptoms *n* = 12; Non-elevated PTSD symptoms *n* = 33	Attachment	PCL-C, SSP	Various, unspecified	97%
4. Chemtob & Carlson, 2004 (Cross-sectional)	25 dyads (mothers)	35.4	PTSD grp *n* = 11; No PTSD grp *n* = 13	Inconsistent discipline	PTDS, Parenting Scale	IPV	84%
5. Chemtob et al., 2013 (Cross-sectional)	97 dyads (mothers)	22-30	Correlational study	Parenting stress	PDS, PSI-SF	Various, unspecified	75%

6. Cohen et al. 2011 (Cross-sectional)	477 fathers	46.9 CSR grp; 47.59 non-CSR grp	PTSD grp *n* = 124; No PTSD grp *n* = 353	Satisfaction	PTSD Inventory, PFQ	Military	88%
7. Creech et al. 2016 (Cross-sectional)	134 mothers	37.11	Correlational study	Satisfaction	PCL, Parenting Sense of Competence Scale	Military	81%
8. Cross et al. 2017 (Cross-sectional)	112 dyads (mothers)	Not provided	Correlational study	Child abuse potential	MPSS, CAPI	Various, unspecified	81%
9. Davies et al. 2008 (Cross-sectional)	211 mothers	26.13 FS; 30.40 PS; 30.21 NS	Fully symptomatic (FS) *n* = 8; Partially symptomatic (PS) *n* = 45; Non-symptomatic (NS) *n* = 158	Overt hostility	SCID-PTSD, PTSDQ, IES, MORS-SF, MPAS	Birth	87%
10. Forcada-Guex et al. 2011 (Cross-sectional)	72 dyads (mothers)	Not provided	Control grp *n* = 25; Low PTSS *n* = 31; High PTSS *n* = 16	Attachment	PPQ, WMCI, 10 min Interactive Play Session	Birth	69%
11. Gewirtz et al. 2010 (Longitudinal)	468 fathers	36.36	Correlational study	Child abuse potential	PCL-M, APQ-9	Military	75%

12. Hershkowitz et al. 2017 (Longitudinal)	200 parents	37.20 (23 – 59)	Correlational study	Child abuse potential, Satisfaction	PDS, APQ-9, PSQ	Various, unspecified	78%
13. Ionio & Di Blasio, 2014 (Cross-sectional)[1]	19 mothers	32.23	Clinical PTSD *n* = 4; No PTSD *n* = 15	Controlling behaviour	PPQ, SFP	Birth	66%
14. Jobe-Shields et al. 2016 (Cross-sectional)	96 caregivers	Not provided	No distress *n* = 73; PTSD grp *n* = 7; Depression grp *n* = 10; PTSD and Depression *n* = 6	Inconsistent discipline	PSS-SR, APQ	Indirect	75%
15. Jordan et al. 1992 (Cross-sectional)	1200 fathers	PTSD grp=39.8; Non-PTSD grp = 41.81	PTSD grp *n* = 319; No PTSD grp *n* = 871	Satisfaction	M-PTSD, PPI	Military	66%
16. Lauterbach et al. 2007 (Cross-sectional)	Unclear	Unclear	Unclear	Parent-Child Relationship	DIS, PCRQ	Various, unspecified	59%
17. Leen-Feldner et al. 2011 (Cross-sectional)	2228 mothers; 1703 fathers	50.02	PTSD grp *n* = 286; No PTSD grp *n* = 3645	Overt hostility	WHOCIDI, Parental Aggression Scale	Various, unspecified	87%

18. Marsanic et al. 2014 (Cross-sectional)	244 dyads (fathers)	45.7	PTSD grp *n* = 122; No PTSD grp *n* = 122	Controlling behaviour	YSR, FAD, PBI	Military	71%
19. Parfitt & Ayers, 2009 (Cross-sectional)	126 mothers; 56 fathers	Mothers 30.92; Fathers 32.58	PTSD grp *n* = 31; No PTSD grp *n* = 121	Parent-Child Relationship	PDS, PBQ	Birth	66%
20. Salloum et al., 2015 (Cross-sectional)	43 dyads	38.78 (24 – 73)	Correlational study	Parenting stress	SCID-RV, PSI-SF	Various, unspecified	87%
21. Samper et al. 2004 (Cross-sectional)	205 fathers	41.44 (33 – 62)	Correlational study	Satisfaction	M-PTSD, Parenting Satisfaction Scale	Military	66%
22. Schechter et al. 2015 (Cross-sectional)	56 mothers	34	PTSD grp *n* = 34; No PTSD grp *n* = 22	Controlling behaviour	CAPS, PCL-S, 5 min free play	IPV	72%
23. Schechter et al. 2010 (Cross-sectional)	74 mothers	29.39	PTSD grp *n* = 17; Subthreshold PTSD symptoms *n* = 30; No PTSD *n* = 27	Limited emotional availability	CAPS, PCL-S, AMBI, CJAS	IPV	69%
24. Solomon et al. 2011 (Cross-sectional)	473 parents	46.9 CSR grp; 47.59 non-CSR grp	PTSD grp *n* = 123; No PTSD grp *n* = 350	Overall poor parenting	PTSD-I, Parental Functioning	Military	56%

25. Suttora et al., 2014 (Cross-sectional)	243 mothers	34.2 Preterm grp; 34.4 full-term grp		Parenting stress	PPQ, PSI-SF	Birth	65%
26. Vukovic et al. 2015 (Cross-sectional)	324 dyads (fathers)	Not provided	PTSD grp *n* = 108; Partial PTSD grp *n* = 108; No PTSD grp *n* = 108	Controlling behaviour	YSR, PBI	Military	75%
27. Wilson et al., 2017 (Cross-sectional)	52 mothers	34.77	Correlational study	Parenting stress	PCL-C, PSI-SF	Various unspecified	81%

Note. [1] Although the overall study design was longitudinal, analyses relevant to this review were wholly cross-sectional. AMBI = The Atypical Maternal Behaviour Instrument; APQ = Alabama Parenting Questionnaire; APQ-9; Alabama Parenting Questionnaire (short form); BMIIS = Bethlehem Mother-Infant Interaction Scale; CAPI = Child Abuse Potential Index; CAPS = The Clinician Administered PTSD Scale; CJAS = Coordinated Joint Attention Scales; DIS =Diagnostic Interview Schedule; IES = Impact of Events Scale; MORS-SF = The Mothers' Object Relations Scale-Short Form; MPAS = The Maternal Postnatal Attachment Scale; M-PTSD = Mississippi Combat Scale; PBI = Parental Bonding Instrument; PBQ = Postpartum Bonding Questionnaire; PCFS = Perceived Child Functioning Scale; PCL-C = Posttraumatic Stress Disorder Checklist - Civilian; PCL-M = The Posttraumatic Stress Disorder Checklist - Military; PCL-S = Post-traumatic Symptom Checklist - Short Version; PCRQ = Parent-Child Relationship Quality; PDS = Posttraumatic Diagnostic Scale; PFQ = Parental Functioning Questionnaire; PPI = Parental Problems Index; PPQ = The Perinatal Posttraumatic Stress Disorder Questionnaire; PSI-SF= Parenting Stress Index-Short Form; PSQ = Parenting Satisfaction Questionnaire; PSS-SR = Posttraumatic Stress Disorder Symptom Scale–Self Report; PTSD-I = Posttraumatic Stress Disorder Inventory; PTSDQ = Posttraumatic Stress Disorder Questionnaire; SCID-PTSD = The Structured Clinical

Interview for DSM-IV Axis I Disorders; SFP = Still Face Paradigm; SSP = Strange Situation Procedure; WHOCIDI = The World Health Organization World Mental Health Composite International Diagnostic Interview; WMCI = The Working Model of the Child Interview; YSR = Youth Self Report

Parenting Satisfaction

Parenting satisfaction encompasses perceptions of parenting efficacy, and enjoyment gained from parenting (Cohen et al., 2011). Six studies investigated the impact of PTSD on parenting satisfaction, all but one used a military sample (Hershkowitz et al., 2017). Studies were rated moderate to high in terms of quality (range 20-28 out of 32, corresponding to .63-.88).

Jordan et al. (1992) found that veteran fathers with PTSD (n = 231) reported lower parenting satisfaction on a brief self-report measure compared to veteran fathers without PTSD (n = 736), although the effect size was small (*Phi* = 0.27). Similarly, Cohen et al. (2011) investigated the impact of paternal PTSD in a sample of 477 veterans. Once again, fathers who suffered from PTSD (n = 124) self-rated their parenting satisfaction significantly lower than those who did not have PTSD (n = 353). Samper et al. (2004) reported similar findings with a sample of male veterans (n = 250) when investigating associations between PTSD symptom clusters and parenting satisfaction, using a five-item measure. Overall PTSD symptom scores (r = -0.27), and avoidance scores (r = -0.30) were significantly negatively associated with parenting satisfaction, with small to medium effect sizes, but there were no equivalent associations for hyperarousal or re-experiencing symptoms. Effects were retained controlling for factors including major depression, alcohol abuse, and intimate partner violence. Berz et al. (2008) similarly studied a sample of female veterans (n = 60) using the same five-item parenting satisfaction measure, and found avoidance (r = -0.23) and hyperarousal (r = -0.29), but not re-experiencing, to be inversely associated with satisfaction scores. However, contrary to previous findings, Creech et al. (2016) found no significant associations between military veteran mothers' (n = 64) PTSD symptom scores and their parenting satisfaction scores.

While this body of work has been predominantly military focused, Hershkowitz et al. (2017) found that in a sample of trauma exposed parents from the general population (N = 200), PTSD symptoms showed an inverse association with parenting satisfaction (r = -0.46, indicating a medium effect), but this effect was eliminated once factors including depression, age, and number of children were included in the model. Overall, the small body of work in this area is consistent in suggesting that veteran fathers may experience reduced satisfaction in their parenting role due to the presence of PTSD, although this impact is small in magnitude. More work is needed to establish whether similar effects apply in other populations.

Parenting Stress

Parenting stress can be defined as the "aversive psychological reaction to being a parent" and is noted to potentially be related to parenting behaviours and child outcomes (Deater-Deckard, 1998, p.315). We identified four studies that investigated the impact of parental PTSD on parenting stress following birth trauma (Suttora et al., 2014) and mixed traumas (including domestic violence, sexual abuse, physical abuse; Chemtob, Gudino, & Laraque, 2013; Salloum et al., 2015; Wilson et al., 2017). Parenting stress was consistently measured using the short form of the Parenting Stress Index (PSI-SF; Abidin, 1995). The mean quality rating for papers was 24.75 (range .65 to .87). In a small, heterogenous trauma sample of mother-child dyads (N = 43), Salloum et al. (2015) found no significant associations between PTSD symptom scores and the three PSI-SF subdomains of parental distress, parent-child dysfunction or the parent's perception of difficult behaviour from the child. By contrast, three studies that studied mothers using only the total PSI-SF score each found links with PTSD. Suttora et al. (2014) studied mothers who had given birth to a pre-term infant (n = 87) and mothers of full-term infants (n = 156) and found that PTSD symptoms mediated an association between birth status and total parenting stress. Wilson et

al. (2017), in a mixed trauma sample of mother-child dyads (N = 52), found that PTSD symptoms were significantly associated with parenting stress score, with medium effect (r = 0.30). Lastly, in a community sample of mothers, a proportion of which reported trauma exposure, Chemtob et al. (2013), compared groups with no diagnosis (n = 70), PTSD-only (n = 6), depression only (n = 11), and co-morbid depression and PTSD (n = 10) based on questionnaire scores. All diagnostic groups reported elevated parenting stress, with no differences between them. Findings are limited by the small sample and the lack of a trauma control group. Further research is needed to tease apart the constructs measured by the PSI which include child as well as parent and relationship characteristics, in order to provide more clarity in this area.

Parent-Child Bonding and Relationships

Six studies focused on the impact of parental PTSD on the parent-child relationship, including measures of relationship quality and the mutual parent-child emotional bond, the attachment that the child develops for the parent, and the representation of the attachment held by the parent in relation to the child. Four studies utilized birth trauma samples (Ayers, Eagle, & Waring, 2006; Ayers et al., 2007; Davies et al., 2008; Forcada-Guex et al., 2011; Parfitt & Ayers, 2009), and two used samples from cohort studies that had experienced various, unspecified traumas (Bosquet Enlow et al., 2014; Lauterbach et al., 2007). Quality ratings for studies ranged from poor (.27) to excellent (.97).

Several studies focused on parental perceptions of their relationship with their child. An internet-based study of parents focused on negative birth experiences (N = 152; 126 women) found symptoms of PTSD to be correlated with more self-rated difficulties in the bond with their baby (r = .36; Parfitt & Ayers, 2009). When symptoms of depression were adjusted for in a structural equation model, a small independent effect of PTSD was retained

(d = .20). Symptoms of PTSD were also associated with more problematic birth characteristics, but these were not accounted for in analyses. Similarly, mothers and fathers deriving from a cohort study who met the diagnostic criteria for PTSD related to mixed traumas (n = 323) were found to rate their relationship with their child as being significantly poorer than parents without PSTD (n = 5884) but the effect was very small (n^2 = 0.005; Lauterbach et al., 2007). The validity of these findings is limited by the use of a single item measure of the parent-child relationship. Importantly, the study also lacked a trauma exposed control group. By contrast, Ayers et al. (2007) studied 64 couples post-birth and found no associations between PTSD symptoms in either mother or father and a poorer bond with their baby. However, overall symptoms were low in this study, which did not focus specifically on traumatic birth experiences. Further, the quality score for Ayers et al. (2007) was low due to this and other factors, including the measurement of only two of the four symptom clusters of PTSD.

Several studies in this area examined parental attachment to the child. In a study of maternal self-reported attachment perceptions, Davies et al. (2008) found that post-birth symptoms of PTSD in mothers (N = 211) were moderately associated with a perceived poorer quality of attachment to their infant at 6-weeks postpartum. However, controlling for the effect of postnatal depression eliminated these effects in this sample, the majority of whom had experienced normal deliveries (Davies et al., 2008). Forcada-Guex et al. (2011) compared mothers of pre-term infants with low (n = 31) or high levels (n = 16) of PTSS to mothers of full-term infants (n = 25; i.e., a no trauma group). Overall, fewer mothers with pre-term versus full-term infants were classed as having balanced attachment representations, as measured by the Working Model of the Child Interview. Underpinning this, there was tentative evidence that relative to full-term mothers, mothers in the low PTSS group were more likely to have disengaged attachment representations, whereas those in the high PTSS

group were more likely to have distorted attachment representations. However, no comparisons revealed significant differences between low and high PTSS groups, meaning that PTSS effects were not clearly demonstrated.

One study examined the attachment the infant formed to the parent (Bosquet Enlow et al., 2014). Mothers from low-income backgrounds, 80% of whom reported lifetime exposure to potentially traumatic events, were categorized as PTSD (n = 12) or no PTSD (n = 33) based on questionnaire scores at six months postpartum. Compared to the no PTSD group, infants of mothers in the PTSD group were significantly less likely to have a secure attachment at 6-months (OR = 11.31, indicating a large effect size), and the likelihood of a disorganized attachment classification was particularly elevated (OR = 13.17). Presence of depressive symptoms and extent of trauma history did not appear to account for these effects. The use of the Strange Situation Paradigm (Ainsworth, 1969) to measure attachment was a major strength of this research, but larger scale studies of this type are needed to confirm the findings. Overall, these findings are mixed, suggesting that in some situations parents with PTSD's relationship with their child may be perceived as poorer than those without PTSD. However, the majority of studies have examined this through self-report measures. While insightful, these measures may be influenced by the parent's mental health. As such, more replication of observational studies is required.

Parenting practices

Fifteen studies examined parental PTSD in relation to parenting styles (such as warmth, sensitivity, overprotection, hostility), parenting practices (e.g. reactive or inconsistent discipline), or parents' potential to maltreat their child. Trauma types included intimate partner violence (IPV; Chemtob & Carlson, 2004; Schechter et al., 2010; Schechter et al., 2015), birth trauma (Davies et al., 2008; Forcada-Guex et al., 2011; Ionio & Di Blasio,

2014), military trauma (Maršanić et al., 2015; Solomon et al., 2011; Vuković et al., 2015), learning of your child's maltreatment (Jobe-Shields et al., 2016), and mixed traumas (Leen-Feldner et al., 2011). Overall, the quality ratings of papers were moderate to high (range .56-.87)[1].

Studies using parental self-report. Nine studies examined self-reported discipline practices, measured via interview or questionnaire. The most consistently used measure was the Alabama Parenting Questionnaire (APQ), which includes domains of positive parenting, inconsistent discipline, and poor supervision (Elgar, Waschbusch, Dadds, & Sigvaldason, 2007; Frick, 1991). In the aforementioned population study of parents who had experienced varied traumas (N = 200), Hershkowitz et al. (2017) found overall PTSD scores to be correlated with poorer parenting behaviour scores, based on a combined score from the APQ (r = -0.24, indicating a small effect size). Effects were maintained when depressive symptoms were included in the same model. In a second study using the APQ, caregivers who developed PTSD secondary to their child being sexually abused showed higher levels of inconsistent discipline practices than those without PTSD. Effects were independent of caregiver depression status, and were present both based on caregivers' own report and on reports of their child (n^2 = 0.11; medium effect) (Jobe-Shields et al., 2016). However, for other parenting practices (positive involvement, supervision/monitoring, positive discipline, corporal punishment) no significant PTSD effects were observed. In a key longitudinal study of 468 national guard fathers, Gewirtz et al. (2010) demonstrated that an increase in PTSD symptoms from initial assessment to 1-year follow up was a predictor of less optimal parenting behaviours on the APQ at 1-year (*SEM standardized beta* = - .36). Basic correlations were also presented, and these suggested that effects were present for each PTSD

[1] A subset of findings from studies have been reported in previous sections (Chemtob et al., 2013; Forcada-Guex et al., 2011; Hershkowitz et al., 2017)

symptom cluster and mainly related to negative (inconsistent discipline/poor supervision) versus positive parenting practices. In mapping symptom change onto parenting outcomes, this important study moves a step closer to demonstrating causal effects, but the authors note that baseline measurement of parenting would be have been ideal in this respect.

Three studies examined a range of parenting practices using measures other than the APQ. In a study examining dysfunctional discipline practices in mothers who had experienced IPV, findings indicated mothers with PTSD (n = 11) reported significantly greater use of overall dysfunctional discipline strategies (d = 0.95), and reactive discipline in particular (d = 1.15), compared to exposed mothers with no PTSD (n = 14) (Chemtob & Carlson, 2004). Estimated effect sizes were large (calculated by this first author based on data reported in the publication). However, no significant differences were found between mothers with and without PTSD on laxness (e.g. neglect of the child), and verbosity (e.g. use of verbal controls). In one of the larger studies identified, Solomon et al. (2011) measured a range of parenting practices in veteran fathers using a five-item self-report measure, with items indexing: use of physical or verbal violence; extent of father's involvement; cooperation from both parents in raising the child; and ability to meet the physical and emotional needs of the child. A single, total score was calculated. Veteran fathers with PTSD (n = 123) rated their own parenting behaviour as significantly lower on this scale compared to those without PTSD (n = 350). The effect size reported was large (d = 0.86; calculated by the first author). Although the scale used in this study showed good internal consistency, the fact that it combined divergent domains limits interpretability.

Three studies focused on overtly negative parenting practices in the context of parental PTSD. In a large study of parents exposed to varied traumas (Leen-Feldner et al., 2011), those with PTSD (n = 286) were significantly more likely to endorse aggressive parenting practices than parents without PTSD (n = 3644). Specifically, 72.5% of parents

with PTSD reported using moderately aggressive parenting practices (e.g. spanking, slapping, grabbing, or pushing), compared to 62.5% of parents without PTSD (*Cramer's* $\varphi = 0.07$; indicating a small effect size); and use of severely aggressive parenting practices (e.g. kicking, or hitting with fist) was reported by 4.4% of parents with PTSD versus 2.4% of parents without ($\varphi = 0.22$; small effect). The large sample was a particular strength of this study, but no potential confounds were considered in analyses and a trauma-exposed control group was not specified. Cross et al. (2017) examined the impact of PTSD from lifetime trauma exposure on child abuse potential in low-income mothers ($n = 112$), 97% of whom reported trauma exposure. Findings indicated a significant correlation between mother's PTSD scores and scores from the Child Abuse Potential Index (CAPI; Milner, 1994), with a large effect size ($r = 0.57$). Effects were maintained controlling for extent of maternal trauma exposure ($\beta = .48$). Lastly, in the previously described community sample of mothers ($N = 97$), a proportion of whom had experienced traumas, Chemtob et al. (2013) found that mothers with comorbid depression and PTSD reported elevated levels of physically ($\eta^2 = 0.17$) and psychologically abusive ($\eta^2 = 0.19$) behaviours[2] towards their children, indicating large effect sizes, compared to mothers with no psychopathology diagnosis, depression-only and PTSD-only. No differences between groups were found regarding child neglect.

Studies using child report of parenting. Only two studies asked children themselves to report on their parenting experiences, which has the advantage of limiting the potential for informant bias. In a sample of adolescents who had a veteran father, those whose father was diagnosed with PTSD ($n = 122$) perceived them as providing significantly less care (*Phi* = 0.37), and using significantly more affectionless control (*Phi* = 0.24), compared to those without a paternal PTSD diagnosis ($n = 122$; Marsanic et al., 2014). No significant

[2] As measured by the parent-to-child version of the Conflict Tactics Scale (CTS-PC)

differences were found between groups regarding affectionate constraint or neglectful rearing practices. In a second study by the same research group, Vukovic et al. (2015) also studied adolescents of veteran fathers. Adolescents of fathers with full PTSD (n = 108) rated their fathers as significantly more controlling compared to adolescents of fathers with partial PTSD (n = 108), and no PTSD (n = 108). Furthermore, paternal care was scored significantly lower in the full and partial PTSD group compared to the non-PTSD group. Effect sizes reported ranged from moderate to large (n^2 = 0.068 – 0.195). Although these studies provide a consistent picture of less caring and more controlling paternal behaviour in association with PTSD, it should be noted that adolescents were recruited from a psychiatric clinic in each case, and findings may not generalize to other samples. Importantly, adolescents also reported on maternal parenting, and their perceptions of maternal warmth and care were similarly related to paternal PTSD. This suggests that paternal PTSD associations with parenting may have an underlying cause other than direct symptom effects.

Studies utilizing direct observations of parenting behaviour. Four studies also examined parenting via direct observation. Although observational assessments are considered the gold standard in the parenting field, studies using this approach tended to have modest sample sizes. The focus has been on infancy and childhood, with infancy studies exclusively examining birth-related distress. In their small longitudinal study (N = 19), Ionio et al. (2014) found that higher scores of maternal PTSD two-months post-birth were cross-sectionally correlated with parenting during the still face paradigm (2-minute blocks of normal play, followed by still face, then a "reunion" episode; see Tronick et al., 1978). Although some associations were identified between PTSD and parenting during both play and reunion phases, only one of these was consistent across both (making more mouth sounds; play $AdjR^2$ = 0.31; reunion $AjdR^2$ = 0.24), which was coded as negative behaviour

suggesting intrusiveness. Moreover, only nine significant associations were found in total, from an estimated 72 correlations carried out. Given the small sample, evidence and lack of consistent effects, this study provides little evidence of parental PTSS influences on parenting.

A second study compared mothers who had given birth to pre-term infants, who were classified as PTSD (n = 16) versus no PTSD (n = 31) based on a self-report questionnaire, and mothers of full-term infants (n = 25) (Forcada-Guex et al., 2011). During a 10-minute dyadic interaction at infant age 6 months, pre-term mother-infant dyads in the maternal PTSD group were more likely to be classed as controlling mother-compliant infant than no PTSD or full-term groups. In addition, pre-term dyads were less likely to be classed as sensitive mother-cooperative infant than full-term dyads, regardless of PTSD status, whereas groups did not differ on the frequency of 'heterogeneous' interaction patterns (Forcada-Guex et al., 2011). Although suggestive, findings are difficult to interpret as parenting style was combined post-hoc with infant responding in all analyses. A further limitation was reliance on retrospective parental reporting of perinatal symptoms at 18-months postpartum.

Two observational studies examined IPV samples. In one of the larger observational studies, mothers exposed to IPV (n = 17 meeting diagnostic criteria for PTSD; n = 30 with sub-threshold symptoms; n = 27 with no PTSD symptoms) were observed during an interaction with their child aged 12 to 48 months (Schechter et al., 2010). Coding of 'atypical' maternal behaviours (e.g. withdrawal, lack of affective communication and hostility) found no significant differences between groups. Nonetheless, exploratory post-hoc analyses found that maternal PTSD severity predicted the amount of time the child attempted unsuccessfully to engage the mother in joint attention after (but not before) a separation episode (β = 0.38, $p < 0.001$). This finding must be considered in the context of the wider set of null results from this study. In a more recent study by the same group, utilizing a similar

method/sample, Schechter et al. (2015) found during a 5-minute free play session with their child, mothers with IPV-PTSD or subthreshold IPV (n = 34) were significantly less sensitive, and significantly more controlling, compared to mothers who were IPV exposed but did not have PTSD (n = 22). Effect sizes were moderate to large (controlling r = 0.42; sensitivity r = -0.51, respectively). This study used a well-validated parenting index, which was a strength. However, there were some limitations, including the inclusion of subthreshold cases in the PTSD group and associated lack of information about the origin of cut-offs applied to define this group, and the identification of differences in extent of trauma exposure in PTSD versus no PTSD groups that were not controlled for in analyses.

Overall, it is apparent that there is a mix of methodological approaches to investigating the impact of parental PTSD on specific parenting practices. While results generally suggest that parental PTSD is associated with use of more negative parenting practices, studies still have a heavy reliance on parental self-report, which may not provide an accurate representation. However, as the most investigated area, results in relation to parenting practices provide evidence across multiple trauma types, which is positive when generalizing to other trauma exposed populations.

Discussion

The available evidence suggests that parental PTSD is associated with elevated levels of parenting stress, as well as being associated with detrimental effects to parenting satisfaction, the parent-child relationship, and the endorsement of negative parenting practices. Such effects are reported relatively consistently, albeit with substantial variability in terms of what is indexed under each of these constructs. At the same time, there are some limitations to the field, which mean that it would be premature to draw firm conclusions.

Studies reviewed provided relatively consistent evidence that parental PTSD is associated with reduced parenting satisfaction, albeit with some contradictory findings. Effect sizes, as well as sample sizes, were generally small, and positive findings derived predominantly from studies of male military veterans – further evidence is needed to establish their generalizability. While there is clearly potential for reduced parenting satisfaction to result in actual impairments in the parent-child relationship, one study to address this failed to identify a pathway from satisfaction to parenting behaviour (Hershkowitz et al., 2017), and this question was generally underexplored. Even if direct implications for parental behaviour and/or child outcomes are not established, poor parental satisfaction seems likely to compound parental distress, which is important in clinical terms (Sherman et al., 2015). The consequences of reduced parenting satisfaction in the context of PTSD warrant further examination.

While only a small number of studies included investigated the impact of parental PTSD on parenting stress, the results were generally consistent in suggesting parental PTSD is associated with increased parenting stress. The use of the same measure across all four studies is a strength, as is the inclusion of heterogenous trauma samples. However, three of the four studies only reported a total score of the PSI-SF. In order to further unpack and understand the influence each of the measured sub-scales (e.g. perceived difficulty of the child parental distress, or parent-child dysfunction) has on parenting stress, future studies should seek to include each of the sub-scale totals in their analysis, as well as the total composite score.

Parental perceptions have also been studied in relation to the parent-child relationship, with studies in this area particularly focusing on PTSD associated with birth experiences. Findings have been mixed; of three studies measuring parents' self-reported bond to their infant, only one provided reliable evidence of an association with PTSD symptoms per se

(versus, for example, trauma exposure). Two studies that examined parents' attachment to their infant found little robust evidence of an association with parental PTSD. Finally, one study examined infant attachment to their mother using direct observation in the strange situation, and found lower rates of secure attachments, and particularly elevated levels of disorganized infant attachments, in association with maternal PTSD. Effects in this study were substantial, and the study was notable in having an independent (versus parent-reported) indicator of parent-infant relationship quality. Nonetheless, conclusions were based on only 45 participants, 12 with PTSD. As such, although evidence of attachment insecurity in association with parental PTSD is of real concern, given potential links with problematic parenting behaviours and long-term adverse child outcomes across a range of domains, replication of these observations is critically needed.

A substantial proportion of studies in the current review focused on aspects of parenting behaviour, using samples that encompassed a range of trauma types and child ages. Studies based on parental self-report provided relatively consistent evidence that parental PTSD is associated with more negative parenting, including inconsistent/reactive discipline, controlling behaviours, and displays of overt hostility and aggression. By contrast, positive parenting strategies were not linked to parental PTSD in the subset of studies that examined those, suggesting that associations do not simply reflect more negative parental self-perceptions overall. A recent review of parenting following child maltreatment, highlighted that some first-time parents report positive associations between their trauma and their parenting (Christie et al., 2018; Fava et al., 2016). Further, in a recent qualitative study with parents in a South African township, parents were still able to find positive aspects in their relationship with their child despite experiences of trauma (Christie et al., in prep). This may suggest that positive elements of parenting may be conserved even in the context of parental PTSD, which warrants further investigation.

The majority of studies focused on deviations in more normative parenting practices (e.g. inconsistent/reactive discipline, or intrusive/controlling behaviours), which nonetheless may increase children's risk for developing both internalizing and externalizing disorders (Padilla-Walker, 2008). However, there were also observations that parental PTSD may result in hostile or more severely aggressive parenting practices, which are of particular concern, albeit with small effect. Importantly, one longitudinal study also provided evidence that *change* in parental PTSD symptoms predicted subsequent parenting behaviours, consistent with a possible causal role of posttraumatic distress. However, parenting was not measured at baseline in this study, and other explanations (e.g. the presence of underlying and persistent parenting or family environment problems that exacerbate parental PTSD) could not be ruled out.

By contrast to the evidence based on parents' own reports, studies that used direct observations or child reports of parenting behaviours provided less reliable evidence. Of four studies that used observational assessments with mother-infant dyads, only one found clear evidence of less optimal parenting in association with maternal PTSD (Schechter et al., 2015). Two studies using child /adolescent informants to measure parenting both provided evidence of less optimal parenting in association with parental PTSD. However, these studies found that adolescents who had a veteran father with PTSD reported more negative parenting for both their fathers and their mothers than a comparison group without paternal PTSD. Of course, there could be many reasons why paternal PTSD has a knock-on impact on maternal parenting, but such observations call into question the assumed direct causal impact of PTSD symptoms on parental behaviour. Moreover, studies using child informants had samples of young people selected based on specific characteristics, namely the presence of maltreatment or mental health problems, so findings may not generalize.

Overall, whilst it seems clear that parents with PTSD perceive themselves to be worse parents and obtain less satisfaction from their parenting role, the extent to which this reflects actual parenting impairments is less clear. The reliance on cross-sectional studies in the field is striking, and causal evidence to demonstrate that parental PTSD is having a direct impact on parenting domains is particularly lacking. The possibility that pre-existing or co-occurring risk factors (e.g. poor family environment, substance use) explain associations often cannot be ruled out. The use of rigorous longitudinal methodology to examine temporal influences between parental PTSD and parenting domains over time would provide better evidence of causal influence. Similarly, measurement of parenting in the context of intervention studies could provide powerful evidence of direct causal influences of posttraumatic distress. Both these approaches will require larger samples than many of those reported in the current review.

Within cross-sectional designs, taking a more rigorous approach to measuring and controlling for key potential confounds is also critical to strengthen the evidence base. First, with some notable exceptions (Bosquet Enlow et al., 2014; Davies et al., 2008), there was limited attention to trauma type and/or symptom severity in the studies reviewed. For example, studies may not have explicitly recruited a Criterion A trauma exposed sample; or in cases where a Criterion A trauma sample had been recruited, it was noted that some participants no longer experienced any distress or traumatic symptoms from their trauma exposure, yet this was not taken into account during the analysis. Further, variations in the nature of the trauma may directly impact parental domains (e.g. studies of premature births). The fact that some studies found evidence that trauma per se may be associated with altered parental functioning suggests that the literature as a whole should attempt to take account of key trauma characteristics.

Second, some studies looked at co-occurring mental health problems in parents, particularly parental depression, with mixed conclusions as to whether PTSD effects may be secondary to other forms of psychological disorders (e.g. Davies et al., 2008; Samper et al., 2004). Although disentangling impacts of co-occurring disorders is likely to be challenging, more consistent measurement and analysis in key areas (especially depression, alcohol and substance abuse) is necessary to provide a reliable picture of potential PTSD related impacts.

Third, not all studies reported on or controlled for key demographic characteristics linked to mental health and parenting behaviour (e.g. level of education). More rigorous consideration of potential confounds will considerably strengthen the case for a direct causal influence of parental PTSD on parenting. Finally, making use of multiple informants and/or independent observations of parenting is crucial to rule out inflation of effects by informant bias. This is especially relevant when measuring the parent-child relationship, as PTSD has been associated with subjective sense of relationship dysfunction which could influence self-report (Schechter et al., 2015).

Although the aim of the current review was to consider *whether* parental PTSD has an impact on parenting, it will also be important to learn more about *why* such impacts are present. In this respect, some of the reviewed studies examined specific PTSD symptom clusters, and there was some evidence that avoidance or hyperarousal may be more strongly related to parenting than intrusive symptoms (Berz et al., 2008; Samper et al., 2004). This is consistent with qualitative evidence in which feelings of irritability/anger and a need to avoid trauma reminders were viewed as particularly problematic by trauma exposed parents (Christie et al., in prep; Sherman et al., 2015), but requires more examination. Such work may ultimately provide better information about whether and how interventions for PTSD are simultaneously likely to deliver improvements in parenting domains.

Some further considerations should be taken into account in interpreting the current findings. Due to the fundamental complexity of parenting as a construct, there was significant variation across studies with regards to focal domains, and there were associated inconsistencies in terms of the precise nature and magnitude of effects reported. Many studies had modest sample sizes, which also limits potential to obtain precise estimates of effect sizes. The quality ratings of some of the included studies were classed as low to moderate, due to issues with the conduct and reporting of the research. Certain types of trauma (particularly birth and military trauma) are disproportionately represented in the literature, which limits generalizability, and fathers are under-represented in parental PTSD research. Future research should seek to address these issues.

Conclusion

Parental PTSD may have a negative impact on parenting domains, but it is not clear whether effects are equally likely to apply across all trauma populations, and causal evidence is extremely limited. In addition, some methodological limitations in the extant literature need to be addressed. Nonetheless, clinicians should be conscious of the potential for PTSD to have an impact on parents and their parenting domains. An awareness of these negative impacts could give rise to more tailored support being provided for families following a parent's trauma exposure.

Chapter 3.

Paper 2: The Development and Maintenance of Posttraumatic Stress Symptoms in Parent-Child Dyads Following a Child's Accidental Injury: A Longitudinal Study

This manuscript is currently being prepared for publication.

Chapter rationale

Findings from Paper 1 emphasise the potential relevance of parental PTSD to parenting domains. This is consistent with the focus in the existing literature on parental factors posttrauma that may affect child psychological adjustment. Thus, associations that have been observed between parental and child PTSD symptoms have typically been considered to reflect parental influences on child adjustment. However, the existing evidence base is predominantly cross-sectional, with limited potential to infer causal direction of effects. Moreover, theoretical models (Cook & Kenny, 2005; Deater-Deckard, 2004) have suggested the potential existence of a bi-directional relationship between parent and child; whereby the parent's mental health may influence the child's psychological outcomes and the child's mental health may also affect the parent's psychological outcomes. Therefore, Paper 2 presents a cross-lagged autoregressive model conducted in order to examine the cross-over effects of the parent and child's mental health on one another over a six-month period, following a child's accidental injury requiring admittance to an accident and emergency department.

Statement of Authorship

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Candidate's contribution to the paper (provide details, and also indicate as a percentage)	The candidate contributed to / considerably contributed to / predominantly executed the… **Formulation of ideas:** Hope Christie contributed to the formulation of the ideas for the current study (70%). **Design of methodology:** The data used in the current study was part of a larger data set. Hope Christie contributed to the design of the methodology in this current chapter (80%), but not for the larger study that collected the data. **Experimental work:** Hope Christie predominantly executed the analysis and interpretation of results for this paper (80%). **Presentation of data in journal format:** The presentation of the data into journal format was predominantly carried out by Hope Christie (90%).								
Statement from Candidate	This paper reports on original research I conducted during the period of my Higher Degree by Research candidature.								
Signed					**Date**				

The Development and Maintenance of Posttraumatic Stress Symptoms in Parent-Child Dyads Following a Child's Accidental Injury: A Longitudinal Study

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Abstract

Following child exposure to a traumatic event, both children and their parents are vulnerable to developing posttraumatic stress disorder (PTSD). Poor parental post-trauma mental health has been highlighted as a potential risk factor for child's PTSD development. However, there has been little longitudinal investigation of this association, and the potential effect of child's PTSD on the maintenance of parent PTSD across time has not been systematically studied. We aimed to address this gap by investigating potential reciprocal effects of parent and child post-traumatic stress symptoms (PTSS) across a six-month period, following the child's trauma. Children and their parent (N = 132) were recruited following the child's admittance to a hospital emergency department and were assessed at four weeks post-trauma, and three months and six months later. Cross-lagged analyses indicated that while self-reported parent PTSS had a significant effect on maintenance of child PTSS at six-months, child PTSS had no significant effect on parental symptom maintenance over time. Findings highlight the potential importance of providing parents with appropriate support following their child's trauma exposure.

Introduction

For children and adolescents exposed to trauma, posttraumatic stress symptoms (PTSS) – including intrusive re-experiencing, avoidant behaviours, negative alternations in cognitions and mood, and hyperarousal (APA, 2013) – are relatively common, and a subset will develop posttraumatic stress disorder (PTSD). Moreover, research has found that parents may also be at risk for developing PTSD following their child's trauma exposure (Balluffi et al., 2004; de Vries et al., 1999; Kazak et al., 1998; Landolt et al., 2003). This is in accordance with the Diagnostic Statistical Manual of Mental Disorders (DSM-5; American Psychiatric Association; APA, 2013), which indicates that indirect trauma (i.e., learning of a trauma that has affected a loved one or witnessing a trauma involving someone else) can also be classed as a 'Criterion A' traumatic stressor. This is consistent with a recent global mental health survey which found that over 40% of all reported traumas qualifying for a diagnosis of PTSD are indirect (Kessler et al., 2017).

Prevalence rates of parental PTSD following child trauma exposure have been found to vary from 15% (Kassam-Adams, Fleisher, & Winston, 2009) to as high as 50% (Le Brocque, Hendrikz, & Kenardy, 2010), depending on the methodology used and the population studied. However, relatively little is known about the development and maintenance of PTSS in parents following their child's exposure to a traumatic event. Research investigating risk factors that may encourage development and maintenance of parent PTSS following their child's accidental injury has been equivocal. Some studies have found that parents who have direct involvement in their child's trauma, such as being the responsible driver in the car accident in which the child was involved (de Vries et al., 1999), or being present and witnessing their child's pain during painful medical procedures, have been found to be more vulnerable to PTSD development than those indirectly involved in

their child's trauma (Bryant, Mayou, Wiggs, Ehlers, & Stores, 2004). However, more recently, Hiller et al. (2016) found that level of parental involvement did not predict symptom trajectory membership following a road traffic accident. Hiller et al.'s (2016) findings suggest that regardless of whether parents are present during their child's trauma, or learn of it later, they may be vulnerable to mental health difficulties that require support post-trauma.

When considering risk factors for the development of parental PTSD following child injury, studies have focused more on factors related to the individual as opposed to the wider context. Yet, as proposed by social ecological and family systems theories (e.g., Bronfenbrenner 1979; Weems & Overstreet, 2008), individuals may be best understood in light of their contextual and interpersonal surroundings. In families in which one or more family members have experienced a trauma, it has been argued that PTSS are not experienced in isolation, and spill over effects between family members may be plausible and detrimental to recovery (Juth et al., 2015; Lambert et al., 2014; Salmon & Bryant, 2002).

It is understood that following a trauma, parents can often be a child's main source of support (Scheeringa & Zeanah, 2001). An association between parental and child PTSD symptoms has been reported consistently (Morris, Gabert-Quillen, & Delahanty, 2012) and in a meta-analysis, one of the most notable predictors of long-term PTSD in children following trauma was parental PTSS (weighted r = .34), which was regarded as a robust finding (Alisic, Jongmans, Van Wesel, & Kleber, 2011). However, there is also potential for the reverse to occur, with child's PTSS having an impact on the parent's psychological recovery. Caring for a child who has experienced a trauma and is exhibiting PTSS may cause the parent to feel helpless and distressed (Appleyard & Osofsky, 2003; Costa, Weems, Pellerin, & Dalton, 2006). Indeed, in recent qualitative studies, parents have highlighted their distress at the thought of their own trauma impacting their child in some way (Christie et al., under review), or their own distress has been compounded by witnessing the impact the trauma has

had on their child (El-Khani, Ulph, Peters, & Calam, 2016; Williamson, Butler, et al., 2017b; Williamson, Creswell, Butler, Christie, & Halligan, 2016). Recently, Juth et al. (2015) considered the potential for such reciprocal influence through a cross-sectional assessment of parent-child dyads at three years following a natural disaster. Findings indicated that while a parent's PTSS was significantly associated with children's wider distress ($b = 0.14$, $p < 0.001$), child's PTSS was not associated with wider distress in the parent post-disaster. While this research suggests that parental influences on child mental health may be more important than the reverse, the cross-sectional nature of this studies limits potential for causal inference, and the focus was on the prediction of general distress versus later PTSS.

We aimed to build upon previous work, by investigating the potential spill-over effects of parent and child PTSS on each other over a six-month longitudinal period following the child's accidental injury. We recruited parents and children and assessed them at approximately1-month following the event (T1), and 3-months (T2) and 6-months (T3) later. We used repeated assessments of parent and child PTSS to test for potential reciprocal influences. Specifically, we hypothesised that:

(1) Parent and child PTSS scores would each show significant stability from T1 to T3;

(2) Parental PTSS would significantly predict child PTSS outcomes; and

(3) Child PTSS would significantly predict parent PTSS outcomes over time.

Method

Study Setting and Ethical Approval

Ethical approval was obtained from the University of Bath (14-035) and Oxford A NHS Research Ethics Committees (Ref 137454). Potential participants, where a child had been exposed to a trauma, were identified by Emergency Department (ED) staff. Once given permission, the research team contacted families to confirm eligibility. Parents provided informed consent, while children provided informed assent. Assessments were completed with parents and children at home at 1-month post-trauma (T1), and were followed up 3 months (by postal questionnaire or home visit if needed) and 6 months later (T2 and T3, respectively).

Participants

Participants were 132 children aged 6–13 years old, and their caregiver (see Hiller et al., 2017a; 2018 for additional details of the sample and recruitment). In cases where both mother and father were present, one nominated parent chose to take part in the study with their child. Families were recruited following the child's involvement in a trauma and subsequent attendance at four EDs in the United Kingdom between April 2014 and January 2016. Complete recruitment details are presented in Hiller et al. (2017a), and the recruitment flow-chart is available in their supplementary materials (S1). Index traumas were: motor vehicle accident (n = 68, 52%), fall from a height (n = 25, 19%), significant bicycle accident (n = 9, 7%), acute medical episode (n = 10, 8%; e.g., acute anaphylaxis), sport injury (n = 6, 5%), assault (n = 3, 2%) and other event (n = 17, 13%, e.g., house fire, dog attack, near drowning).

Retention rates at 3 months were 84% (where questionnaires were generally completed via post), while at the 6 months home visit 96% of the original sample was

retained. There was some evidence of selective attrition at 3 months, with non-completers experiencing less severe events (triage rating: completers [M = 1.87, SD = 1.02] versus non-completers [M = 2.44, SD = 1.19]; p = .02). However, there were no significant differences between 3-month completers or non-completers for age, sex of child or symptom severity (*ps* > .22).

Measures

Parent report measure - Posttraumatic Diagnostic Scale (PDS; E. B. Foa, Cashman, Jaycox, and Perry (1997). The PDS is a 49-item self-report measure that indexes DSM-IV criteria for PTSD, including a 17-item symptom scale (rated 0 [not at all] to 3 [5 or more times a week]). Symptom scores were used to characterise study participants in terms of their PTSS severity; scores of 21-35 are classed as moderate to severe, with scores over 36 classed as severe. There is no specific clinical cut off. The scale has good test–retest reliability and internal consistency (Foa et al., 1997; Cronbach's α = .88).

Child report measure – University of California at Los Angeles PTSD Reaction Index (PTSD-RI; Steinberg, Brymer, Decker, & Pynoos, 2004). Children completed the child self-report versions of the PTSD-RI, which assesses 17 DSM-IV-TR[3] PTSD symptoms, with responses rated on a 5-point Likert scale ranging from 0 [none of the time] to 4 [most of the time]. The measure suggests that a score of 38 or greater following a single incident traumatic event has the 'greatest sensitivity and specificity for detecting PTSD' (Cronbach's α = .89).

[3] 4th Edition of the Diagnostic Statistical Manual of Mental Disorders – Text Revision (American Psychiatric Association, APA, 2000)

Child report measure - The Anxiety Disorder Interview Schedule-PTSD Module (ADIS-PTSD; Silverman, Albano, & Barlow, 1996). The ADIS is a well-validated diagnostic tool for PTSD, which is based on DSM-IV-TR criteria. This interview was administered to children by trained researchers during T1 and T3 assessments. Diagnostic inter-rater agreement was established on 25% of the interviews by a separate, blinded researcher (k = 1.00). Thereafter, approximately every sixth diagnostic interview was discussed at a consensus meeting.

Procedure

Potential participants were approached by ED staff and gave permission to be contacted by the research team. Home assessments were completed at the first and final time points in the study. At approximately 3-months post trauma (T2) all assessments were questionnaires and therefore could be completed online or via post. All participants were invited to complete the 6-month assessment, regardless of whether or not the 3-month assessment was completed. Dyads received GBP20 at each time point, as a thank you for their time.

Analytical Strategy

Normality checking was conducted, and it was found both the parent and child PTSS scores were not normally distributed. Following a square root transformation data were still found to have positive skew; therefore, Spearman's Rho correlations were conducted to examine univariate associations between parent PTSS and child PTSS scores across the three time points. Next, in order to test whether parent PTSS was having an impact on child PTSS across time, as well as child PTSS having an impact on parent PTSS across time, we constructed an autoregressive cross-lagged Structural Equation Model (Figure 3.1) using MPlus 7.0 (Muthén & Muthén, 1998–2011). A cross-lagged analytic model accounts for the

shared variances and correlated error variance between the dyad members' parameters (i.e., parents' and children's PTSS and general distress) to control for non-independence of the constructs and residual errors. In the SEM framework, parents' and children's PTSS are simultaneously regressed on their own and each other's PTSS, which means that the model isolates possible dyadic influences that occur over and above longitudinal stability in symptoms for each.

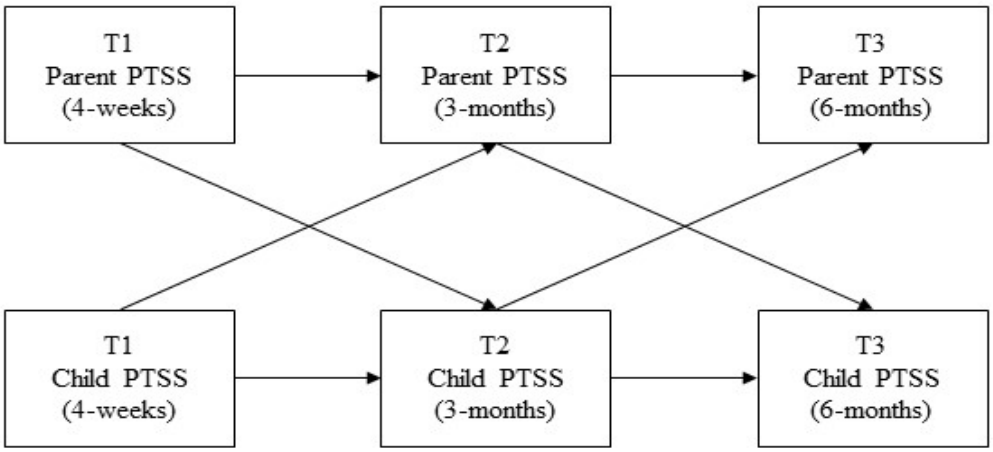

Figure 3.1. An autoregressive cross-lagged model for investigating the interdependent effects of parent and child PTSS over time

We assessed model fit using four standard indices; chi-square statistic, root mean square error of approximation (RMSEA) fit index, standardised root mean square residual (SRMR) index and a comparative fit index (CFI). Extent of missing data ranged from 3.8 to 28% in children, and 0 to 25% in parents, with the highest levels of missing being recorded at T2. MPlus model command 'maximum likelihood robust' (MLR) was used to handle missingnesss, and ensure all available data is used (Allison, 2003). In the model, parent and child PTSS were specified as continuous observed variables. In light of the significant correlations, a robust maximum likelihood (MLR) model was applied to account for non-normal and non-independent observations (Suh, 2015).

Results

Descriptive statistics

Sample characteristics of the 132 families are presented in Table 3.1. Nearly half of children's traumas were assigned a triage rating of 1 (46%) upon arrival at the ED, meaning they required immediate medical attention. Triage ratings were based on a scale of 1 (most severe) to 4 (not severe). PTSD symptom scores for both parents and children decreased from T1 to T3 (reported in Table 3.2).

Table 3.1
Descriptive demographic information of the sample

Demographic characteristics	Statistic (*N*=132)
Parent demographics	
Age in years (M [SD])	39.7 [7.0]
Proportion of mothers	119 (90%)
Proportion married or cohabiting	97 (74%)
Ethnicity – Caucasian	121 (92%)
Socioeconomic status – Annual household income	
Less than £10,000	9 (7%)
£10,000 - £19,999	29 (22%)
£20,000 - £29,000	23 (17%)
£30,000 - £39,000	12 (9%)
£40,000 - £49,000	19 (14%)
More than £50,000	30 (23%)
Don't know or do not wish to respond	10 (8%)
Child demographics	
Age in years (*M* [*SD*])	9.87 [1.8]
Proportion of males	82 (62.1%)
Triage rating	
1 (requiring immediate attention)	61 (46%)
2 (very urgent)	29 (22%)
3 (urgent)	26 (20%)
4 (less urgent)	16 (12%)

Table 3.2

Descriptive statistics describing the sample's PTSS scores

	T1	T2	T3
Child PTSS score, *M (SD)*	18.54 [13.34]	14.95 [11.89]	12.86 [11.88]
Proportion of children meeting diagnostic criteria for PTSD, *N (%)*	34 (26%)	-	12 (10%)
Parent PTSS score, *M (SD)*	11.93 [11.98]	7.19 [8.85]	5.95 [8.92]
Proportion of parents reporting moderate-severe symptoms *N (%)*	50 (41%)	11 (12%)	24 (19%)

Note. Child PTSS score was measured using the PTSD-RI; Child PTSD diagnosis was measured using ADIS administered at T1 and T3 only; Parent PTSS score measured by the PDS. T1 – 1-month follow-up; T2 – 3-month follow-up; T3 – 6-month follow-up.

Parent and child PTSS

A correlation matrix (Table 3.3) shows the associations between parent PTSS and child PTSS across all three assessment time points. With the exception of T1 child PTSS and parental PTSS at T2, parent and child total PTSS scores were all moderately, positively associated with one another.

Table 3.3

A Spearman's Rho correlation matrix investigating associations between parent and child PTSS

	1	2	3	4	5	6
1. Parent PTSS T1	-					
2. Parent PTSS T2	.68**	-				
3. Parent PTSS T3	.68**	.74**	-			
4. Child PTSS T1	.27**	.18	.19*	-		
5. Child PTSS T2	.33**	.41**	.42**	.51**	-	
6. Child PTSS T3	.32**	.46**	.36**	.50**	.67**	-

Note. **. Correlation is significant at the 0.01 level (2-tailed); PTSS=posttraumatic stress symptoms; T1=time 1; T2=time 2; T3=time 3

Dyadic Mental Health

As depicted in Figure 3.1, in order to investigate the interrelated effects of parent and child PTSS following the child's trauma exposure, a cross-lagged SEM was constructed examining stability in parent and child PTSS from T1 through to T3, and cross-sectional and longitudinal pathways between the two over time. The structural model demonstrated a moderate to good fit, $X^2 = 0.92$ ($df = 2$, $N = 119$, $p = 0.63$), $RMSEA < 0.001$, $SRMR = 0.008$, $CFI = 1.00$. The final structural equation model is illustrated in Figure 3.2.

When looking at the autoregressive parts of the model, significant stability in parent and child symptoms from T1 to T2 and from T2 to T3 was demonstrated, as expected (see Figure 3.2). In addition, it was found that child PTSS at T1 directly predicted child PTSS at T3. With regard to indirect effects, parent PTSS at T1 ($\beta = 0.738$, $SE = 0.053$, $p < 0.001$) predicted parent PTSS at T3 through the occurrence of parent PTSS at T2 ($\beta = 0.744$, $SE = 0.084$, $p < 0.001$). Child PTSS at T1 ($\beta = 0.416$, $SE = 0.075$, $p < 0.001$) was also found to indirectly predict child PTSS at T3 through the occurrence of child PTSS at T2 ($\beta = 0.460$, $SE = 0.078$, $p < 0.001$).

Results from the cross-lagged sections of the model found parental PTSS at T1 did not have a direct effect on child PTSS at T2 ($\beta = 0.188$, $SE = 0.098$, $p = 0.06$). However, parental PTSS at T2 was found to have a significant effect on child PTSS at 6-months post-trauma ($\beta = 0.228$, $SE = 0.077$, $p = 0.003$). An indirect effect of parent PTSS at T1 through parent PTSS at T2 and finally affecting child PTSS at 6-months post-trauma was also found (T3; $\beta = 0.168$, $SE = 0.059$, $p = 0.004$).

In contrast, child PTSS scores were *not* found to have direct or indirect effects on parent PTSS scores across any of the time points. In addition, results of the final model found no association between parent and child PTSS at 6-months post-trauma, once other cross-sectional and longitudinal pathways between the two were taken account of.

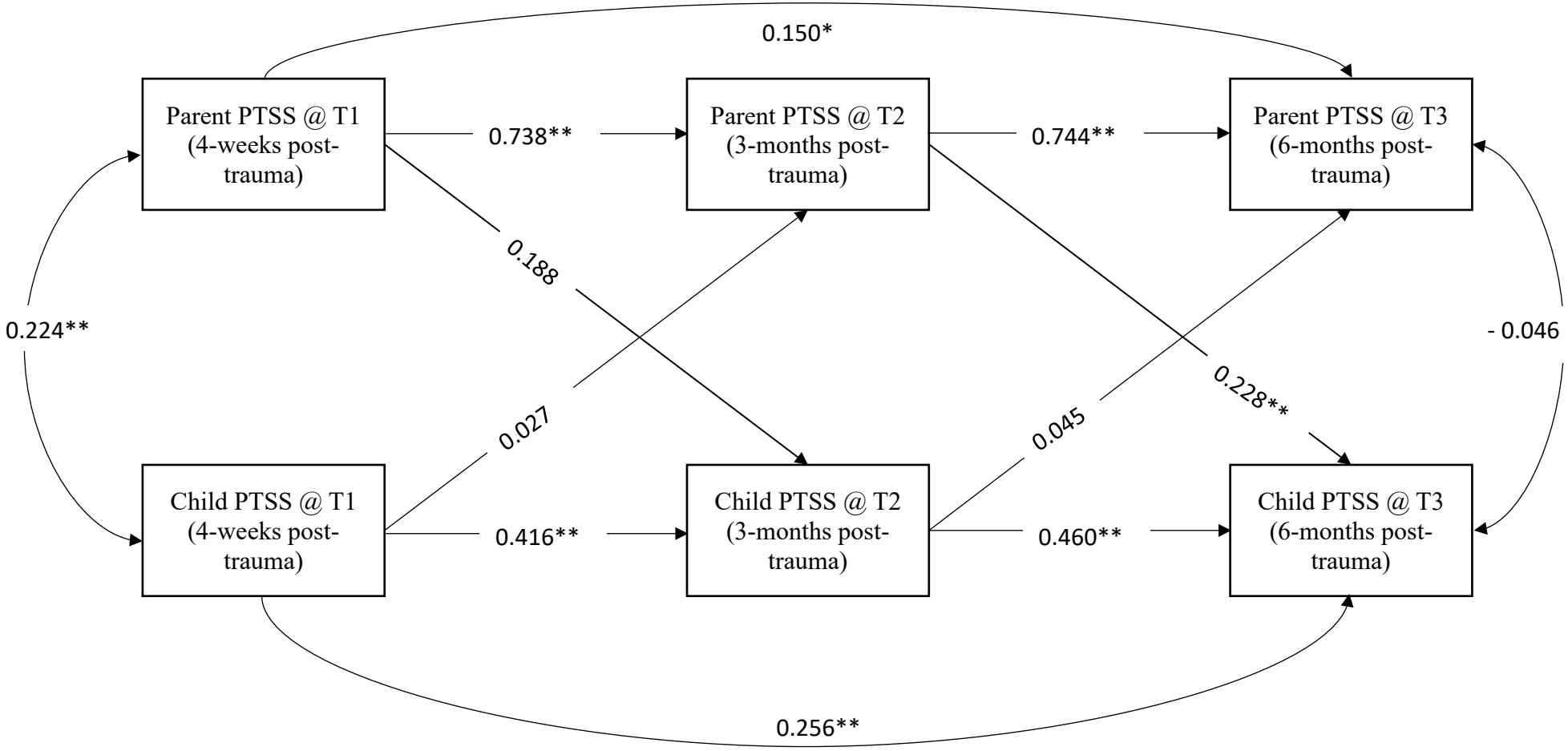

Figure 3.2. Final SEM showing all direct with standardised beta coefficients[4].

[4] *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$

Discussion

We examined interrelated effects of child and parent PTSS following a child's accidental injury. As expected, self-reported PTSS scores for both parent and child recorded soon after the trauma were predictive of PTSS scores for the same individual six months post-trauma. Further, over and above this symptom stability within individuals over time, parental self-reported PTSS had a significant effect on effect on later child PTSS. However, contrary to our original hypothesis, we did not find evidence that child self-report PTSS had impact on later parent PTSS.

This finding of parental PTSS influencing child outcome is in line with a wealth of research based on cross-sectional evidence of associations between parent and child PTSS (de Vries et al., 1999; Morris et al., 2012; Nugent, Ostrowski, Christopher, & Delahanty, 2007). Our study builds on this existing work by demonstrating longitudinal associations between parental PTSS and child symptoms, that are present even once cross-sectional correlations between the two and longitudinal stability in each over time are accounted for. Whereas previous research has highlighted a number of a shared underlying genetic risk as potential contributor to associations between parent and child PTSS (Brand, Engel, Canfield, & Yehuda, 2006; Leen-Feldner et al., 2013; Yehuda et al., 2005), our findings are consistent with a more active parental influence. Parents may encourage maintenance of child symptoms through parenting behaviours associated with their own distress, for example, engaging in fewer positive interactions with the child (Ruscio, Weathers, King, & King, 2002; Williamson, Creswell, et al., 2017b), making strong negative appraisals relating to the child's trauma and their posttrauma adjustment, or encouraging avoidant child coping behaviours (Hiller et al., 2018). Regardless of the specific underlying mechanism, our findings suggest that helping parents with their own trauma related distress could have

additional benefits in terms of augmenting child recovery, a possibility that should be investigated in future research.

While in principle, parent's own posttraumatic distress may cause maladaptive parenting behaviours to surface, direct longitudinal evidence relating to possible changes in parental responding is currently lacking (Christie et al., 2019). It has been found that parents with PTSD report impaired parenting outcomes (Christie et al., 2019; Creech & Misca, 2017; Hershcowitz et al., 2017), including, for example, reduced parenting satisfaction, increased use of negative parenting practices (e.g., yelling or hitting), and difficulties in the parent-child relationship, which may include increased levels of rejection, avoidance or distancing in some populations (Hafstad, Gil-Rivas, Kilmer, & Raeder, 2010; Kelley et al., 2010). Such parenting styles may make it difficult for children to emotionally and cognitively process and adjust to the traumatic event (Salmon & Bryant, 2002), resulting in heightened distress. However, existing studies have focused on recruiting parents with their own trauma history and PTSD, not parents who are also responding to a trauma exposed child. Whether such alterations characterise dyads where both parent and child are coping with the effects of child trauma, or provide a causal link between parent and child PTSS, remains to be established.

The current study builds upon findings from Juth et al. (2015), who studied parent-child dyads three years on from a natural disaster and found that parental PTSS was significantly associated with child general distress, but child PTSS was not associated with parent general distress. Similarly, while we found evidence that parental PTSS can predict later child PTSS, we did not find evidence of the converse effect, whereby child PTSS influences later parental PTSS. The latter is contrary to the qualitative evidence in the parental PTSD field, where parents describe children's distress as an important contributor to their own difficulties (Christie et al., under review; El-Khani et al., 2016). The lack of

significant findings regarding spill-over effects from child to parent may be explained in a number of ways.

First, while recent qualitative findings have found parents highlighting their child's distress levels as a contributor to their own difficulties, it may be the case that parents perceive their child's distress to be influencing their own, but that their perception is based on their own mental health difficulties following their child's trauma. This is consistent with observations that there are poor levels of agreement between parent and child reports of child's PTSD symptoms, and that parent reports of their child's distress may be influenced by their own distress (Meiser-Stedman, Smith, Glucksman, Yule, & Dalgleish, 2008; Stover, Hahn, Im, & Berkowitz, 2010). In addition, it is notable that mutual associations between parent and child mental health have been previously demonstrated most reliably in the context of child behavioural problems, where there is clear potential for escalation between parental and child anger and aggression (Pinquart, 2017). In the context of child trauma, the potential for child symptoms to *escalate* parental PTSS is less obvious. Other factors, including child-linked trauma reminders, such as ongoing child physical health impairment or long-term loss of function, may be more important influences on parental posttraumatic distress. Further examination of the processes that maintain parental PTSS following child trauma exposure is warranted.

Limitations and future research

The study's findings must also be considered within the contexts of its limitations. Firstly, the sample size was modest, which may have had an effect on the results of our statistical analysis. Muthén & Muthén (1998–2011) advise a minimum sample size of 200 participants for SEM analysis; however, the current study had 119 responses in the analysis. Future research should aim to conduct a similar research design, but with a larger sample size

in order to build upon these findings further. Secondly, while overall the retention rate of the current study was excellent (87%), there was a substantial number of missing at random responses, particularly around time two, which may have also had an impact on the analysis. Thirdly, the age group studied was relatively narrow and the developmental stages of the children in the current study may have influenced their levels of distress. Children may vary in their susceptibility to parents' mental health and care-giving quality depending on their age, as older children may be more independent. Conversely, Compas et al. (2014) suggests that adolescents may have poorer emotional regulatory abilities, which may mean they may rely more on their parents to aid in the management of their distress. Future studies should explore child age as a possible moderator for the observed spill over effects in children at different stages of development. Lastly, our sample was relatively low risk trauma group, with the main trauma type being a road traffic accident. Future research should examine whether similar results are found on a more severe trauma sample.

Conclusion

Findings from the current study suggest that parents are still vulnerable to poor mental health outcomes, specifically the development of PTSS, after their child's accidental injury. Further, in line with findings from Nugent et al. (2007), results from the current study emphasise the subsequent detrimental impact parent's mental health can have on their child's own post-trauma psychological recovery. However, their child's PTSS was not found to have a significant impact on parental post-trauma psychological recovery. This would suggest that even though parents may not have directly experienced the trauma with their child, they may still require support to aid their own psychological recovery. Investigating the maintenance of PTSS over time also highlights potential points for this psychological support to be provided

to families following the child's admittance to an accident and emergency department. Offering targeted support could benefit the parent directly in terms of aiding their own psychological recovery, but may also have subsequent positive impacts for the child in terms of their own psychological adjustment following their trauma.

Chapter 4

Paper 3: Investigating the Effect of Parent Mental Health on Observed Parenting Behaviours Following Child Trauma Exposure

This manuscript is currently being prepared for publication.

Chapter rationale

Findings from Paper 2 highlight that parents are also vulnerable to the development of PTSS following child trauma. It is understood that PTSS may cause posttraumatic stress (PTS), which may subsequently develop into PTSD, which may have consequences for child outcomes. The aim of Paper 3 was to investigate the potential impact of parental PTSD following their child's trauma may have on positive (e.g., warmth and sensitivity) and negative (e.g., intrusiveness and expressed anxiety) parenting behaviours. Previous studies, both qualitative and quantitative, have often utilised parental self-report through interviews and/or psychometric tests. Paper 3 offered additional insight by utilising observational methods, providing a more objective perspective. The following paper presents findings from two observational tasks that encouraged engagement from both the parent and the child. The tasks included a trauma-focused narrative discussion, and a non-trauma specific problem-solving task). Positive and negative parenting behaviours were coded from the interactions between parent and child during the two tasks, in order to gain a better understanding of the association between parental PTSD and parenting behaviours.

Statement of Authorship

This declaration concerns the article entitled:			
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Publication status (tick one) **Draft manuscript** [X] **Submitted** [ ] **In review** [ ] **Accepted** [ ] **Published** [ ]			
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Candidate's contribution to the paper (provide details, and also indicate as a percentage)	The candidate contributed to / considerably contributed to / predominantly executed the… **Formulation of ideas:** Hope Christie contributed to the formulation of ideas for the current study (60%). Although, data had been collected previously as part of a larger data set. **Design of methodology:** During the larger study, videos were taken of the of the two observational tasks between the parent-child dyads. Hope Christie became reliable in the coding of parent and child behaviours during the anagram task and then coded predominantly contributed to data generation by coding the videos of parent-child interactions during the anagram task (100%). **Experimental work:** Hope Christie predominantly executed the analysis and interpretation of the data for this paper (90%). **Presentation of data in journal format:** The presentation of the data in journal format was predominantly executed by Hope Christie (90%).		
Statement from Candidate	This paper reports on original research I conducted during the period of my Higher Degree by Research candidature.		
Signed		**Date**	

Investigating the Effect of Parent Mental Health on Observed Parenting Behaviours Following Child Trauma Exposure

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Abstract

Following their child's exposure to a traumatic event parents are vulnerable to developing posttraumatic stress disorder (PTSD) and other psychological difficulties, including symptoms of depression and anxiety. Evidence suggests that parental mental health problems may be detrimental to parenting behaviour. However, research investigating the impact that parental mental health difficulties post-trauma may have on parenting outcomes, during observed parent-child interactions, is limited. The current study aimed to investigate the predictive role of parent symptoms of PTSD, depression and anxiety following their child's exposure to trauma on parenting outcomes during two observational tasks. Children (aged 7-13 years; M = 9.87, SD = 1.8) and their parents (N = 132) were recruited following the child's admittance to a hospital emergency department and were visited by researchers at their home four-weeks after the child's discharge. Dyads were invited to take part in two tasks: a trauma-specific task involving constructing a narrative of the trauma, and a non-trauma specific task involving a challenging anagram puzzle. Tasks were video recorded for subsequent coding of positive (i.e., warmth and sensitive responsiveness) and negative (i.e., intrusiveness and expressed anxiety) parenting behaviours; and links between parental symptoms and parenting during each task were examined. Results found parent PTS scores were positively predictive of positive parenting behaviours (e.g., warmth and sensitivity) during the trauma-specific task, while anxiety significantly reduced sensitivity during the non-trauma specific task. Findings suggest that parental PTSD symptoms following their child's experience of trauma are unlikely to result in more negative parenting behaviour.

Introduction

Following exposure to a traumatic event, children as well as their parents are vulnerable to developing posttraumatic stress disorder (PTSD), as well as other psychological difficulties such as depression and anxiety. The prevalence of parental PTSD following indirect trauma can range from 15-50% (Kassam-Adams, Fleisher, & Winston, 2009; Le Broque, Hendrikz, & Kenardy, 2010). Development of depression and anxiety have also been found to be prevalent in parents following their child's admittance to hospital (19 – 23%; Fukunishi, 1998; Kent, King, & Cochrane, 2000). Significant variation in rates of poor mental health outcomes in parents has been attributed to differing methodologies used and populations studied. Recent findings suggest poor parental mental health following child trauma may persist up to three years post-event in some cases (Hiller et al., 2015; Kassam-Adams, Bakker, Marsac, Fein, & Winston, 2015).

The presence of PTSD among parents is potentially significant, as recent evidence suggests that PTSD may impair several parenting outcomes (for a review, see Christie, et al., 2019). These include increasing parenting stress, decreasing parenting satisfaction, negatively impacting the parent-child relationship, and increasing the endorsement of negative practices, such as yelling or hitting. Such effects may have implications for child adjustment posttrauma. A recent meta-analysis highlighted that following trauma exposure, negative parenting behaviours (including overt hostility) accounted for 5.3% of the variance in childhood PTSD symptoms, while positive parenting behaviours (such as warmth or sensitivity) accounted for only 2% of the variance (Williamson et al., 2017b). Furthermore, recent longitudinal evidence has suggested that trauma specific negative parenting behaviours were significantly associated with higher child reported posttraumatic stress symptoms six-months posttrauma (Hiller et al., 2017a). While these findings do highlight the importance of parenting behaviours following child trauma, little research attention has been paid to the

impact of the parent's own mental health symptoms on their parenting behaviours, in the aftermath of their child's trauma.

Notably, examination of the impact of mental health on parenting within the parental PTSD field has placed a strong reliance on parent's own report of their parenting behaviours, with little use of direct observations or additional source (e.g., children or spouse) reports (Christie et al., 2019). Within this context, while the use of self-report methodology is important to gain an understanding of the parent's perspective, it is important that additional methods should also be utilised as it is understood that self-report may be subject to bias (Gardner, 2000), and parents with mental health problems may be more likely to take an overly negative view of their parenting ability.

While there are some studies that have utilised observational methods within the parental PTSD field, sample sizes within these studies have been modest and the evidence produced is equivocal. In a small longitudinal study (N = 19), it was found that maternal PTSD following birth trauma was associated with observed negative, intrusive behaviour during the Still Face Paradigm (Ionio & Di Blasio, 2014). However, a number of inconsistent and null findings also emerged from this small study, which consequently does not provide robust evidence for the associations of parental PTSD with parenting outcomes. Another study compared observed parenting outcomes of women who had PTSD following the birth of a pre-term infant, with women who did not have PTSD following the birth of a full-term infant, during a 10-minute interaction between mother and baby (Forcada-Guex, et al., 2011). While findings did suggest that maternal PTSD was associated with more controlling maternal behaviour and compliant infant behaviour, findings were difficult to interpret as parenting style and infant response behaviour was combined during the analysis, and the comparison group of mothers did not have infants born pre-term. Further, two studies utilised samples of mothers who had experienced interpersonal violence (Schechter et al., 2010;

2015). In the larger of the two observational studies, mothers who met diagnostic criteria for PTSD (n = 17), who had sub-threshold symptoms (n = 30), and who had no PTSD symptoms (n = 27) were observed during an interaction with their child aged 12 to 48 months (Schechter et al., 2010). No differences were found between the three groups in terms of key parental behaviours. More recently, Schechter et al. (2015) found that mothers' PTSD (n = 34) was associated with reduced maternal sensitivity and increased controlling behaviours during a 5-minute free play session with their child. Reported effect sizes were moderate to large (controlling r = 0.42; sensitivity r = -0.51, respectively; Schechter et al., 2015).

Taken together, the findings from observational studies provide limited evidence that parental PTSD is associated with more negative parenting practices, but small sample sizes mean that further investigation is warranted. Previous studies that have used observational methods of assessing parenting have also examined a limited range of trauma types, and have not examined impacts on parenting outcomes following their child's trauma exposure, despite observations from qualitative research that parental distress may be highly relevant to how parents support children in this context (Alisic, Boeije, Jongmans & Kleber, 2012; Hiller et al., 2017a; McGuire, Hiller, Cobham, Haag & Halligan, 2019; Williamson, Creswell, Butler, Christie & Halligan, 2016; Williamson et al., 2017a) .

In sum, evidence suggests that poor parental mental health outcomes can arise following indirect trauma exposure, which may disrupt parenting behaviour. However, there are limitations to the existing evidence base. Importantly, studies that include direct observations of parenting behaviour are extremely limited and provide less compelling evidence of associations with parental PTSD. There has also been limited consideration of other parental mental health problems posttrauma, yet anxiety and depression are common sequelae. This is potentially important, as findings from a meta-analysis found a strong association between maternal depression and negative parenting behaviour (e.g., being

hostile, critical, or intrusive), with a weaker, inverse association between maternal depression and positive parental behaviour (e.g., warmth; Lovejoy, Graczyk, O'Hare, Neuman, 2000). Similarly, anxious mothers have also been found to display negative parenting behaviours, such as excessive control or encouragement of avoidance (McLeod, Wood & Weisz, 2007; Waite, Whittington & Creswell, 2014). Despite such observations, few studies in the parental PTSD field have taken account of co-occurring depression or anxiety.

We investigated the effect of parent posttraumatic stress (PTS), depression and anxiety following child trauma exposure on parenting during two observational tasks: a trauma-specific task and a non-trauma specific, mildly stressful task. Comparison between tasks was done in order to understand if context had any impact or influence on parenting behaviours, as qualitative research suggests that some negative parenting consequences of PTS may be specific to trauma related contexts (Christie et al., under review). Further, previous research within the child anxiety field suggests context may have an influence over parental performance during observational tasks (see Creswell, Apetroaia. Murray & Cooper, 2012; Ginsburg, Grover, Cord & Ialongo, 2006).

The current study had three specific research aims:

1. *To examine whether parental PTS scores predict the expression of more negative (expressed anxiety and intrusiveness) and less positive (warmth and sensitive responsiveness) parenting behaviours.*
2. *To investigate whether a more negative parenting style in association with parental PTS symptoms is more reliably displayed in the trauma-specific task compared to the non-trauma specific task.*

3. *To determine whether parental depression and anxiety symptoms are also important influences on parenting posttrauma, and whether they can account for any associations between PTS symptoms and parenting outcomes.*

Method

Study Setting and Ethical Approval

Ethical approval was obtained from the University of Bath (14-035) and Oxford A NHS Research Ethics Committees (Ref 137454). Potential participants were identified by Emergency Department staff and, given permission by families, the research team contacted families to confirm eligibility. Parents provided informed consent, while children provided informed assent. The data were analysed as part of a larger study; for main study papers see Hiller et al. (2017a; 2018).

Participants

Participants in this study (N = 132) were children and their parent (predominantly mothers). Participants were recruited to the study following the child's admittance to one of four Accident and Emergency departments in hospitals located in the South West of England (Bath, Bristol, Gloucester and Swindon), between April 2014 and January 2016, as previously reported (Hiller et al. 2017a). Complete recruitment details are presented in Hiller et al. (2017a), while the recruitment flow-chart is available in supplementary materials (S1). Families were excluded if their carer was unable to provide consent; the carer and/or the child did not speak English; the child showed signs of deliberate self-harm or suicidal intent; the child had an intellectual disability that precluded them from mainstream schooling; the child was being looked after by child protective services; or there was suspicion of harm by carer. Index traumas were: motor vehicle accident (n = 68, 52%), fall from a height (n = 25, 19%), significant bicycle accident (n = 9, 7%), acute medical episode (n = 10, 8%; e.g., acute

anaphylaxis), sport injury (n = 6, 5%), and assault (n = 3, 2%) or other event (n = 17, 13%, e.g., house fire, dog attack, and near drowning). Sample characteristics are presented in Table 4.1.

Measures

Parent Questionnaire Measures

Posttraumatic Diagnostic Scale (PDS; E. B. Foa et al. (1997). The PDS is a 49-item self-report measure that indexes DSM-IV criteria for PTSD, including a 17 item PTSD symptom scale (rated 0='not at all'; to 3='5 or more times a week'). The scale has good test–retest reliability and internal consistency (Foa et al., 1997). The PDS had a high level of internal consistency in the current study (*Cronbach's* α = 0.90).

Depression Anxiety Stress Scale – Short Form (DASS-SF; Lovibond and Lovibond, 1995). The DASS-SF is a 21-item self-report measure designed to explore negative emotional states of depression, anxiety and stress through the use of three sub-scales. The depression and anxiety subscales were used in the current analyses. Respondents are asked to use 3-point severity/frequency scales to rate the extent to which they have experienced each state *over the past week*. Scores can give an indication of severity categories, which include normal, mild, moderate, severe, and extremely severe. The DASS had a high level of internal consistency in the current study (*Cronbach's* α = 0.96).

Observational Tasks

Anagram task. Dyads were asked to complete a mildly stressful anagram task, which required the child to solve six pages of scrambled words in seven minutes (based on work by Creswell et al., 2012). The words used in the anagrams were overly difficult for the child's reading age. Parents were instructed that the task was designed to test the child's problem-solving abilities. Dyads were given five minutes to complete the task and a stopwatch was

placed so that both the parent and child could monitor the time they had left. Parents were also given the answers for their eyes only and were instructed to help their child as much or as little as they felt he or she needed it. The researchers left the room and the task was video recorded.

Joint Narrative Task. Parents were asked to engage their child in a conversation about the traumatic event (joint trauma narrative). They were instructed to begin just before the event happened and to include anything that they thought was important – to facilitate a naturalistic discussion. There was no time limit and the task was video recorded for later quantitative coding (see Hiller et al., 2018). Following the free discussion component, parents were provided with 13 prompt cards that gave them specific questions about the child's thoughts and feelings during and after the event to talk about together, e.g., 'How did you feel when you were in the hospital?'.

Coding and reliability. Both the anagram task and the joint narrative task were coded for parenting behaviour, based on a coding scheme developed by Creswell et al. (2012). For each task, two positive parenting responses (i.e., warmth and sensitive responsiveness) and two negative behaviours (i.e., intrusiveness and expressed anxiety) were coded on a minute by minute basis. Parents' behaviours were scored from 1 (behaviour not present) to 5 (behaviour very much present); an average score for each behaviour across the duration of the task was then calculated. All coding was completed by a trained rater who was blind to the other assessment outcomes, with 25% of the videos from each task double coded to establish adequate inter-rater reliability (narrative task ICC = 0.90–0.93; anagram task ICC = 0.75-0.82). Every 10th video from each task thereafter was quality checked for coding consistency.

Procedure

A home assessment was completed at 2-6 weeks post-trauma (henceforth referred to as 1-month posttrauma). Following reading of information sheets, and informed consent procedures, parent-child dyads were asked to individually complete a series of questionnaire measures (child outcomes not reported here; see Hiller et al., 2017a; 2018), and children provided a description of their trauma. Parent-child dyads then participated in the two observational tasks beginning with the joint narrative followed by the anagram task. Following completion of both tasks, children and their parent were debriefed and offered the opportunity to ask any questions. Families were subsequently followed up 3 months and 6 months later (data not included here, see Hiller et al., 2015; 2018).

Data Reduction, Data Screening and Analytical Strategy

All analyses were conducted using SPSS version 22. Distributions of parental mental health scores (i.e., PTSD, depression and anxiety) were found to have a positive skew; therefore, a square root transformation was applied to each. Distributions of observed parenting scores for the joint narrative and anagram tasks were found to be approximately normal based on Q_Q plots. In order to test associations between parental mental health and parenting, a series of preliminary bivariate correlations were first conducted to test univariate associations between PTSD, depression and anxiety symptom scores and the observed parenting outcomes across the two different tasks. Next, a series of separate hierarchal multiple regressions were conducted to explore these same associations while controlling for age and sex of both parent and child, triage rating of the child's trauma and socioeconomic status (SES), and considering all mental health scores together in the same model.

Table 4.1

Descriptive demographic information of the sample

Demographic characteristics	Statistic (N = 132)
Parent demographics	
Age in years (M [SD])	39.7 [7.0]
Proportion of mothers	119 (90%)
Proportion married or cohabiting	97 (74%)
Ethnicity – Caucasian	121 (92%)
Child demographics	
Age in years (M [SD])	9.87 [1.8]
Proportion of males	82 (62.1%)
Socioeconomic status – Annual household income	
Less than £10,000	9 (7%)
£10,000 - £19,999	29 (22%)
£20,000 - £29,000	23 (17%)
£30,000 - £39,000	12 (9%)
£40,000 - £49,000	19 (14%)
More than £50,000	30 (23%)
Don’t know or do not wish to respond	10 (8%)
Triage rating	
1 (requiring immediate attention)	61 (46%)
2 (very urgent)	29 (22%)
3 (urgent)	26 (20%)
4 (less urgent)	16 (12%)

Results

Descriptive Statistics

At T1 (one-month following their child's discharge from hospital), 41% (n = 50) of parents reported having moderate to severe PTSD symptom scores. Further, a number of parents also reported moderate to severe symptom scores for depression (n = 46; 35%) and anxiety (n = 52; 34%)[5]. A more detailed description of scores can be found in Table 4.2.

Of the two observed tasks, 128 (97%) families took part in the joint narrative task and 130 (99%) families took part in the anagram task. The remaining families were unwilling to participate in these assessments.

Table 4.2

Descriptive statistics for PTSD, depression, stress and anxiety measures (N = 132)

	N	*M*	*SD*
Posttraumatic stress symptom score	123	11.94	11.80
Depression symptom score	132	7.55	10.33
Anxiety symptom score	132	6.59	8.75

Table 4.3 presents descriptive statistics for observed parenting scores for the trauma-specific (trauma narrative) versus general (anagram) parental tasks, with scores being compared across the two using paired samples t-tests. As can be seen from Table 4.3, parents overall showed a positive parenting style, which scores for positive domains being higher than those for negative domains. In addition, parents were observed to be warmer, display less intrusive behaviours and be more sensitive in the joint narrative compared to the anagram task, but there were no differences in expressed anxiety, which was low across both tasks.

[5] Measured via self-report scales; Posttraumatic Diagnostic Scale and the Depression, Anxiety, and Stress Scale

These task related differences support the study objective of considering these two parenting contexts separately in analyses.

Table 4.3

Paired samples t-test comparing parenting outcomes between tasks

Parenting outcome	Task	*M*	*SD*	*t*	*Df*	*p*
Warmth	Joint narrative	3.98	1.01	3.47	127	0.001
	Anagram	3.68	0.58			
Sensitive Responsiveness	Joint narrative	4.21	0.88	6.66	126	0.000
	Anagram	3.67	0.64			
Intrusiveness	Joint narrative	1.80	0.92	-5.28	127	0.000
	Anagram	2.35	0.82			
Expressed Anxiety	Joint narrative	1.88	0.91	-0.08	127	0.940
	Anagram	1.88	0.60			

Associations between parent mental health scores and parenting outcomes

A series of Pearson's correlations were conducted between parent PTSD, depression and anxiety scores and the observed parenting scores from both the joint narrative and anagram task. During the joint narrative, parent depression (r = .20, p = .02) and anxiety (r = .20, p = .02) scores were found to be significantly correlated with expressed anxiety, with small effect sizes. However, counter to expectations, there were no equivalent effects of parental PTSD symptoms. Full information can be found in Table 4.4.

Table 4.4

Results from bivariate correlations investigating associations between parental mental health scores and observed parenting behaviours during the trauma-focused, joint narrative (JN) task

	1	2	3	4	5	6	7
1. PTSD	-						
2. Depression	.70**	-					
3. Anxiety	.67**	.72**	-				
4. JN Warmth	.09	-.12	-.11	-			
5. JN Sensitive responsiveness	.15	-.05	-.01	.66**	-		
6. JN Intrusiveness	-.10	-.01	-.01	-.39**	-.54**	-	
7. JN Expressed anxiety	.12	.20*	.20*	-.45**	-.33**	.30**	-

Note. * Correlation is significant at the 0.05 level (2-tailed) ** Correlation is significant at the 0.01 level (2-tailed).

When parenting was examined in the context of the anagram task, there was little evidence for associations with parental mental health. Parental anxiety scores were found to be significantly negatively correlated with sensitive responsiveness (r = -.23, p = .008), indicating a small effect size. There were no equivalent effects for parental PTSD or depressive symptoms (see Table 4.5).

Table 4.5

Results from bivariate correlations investigating associations between parental mental health scores and observed parenting behaviours during the problem-solving, anagram (AN) task

	1	2	3	4	5	6	7
1. PTSD	-						
2. Depression	.70**	-					
3. Anxiety	.67**	.72**	-				
4. AN Warmth	.01	-.04	-.11	-			
5. AN Sensitive responsiveness	-.03	-.08	-.23**	.55**	-		
6. AN Intrusiveness	.09	.07	.02	.06	-.24**	-	
7. AN Expressed anxiety	-.10	-.08	.01	-.08	-.07	.11	-

Note. * Correlation is significant at the 0.05 level (2-tailed) ** Correlation is significant at the 0.01 level (2-tailed).

Multivariate analyses of parent PTSD and parenting outcomes

A series of separate hierarchal regressions were conducted in order to investigate the predictive role of parent self-reported PTSD, depression and anxiety on each of the four parenting outcomes during both the joint narrative task and the anagram task, controlling for potential covariates; both parent and child age and sex, child triage rating (objective trauma severity), and socioeconomic status.

Results are presented in Table 4.6. During the joint narrative task, when parental PTSD, anxiety and depression were considered simultaneously in regression models examining each of the parenting outcomes, parental PTSD scores significantly predicted more positive parenting behaviour; warmth (β = .28, p = 0.03) and sensitive responsiveness (β = .28, p = 0.04). However, parental PTSD was not associated with negative parenting behaviours (i.e., intrusiveness and expressed anxiety; $p > 0.05$). Depression and anxiety did not predict any parenting outcomes during the joint narrative task in multivariate analyses.

Table 4.6

Results from the final step of the hierarchical regression analysis, analysing the effect of predictor variables on the observed parenting outcomes during the trauma focused joint narrative task

	B			
	Warmth	Sensitive responsiveness	Intrusiveness	Expressed anxiety
Age of child	-.24*	-.32**	.21*	.17
Age of parent	.09	.07	.11	-.02
Sex of child	-.12	.02	.05	-.22
Sex of parent	.03	-.14	.06	.08
Triage rating	-.17	-.02	.05	-.02
SES	.11	.02	-.10	-.17
PTSD	.28*	.28*	-.13	-.02
Depression	-.26	-.24	.07	.08
Anxiety	-.10	.01	.04	.15
Model information				
F-value	3.53	2.82	1.36	1.94
df	9, 110	9, 110	9, 110	9, 110
p	.001	.005	.217	.05
R^2	.22	.19	.10	.14

Note. *SES = Socioeconomic status;* †p < 0.10; *p < 0.05; **p < 0.01; ***p <0.001

Equivalent regression analyses for the anagram task are presented in Table 4.7. Regression models found that higher parental anxiety significantly predicted decreases in sensitive responsive behaviour (β = -.36, p = 0.01). However, parental PTSD, depression and anxiety failed to predict any other observed parenting behaviours during the anagram task.

Table 4.7

Hierarchical regression analysis summary analysing the effect of predictor variables on the observed parenting outcomes during the problem-solving anagram task

	B			
	Warmth	Sensitive responsiveness	Intrusiveness	Expressed anxiety
Age of child	-.07	-.17	-.05	.26
Age of parent	-.13	.04	.06	-.12
Sex of child	.10	.10	.16	-.07
Sex of parent	-.06	.01	-.12	.04
Triage rating	-.19	.01	.09	-.17
SES	-.16	.01	.08	-.08
PTSD	.16	.17	.11	-.10
Depression	-.15	.05	.06	-.17
Anxiety	-.18	-.36**	-.07	.14
Model information				
F-value	1.63	1.39	.65	1.35
df	9, 112	9, 111	9, 112	9, 112
p	.11	.20	.75	.22
R^2	.12	.10	.05	.10

Note. *SES = Socioeconomic status;* $^{\dagger}p < 0.10$; *p < 0.05; **p < 0.01; ***p <0.001

Discussion

We investigated the impact of parental PTS, depression and anxiety, following indirect trauma, on parenting outcomes during two observational tasks. Contrary to expectations, the evidence suggests that higher parental PTSD symptoms were associated with more positive parenting in the trauma narrative task. However, this effect only emerged in multivariate analyses where depression, anxiety and PTSD symptoms were examined simultaneously. Higher levels of parental anxiety and depression were associated with somewhat more negative parenting responses, in line with expectations.

Participants in the current study completed both a trauma-specific narrative task, and a more general, mildly stressful problem-solving task. When scores were compared across tasks, parents were observed to be warmer and more sensitive towards their child in the trauma-specific compared to the non-trauma specific parenting task. In addition, parents were found to display more intrusive behaviour during the anagram task, as opposed to the joint narrative. Interestingly, there was no difference in parental expressed anxiety levels between the two tasks. This is a promising finding, as it suggests that during discussions about the traumatic event with their child, parents are displaying warm and sensitive behaviour, more so than during other tasks that are unrelated the trauma. This is consistent with qualitative evidence, where both parents and child describe parental efforts to show extra warmth and care in the context of child trauma (Alisic, Boeije, Jongmans & Kleber, 2011; Hiller et al., 2017b; Williamson, Creswell, Butler, Christie & Halligan, 2016; Williamson et al., 2017a).

Such positive parental responding in the context of child trauma is likely to be a natural response, given that parents may have significant concerns about the potential for ongoing, trauma-related distress in their child. This suggestion is supported through findings in the posttraumatic growth literature, which highlight that following a traumatic experience parents may display more compassionate attention towards their child (i.e., the parent's ability to provide love, care and support towards others in day-to-day life, including their child). Empathic concern is a compassionate response whereby through seeing their child in pain or experiencing distress, parents may react by displaying positive parenting behaviours (e.g., warmth and sensitivity) in order to provide comfort and reassurance to their child (Cousineau et al., 2019). Moreover, it is likely to provide a foundation for further trauma talk, which may be important to helping parents understand their child's thoughts and feelings about the event, and in helping children to recover (Alisic et al., 2017; McGuire et al., 2019).

The main aim of the current study was to examine the potential associations between parent symptoms of PTS, depression, and anxiety following their child's trauma and more negative parenting behaviours. However, we found little evidence for such effects. For PTS symptoms, there were no associations with parental responding in univariate analyses. In multivariate analyses where co-occurring depression and anxiety were controlled, parent PTSD was associated with higher levels of warmth and sensitive responsiveness in the joint narrative task, which was counter to expectations. Parental PTS showed no association with responding in the general parenting, anagram task.

Our failure to demonstrate any associations between parental PTSD symptoms and more negative parenting, and tentative observations that PTSD symptoms may result in more positive parenting, is counter to theories relating to the role of parenting in the intergenerational transmission of trauma and to evidence deriving from a number of existing studies in the field (Christie et al., 2019). However, our current knowledge of the impact of PTSD on parenting outcomes is derived largely from parental self-report where there is potential for bias being introduced due to co-occurring distress. Existing findings are most robust when considering the lack of satisfaction parents have with their own parenting capacity as the result of their PTSD (Christie et al., 2019; Hershkowitz, Dekel, Fridkin & Freedman, 2017), which may cause them to answer more negatively about their parenting through self-report measures. Observational studies, which do not have the same limitations relating to bias, to date, provide much less compelling evidence for parenting alterations in association with PTSD (Christie et al., 2019).

Notably, the current study also examined a specific population of parents whose symptoms of PTSD related to a trauma that their child experienced directly. Consequently, parents may be particularly motivated not to allow their own distress to affect their parenting. In line with the posttraumatic growth literature, our study suggests that following a traumatic

event, parent PTSS and parental concern for their child may translate into the display of more positive parenting behaviours (Cousineau et al., 2009). Findings indicate that parents who experience higher levels of PTSS may also report greater levels of posttraumatic growth, an outcome of which is the development of more meaningful relationships and greater sensitivity towards the needs of others (Hungerbuehler, Vollrath, & Landolt, 2011; Picoraro, Womer, Kazak, & Feudtner, 2014). However, in qualitative studies of parents deriving from similar populations, parents report concerns that their own distress makes it harder for them to support their child (Williamson et al., 2016; 2017a); therefore, these findings do warrant further investigation.

We also found that during trauma focused discussions with their child, parental PTSD symptoms were associated with more positive parenting behaviours. The same results were not found in the non-trauma specific task, and associations between parental PTS and more positive parenting only emerged when co-occurring depression and anxiety were controlled, meaning that caution should be exercised in interpreting the current findings. Nonetheless, it is possible that parents who themselves are struggling with symptoms of PTSD may be more sensitive to the potential for distress in their child, and adjust their own responses in approaching trauma-related material accordingly. Although, if replicated, it could be reassuring to parents of trauma-exposed children to know that their own distress may translate in a positive way in some contexts. The current findings must be considered in the wider context, where parental PTSD symptoms have been found to be a longitudinal predictor of child symptoms (Christie *et al*, in prep; this thesis). Further research is required in order to build upon the findings from the current study and gain a clearer picture of the role played by parental PTS on parenting outcomes during observed parent-child interactions.

In correlational analyses, depression and anxiety showed modest positive associations with expressed anxiety during the narrative task, and parental anxiety was found to negatively

predict sensitive responsiveness during the anagram task, with only the latter effect being maintained in multivariate analyses. This is in line with the wider parent anxiety literature, which indicates anxiety can have a detrimental impact on parenting behaviours during parent-child interactions (Waite et al., 2014). The fact that associations between depressive symptoms and observed parenting were less robust than might have been expected based on previous findings (England & Sim, 2009; Lovejoy et al., 2000) may be explained by the current population, which was not defined by the presence of anxiety or depressive disorder and may consequently be less powered to demonstrate effects in these domains.

Implications

Taken together, the findings of the current study highlight the importance of addressing the parent's mental health needs as well as their child's following their child's accidental injury. Parents can be vulnerable to developing poor mental health outcomes following trauma, which may subsequently impair certain parenting domains. It is a positive finding that parent's PTSD symptom scores are positively predictive of the more warm and sensitive behaviour during a trauma focused conversation. However, this positive behaviour may be the result of parent's negative cognitions regarding their child's vulnerability following their trauma, which may subsequently result in more restrictive and controlling behaviours (Scheeringa & Zeanah, 2001). Future research should endeavour to examine these behaviours more longitudinally.

Limitations

The current study had some key strengths, particularly the fact that parenting was observed directly, across two contexts. Tasks were conducted in the family home reminiscent of a more naturalistic environment; therefore, combatting against external invalidity as tasks were not conducted in a lab (Gardner, 2000; Richters, 1992)). Nonetheless, findings from the

current study must also be considered within its limitations. While the data analysed was part of a larger, longitudinal study, data in the current study were cross-sectional, which limits potential for causal inferences. Future studies should seek to observe parenting at multiple follow-up points. This would provide a more detailed depiction of the family environment and parenting behaviours. Moreover, tasks were always completed in the same order, and required different responses from parent and child. Therefore, any task differences may be attributable to these factors as opposed to the specific nature of the task (e.g., trauma specific vs. non-trauma specific).

Conclusion

The findings from the current study emphasise the importance of understanding the role parental mental health has on parenting and child outcomes following their child's admittance to hospital. Further, given high rates of co-morbidity between PTS, depression, and anxiety (Breslau, 2009), consideration should be given by support services post-trauma to monitor parents' depression and anxiety levels, where increased symptoms may have negative implications for the parent's own wellbeing, their parenting, and ultimately their child's recovery.

Chapter 5

Paper 4: Exploring the Impact of Parental PTSD on Parents and the Family Dynamic – A Qualitative Study

Manuscript is currently being prepared for publication.

Chapter Rationale

As noted in the systematic review (Paper 1), current evidence in the parental PTSD field has been derived mainly from quantitative research. Lack of qualitative evidence limits our understanding of how parental PTSD may impact parenting outcomes, particularly from the parent's perspective, which was further emphasised by the unexpected findings in Paper 3. Further, our understanding of whether impacts to parenting following trauma is generalisable across trauma type is limited, due to the utilisation of homogenous trauma samples. Thus, Paper 4 aims to explore the lived experiences of a heterogenous trauma sample of parents with PTSD currently residing in the United Kingdom, a lower risk context.

Statement of Authorship

This declaration concerns the article entitled:									
Exploring the Impact of Parental PTSD on Parents and the Family Dynamic – A Qualitative Study									
Publication status (tick one)									
Draft manuscript	**X**	**Submitted**		**In review**		**Accepted**		**Published**	
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I hold the copyright for this material	X	Copyright is retained by the publisher, but I have been given permission to replicate the material here							
Candidate's contribution to the paper (provide details, and also indicate as a percentage)	The candidate contributed to / considerably contributed to / predominantly executed the… **Formulation of ideas:** Hope Christie contributed considerably to the formulation of ideas for the current study (90%). **Design of methodology:** Hope Christie contributed considerably to the methodological design of the study (85%). **Experimental work:** All data was conducted by Hope Christie. Hope Christie was predominantly responsible the transcribing, analysis and interpretation of the data in the current study (85%). **Presentation of data in journal format:** The presentation of the study data in journal format was predominantly executed by Hope Christie (90%).								
Statement from Candidate	This paper reports on original research I conducted during the period of my Higher Degree by Research candidature.								
Signed				**Date**					

Exploring the Impact of Parental PTSD on Parents and the Family Dynamic – A Qualitative Study

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Abstract

A considerable number of adults who are currently living with posttraumatic stress disorder (PTSD) are also parents caring for at least one biological child. Evidence suggests that parental PTSD can be associated with impairments to certain parenting behaviours, such as lowering parenting satisfaction or increasing the use of more negative practices such as yelling and hitting. However, most of the evidence to date has been collected using quantitative methodology and utilising homogenous trauma samples, which gives limited insight into why such effects might occur. The current study comprised a qualitative exploration of the lived experiences of a heterogeneous trauma sample of parents currently living with PTSD. Interviews were conducted with 30 parents (16 mothers, 14 fathers) living in the United Kingdom. Four key themes were identified, focused on: key impacts of the trauma to the parent personally; negative changes to specific parenting outcomes; the impact these parenting changes had on the parent's sense of parental efficacy; and recovery and coping. These findings provide novel insight into the experiences of both mothers and fathers with PTSD, and highlight the multiple challenges faced by parents living with PTSD that extend beyond impairments to themselves as individuals. Potential implications for the implementation of effective support for parents and their families following trauma exposure are considered.

Introduction

Following a traumatic experience, an individual may be vulnerable to developing posttraumatic stress disorder (PTSD). Recent evidence suggests 12.9 lifetime episodes of PTSD are experienced per 100 people in the population (Kessler et al., 2017), and many of those affected will be parents, or have at least one child in their care (Lauterbach et al., 2007; Nicholson, Biebel, Katz-Leavy, & Williams, 2004; Sherman et al., 2015). To date, a predominant focus in the parental PTSD literature is understanding how it may be detrimental to their child's psychological, social and emotional outcomes (Dekel & Goldblatt, 2008; Figley, 1995; Kellerman, 2001)). While this work is clearly important, the particular needs and experiences of the parents themselves have received less attention.

Recently reviewed evidence has found that in specific trauma populations, parental PTSD can impair certain parenting behaviours (Christie et al., 2019; Creech & Misca, 2016; van Ee, Kleber & Jongmans, 2016). In military veterans, it has been found that parents with PTSD are often more reactive or aggressive towards their child, and rate their satisfaction with their own parenting as significantly poorer than those without PTSD (Creech & Misca, 2016; Leen-Feldner et al., 2013; Samper, Taft, King & King, 2004);). In populations of refugee parents, it has been found those with PTSD experience difficult relationships with their children, as well as often withdrawing from interacting with them (; van Ee, Kleber & Mooren, 2012; van Ee, Kleber, Jongmans, Mooren & Out, 2016). Further, parents who develop PTSD as the result of a traumatic birth, also appear to experience relationship difficulties with their children compared to those who do not have PTSD (Ayers, Eagle, & Waring, 2006; Ayers, Wright, & Wells, 2007; Davies, Slade, Wright, & Stewart, 2008). However, significant gaps also exist in this literature (Christie et al., 2019). First, there is a strong reliance on quantitative, self-report findings, which provides limited insight into the

challenges faced by parents with PTSD, or the key drivers for potential parenting problems. The lived experiences of parents with PTSD are largely neglected in this framework.

Emerging qualitative evidence has begun to provide a more in-depth picture of the experiences of parents with PTSD. A pilot study with military veterans (Sherman et al., 2015) found that parents who suffered from PTSD reported a number of challenges around parent-child communication. Veteran parents described simultaneously wanting to communicate with their child about PTSD, but feeling great concern about how to discuss this and the consequences of doing so. Consequences included looking weak in front of their child, losing any authority or respect their child had for them, and concern their child may disclose to others about their [parent's] disorder (Sherman et al., 2015). In a further qualitative study by Sherman, Gress Smith, Straits-Troster, Larsen, and Gewirtz (2016), a number of PTSD symptoms, including hyperarousal, avoidance and negative alterations to cognition and mood, were discussed by military veteran parents as substantially impacting upon their parenting behaviours.

Research involving Syrian refugee populations has emphasised similar important points (El-Khani et al., 2016; 2018). During one-to-one interviews, as well as focus groups, refugee mothers discussed three main challenges to their parenting following displacement from the family home. Although mothers in this study did not have a diagnosis of PTSD, it was noted that participating mothers had been exposed to varying levels of trauma. Firstly, parents described the chaotic environment they now lived in, which prevented them from having any structure or routine with their children, which they attributed to be a large contributor to parenting problems. Second, parents noted a change in their child's behaviour and emotions, including noticing increases in their child's anger and frustration, more aggressive play, and misbehaving more. Lastly, parents discussed experiencing difficulty dealing with their own emotions, including increased feelings of guilt, which was rooted in

worrying about their child and how the experience of displacement may have impacted them (El-Khani et al., 2016).

In summary, taken together, findings from the current qualitative evidence highlight several parenting challenges faced by parents who have been exposed to trauma and/or are struggling with PTSD (El-Khani et al., 2016; 2018; Sherman et al., 2015). However, the focus of these studies has been on trauma populations where other major challenges to parenting are present, for example veteran populations where long absences from home are common, or refugees coping with a range of extreme and ongoing stressors. As such, the potential generalisability to other trauma populations is unclear. The utilisation of more heterogenous trauma samples may aid in the development of an understanding that cuts across different trauma experiences and increase the transferability of findings. To this end, we conducted a qualitative exploration of the lived experiences of parents currently living with PTSD, using a heterogeneous trauma sample, focusing on parental perspectives on the potential implications for their parenting role.

Method

Ethical approval was granted by the University of Bath (17-039), and the South East Wales Research Ethics Committee - Panel C (12/WA/0037). A standard protocol for managing risks was approved by the ethics committee, but no risk events were experienced.

Study Design and Setting

Parents were recruited via a register that has been created and developed by two authors (JB and NR). The registry was part of a larger initiative linked with the National Centre for Mental Health (NCMH), which aimed to establish a collection of phenotyped samples for mental health research, including PTSD. The registry recruited adult participants

who had a history of PTSD via NHS services across Wales, who were willing to be contacted about future research projects. Of the participants held on the registry, 201 had dependent children and were therefore eligible for the current study. Potential participants were contacted by researchers from Cardiff University via postal letter and a follow-up phone call to invite them to participate. Of the 201 letters sent out, 49 (24%) returned letters stating they were willing to participate. Of these, one potential participant did not meet the study criteria, four participants asked to withdraw, nine participants were willing to complete the questionnaire measures, but did not wish to be interviewed, and five could not be contacted after their initial expression of interest. This left a total of 30 parents who took part in the qualitative interview and also completed study questionnaires (results of questionnaire data will not be presented in the current study). Full details of the recruitment process can be found in Figure 5.1.

Parents were included in the study if they: i) were the parent of at least one child; ii) were in frequent contact[1] with their child(ren); iii) had experienced a trauma over four weeks ago. Parents were excluded if: i) they suffered from an organic brain injury or intellectual disability which inhibited their ability to understand the purpose of the study; or ii) they had been diagnosed with any psychotic disorder (e.g., schizophrenia).

[1] Defined as "living in the same house as, or have shared custody of your child(ren)". If the children were older and had moved out of the family home, seeing their children on a regular basis and communicating by phone were also viewed as 'frequent contact'.

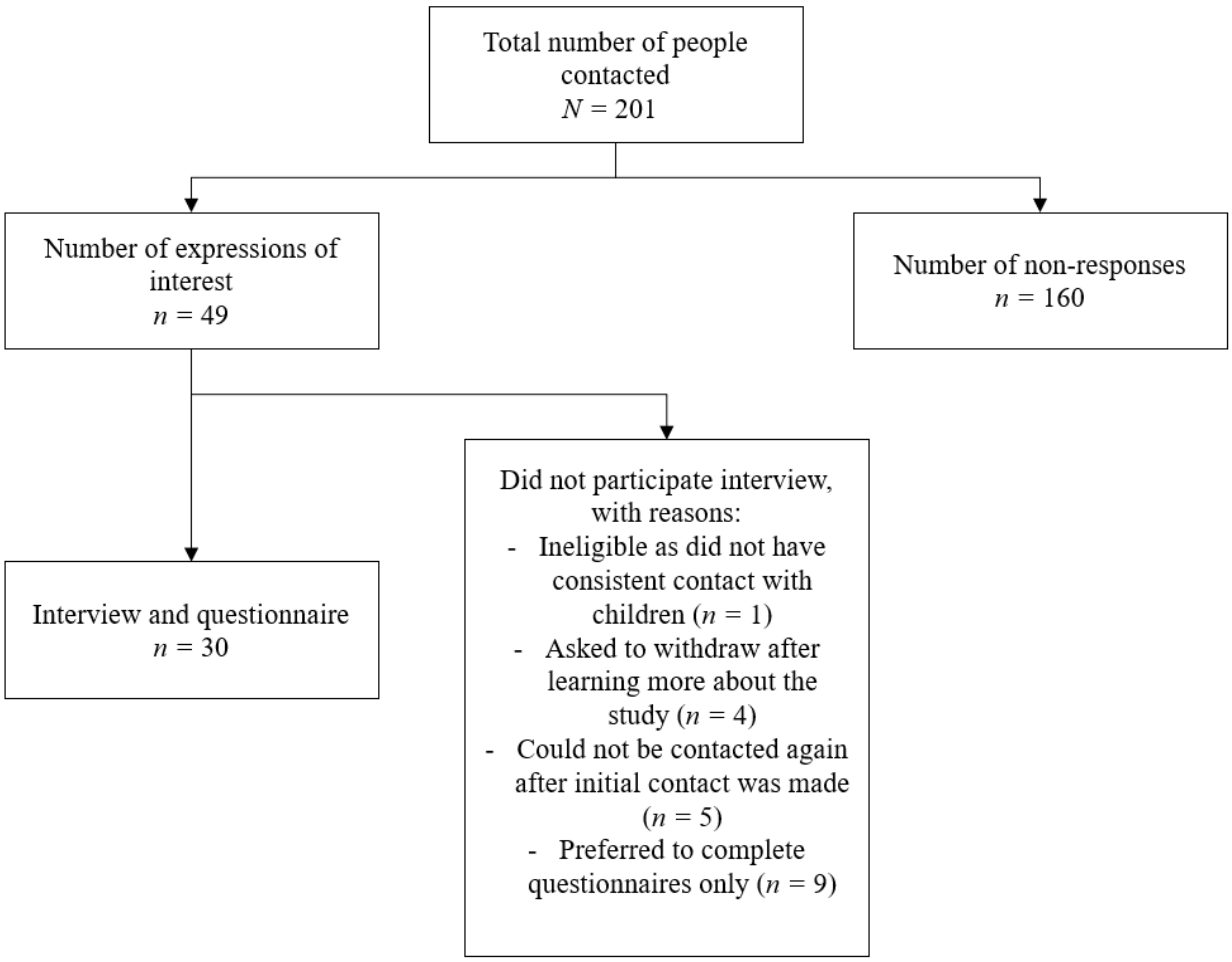

Figure 5.1. A consort diagram depicting the recruitment process.

Measures

Posttraumatic Diagnostic Scale (PDS; Foa, Cashman, Jaycox, & Perry, 1997). The PDS is a 49-item self-report measure that indexes DSM-IV criteria for PTSD, including a 17 item PTSD symptom scale that is rated 0 ('not at all') to 3 (5 or more times a week). Symptom scores showed a high level of internal consistency in the current study (*Cronbach's alpha* = 0.92). The scale has good test–retest reliability and internal consistency (Foa et al., 1997). Symptom scores were used to characterise study participants in terms of their PTSS severity; scores of 21-35 are classed as moderate to severe, with scores over 36 classified as severe. There is no specific clinical cut off.

Semi-Structured Interview. The development of the semi-structured interview was informed by the available evidence relating to parenting in the context of PTSD (Christie et al., 2019), as well as key papers in the wider parenting field (Darling & Steinberg, 1993; O'Connor, 2002). A similar interview schedule was used in a previous research study (NAMES REMOVED FOR BLINDING). The interview schedule was also piloted by members of the research study to ensure appropriateness of the questions.

During the interview participants were asked to identify and discuss their most significant trauma. The interview guide then invited participants to discuss (i) their parenting styles and broader relationships *prior* to the event, (ii) the focal trauma, (iii) parenting styles and relationships following the trauma, and (iv) coping and support seeking behaviours. The interview guide included prompts relating to parent-child communication (e.g., "Would you and your child generally talk about things?"), the parent-child relationship (e.g., "Can you describe your relationship with your child?"), the parent's own satisfaction with themselves in their role as a parent (e.g., "Can you tell me what pleases you about being a parent?"), and parental anxious behaviours towards the child ("Do you think you are protective of your child?"). A subset of parents' (n = 5) focal trauma was maltreatment that they had experienced as a child, meaning that they were unable to comment on their parenting prior to their trauma taking place. These parents were still asked the same questions as the wider sample, including their perception about how they felt their trauma experience had impacted on their parenting behaviour, but they were not asked about their parenting prior to their trauma taking place.

Interviews were conducted over the phone in English by HC. HC was trained in qualitative interview methods, interviewing trauma-exposed individuals, and was aware of risk and referral procedures. Detailed feedback on interview content was given during supervision, and quality checks of interviews were conducted throughout data collection.

Quality checks ensured that information gathered during the interview was relevant and appropriate. Following completion of the first four interviews, transcripts were discussed between the interviewer and supervisors. Points in the interview were identified where it may have been possible to explore the participant's answer in more depth. Further, given the sensitive nature of some of the questions, alternative ways to ask these specific questions were also explored. For example, asking parents directly why they had not spoken to their child about their trauma experience resulted in a short, non-descriptive answer. Consequently, the question was re-phrased to limit potential for parents to feel they had made a wrong choice and encourage openess. This process was repeated when 15 interviews had been completed.

Safeguarding

There were specific protocols in place should a parent be perceived as being a danger to themselves or others, including their spouse or child. At the beginning of each interview parents were advised that if the interviewer was at all concerned about their [participant's] safety that these protocols would be activated and, depending on the severity, key personnel would be contacted (e.g., participant's doctor, psychologist, emergency services). In addition, while it was emphasised during the interview that there was no judgement from the interviewer surrounding the participant's parenting style, participants were made aware that if the interviewer believed their child to be in danger of harm, then appropriate action would be taken.

Procedure

Participating parents were either sent out a questionnaire pack via post or were provided with a link via email to complete the questionnaires online. Once questionnaires were returned, participating parents were called to ensure they were happy to continue with

their participation and were offered the opportunity to ask any questions. Following this discussion, an appropriate date and time for the interview was set.

The interviews were conducted by phone with the participants. Participants were informed that their interview would be audio-recorded and later transcribed. Following their participation, parents were given a £10 Amazon gift voucher for their participation in the study. In addition, parents were debriefed and given the opportunity to discuss their experience and ask any questions. Debriefing occurred immediately after the interviews had taken place; participants were reminded by the interviewer what the purpose of the study was and were offered the opportunity to ask any questions about the research. During the debrief, participants were informed that the interviewer would follow up with them approximately seven days post-interview via telephone. The purpose of this follow-up was to check in with the participant to ensure their wellbeing had not been negatively affected as the result of their participation in the study. The interviewer also used this as an opportunity to ensure the participant's voucher had arrived.

Data Analysis

Transcripts were analysed using qualitative analysis software (Atlas.ti.). As the focus was on an exploration of parent's experiences, an inductive Thematic Analysis approach (TA; Braun & Clarke, 2006) was used to "report experiences, meanings and the reality of participants" (Braun & Clarke, 2006, p. 9) and to identify, analyse, and report patterns (themes) within data. The analysis was conducted following Braun and Clarke's (2012), six-phase approach. Firstly, the first author initially read through the transcripts without coding, but noted down thoughts while reading to become fully immersed and familiarised with the data. Initial codes were then generated, and were iteratively re-visited as the analysis progressed. Preliminary themes were then developed and mapped, before being discussed

with other co-authors. Themes were then reviewed and revised if necessary. Final themes were defined and named, and a thematic map was developed.

As qualitative analysis is subjective in nature, steps were taken to ensure limited assumptions, biases or premature interpretations of the data were made. First, the first author kept a reflexive journal during the analysis (Morrow, 2005). Second, an additional coder (RM) was asked to blind code 10% (n = 3) of the transcripts. Following blind coding, both authors met to discuss codes and themes to examine for agreement, coherence and accuracy. Further discussion of initial themes was had with the remaining co-authors to ensure participant's views and experiences were represented accurately. The analysis process was made transparent through study researcher's annotations and notes, from initial thoughts, to clusters of ideas, to themes (Shenton, 2004).

Results

Sample characteristics

Participants were 30 parents who were resident within the United Kingdom. The sample comprised of 16 mothers (53%) and 14 fathers (47%), aged between 35-66 years (see Table 5.1 for demographic characteristics). Some parents in the sample had adult children, which meant that the children no longer lived at home (n = 13; 43%); however, their children were in the home growing up during the time of their trauma, which was the focus of the interview. The remaining parents (n = 17; 57%) still had their children living at home with them. Over half of the sample was married or co-habiting (n = 18; 60%), and 67% (n = 20) of the sample were not currently working either due to unemployment or retirement.

Using the PDS, parents reported experiencing between one and nine traumatic incidents (Mdn = 2; see Table 5.2 for full details of the sample's trauma exposure). Where multiple traumas were reported, participants were asked to identify a focal trauma (i.e., the

event that caused them the most distress) to discuss during the interview. For a large proportion of the sample (n = 26; 87%), their focal trauma had taken place more than 5 years prior to the interview. All parents in the current study had a confirmed clinical history of a diagnosis of PTSD, with 83% (n=25) of the sample still reporting moderate to severe symptom severity scores (M = 36.1, SD = 15.4).

Table 5.1

Sample demographics

Demographic characteristics	Statistic (*N*=30)
Parent demographics	
Age in years, *M* (*SD)*	52.4 (9.12)
Proportion of mothers*, N* (%)	16 (53%)
Proportion married or cohabiting, *N* (%)	18 (60%)
Ethnicity	
White, *N* (%)	28 (93%)
Other, *N* (%)	2 (7%)
Child demographics	
Number of children, range (median)	1-5 (2)
Age in years, range (median)	4-46 (23)
Proportion of parents still have their children living at home with parent, *N* (%)	17 (57%)
Length of time since index trauma	
3-5 years, *N* (%)	4 (13%)
More than 5 years, *N* (%)	26 (87%)

Table 5.2

Summary of trauma types experienced as measured by the Posttraumatic Diagnostic Scale

Trauma Type	Focal ($N = 30$)		Experienced ($N = 30$)	
	n	%	*n*	%
Serious accident	6	20	13	43
Natural disaster	1	3	1	3
Non-sexual assault by stranger	0	0	6	20
Non-sexual assault by family member	0	0	5	17
Sexual assault by family member	4	13	10	33
Sexual assault by stranger	1	3	4	13
Military combat*	8	27	9	30
Sexual contact younger than 18	0	0	10	33
Torture	0	0	3	10
Life threatening illness	2	7	8	27
Other**	8	27	16	53

Note. *Military trauma was experienced by men only.
**Other traumas reported included 'sudden unplanned incidents', or 'work place bullying'

Qualitative Findings

Inductive thematic analysis of the interviews revealed four main themes (each with multiple sub-themes), which related to participants' experiences as parents with PTSD, as well as illustrating the daily challenges they faced. These challenges included key impacts that their trauma exposure had had on them personally (Theme 1), the changes they felt the

trauma had caused to their parenting (Theme 2), which largely impacted their perception of their parenting efficacy (Theme 3). Lastly, parents reflected on how their life had changed as the result of their trauma, as well as discussing how they had recovered and what support they had sought to get to a better place (Theme 4). See Figure 5.2 for a representation of main themes and sub-themes.

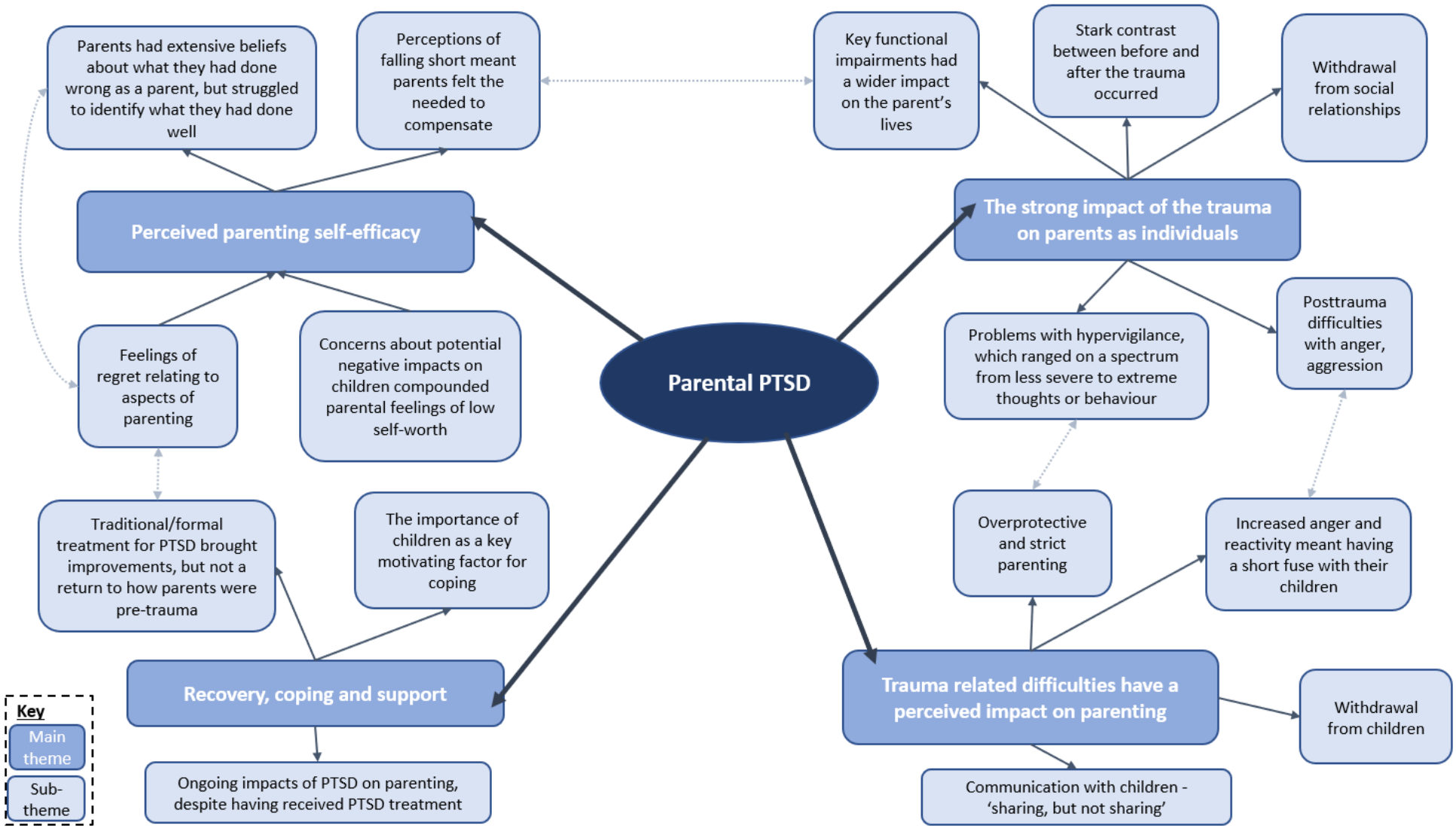

Figure 5.2. Thematic map depicting the four main themes and multiple sub-themes from the qualitative interviews, and how they link with one another

Theme one: The strong impact of the trauma on parents as individuals

Participants discussed the personal impact they had experienced as the result of their trauma exposure and subsequent development of PTSD; including evident changes to personality and behaviour, as well key functional impairments.

Sub-theme one: Stark contrast between before and after the trauma occurred. With the exception of the parents who had experienced early childhood trauma, which in their own words meant their earliest memories were of their trauma (n = 5), the majority of parents described a considerable negative contrast between the person they were before the trauma took place compared to present day. Although it is possible that their perceptions were potentially idealised; generally, parents described themselves, pre-trauma, as happy, outgoing people, who had good jobs that they enjoyed, as well as describing a number of hobbies they took part in. Post-trauma, parents described their feelings, personality and social relationships as being strongly negatively affected, in a way that felt almost immediate for some. In describing this contrast, parents often discussed that this evident change was upsetting to them, and described a desire to turn back the clock to the way they had been before the trauma had occurred.

> *My personality, I think, changed literally, you know, nearly, overnight…Completely. I completely changed. My personality just went. I became very withdrawn. I wouldn't enjoy anything. We'd go out and do family things. I wouldn't enjoy them. Those types of feelings. Completely changed me, completely.* (PID 015, mother).

> *I used to be…I was quite an optimist, pretty happy and yeah, pretty content with things on the whole. But I'm not now, not at all…I was also quite a keen cyclist and I enjoyed travelling. I was fairly outgoing and I had a large circle of friends. And now,*

I can say that I don't have any friends at all. I'm really withdrawn, particularly from the social side of things really. (PID 007, father).

Sub-theme two: Posttrauma difficulties with anger, aggression. A number of parents, particularly fathers, discussed that after their trauma they noticed becoming angrier and more reactive, which often resulted in violent behaviour. For some parents this was extreme, with a minority of them (fathers) seeking out and/or instigating physical altercations. Other parents stated when they became frustrated, they would break or hit inanimate objects in the house, or leave the house to 'cool off' elsewhere. During these discussions there was an evident divide between mothers and fathers. Fathers often would discuss their anger in more physical terms, highlighting their wish to physically harm people, or taking their anger out on objects in the house or spouses.

So, I wanted to kill him at the time. I had a raging need to kill him [perpetrator]…Well I wanted to kill him, and it was eating me up inside. That's all I ever thought, was just to kill him. I was confused…Yeah. I was moody and angry. It filled me up for years. Hatred and anger. (PID 001, father).

Yeah, I used to have…well, still do, have really bad road rage, but I'm talking to the point where I would chase people down, drag them out their car and…emm…'educate' them…I was very, very violent and very, very angry all the time…People used to give me a wide berth, because they all thought I was bonkers…. (PID 030, father).

While there were some mothers who discussed also experiencing increased anger, they were less likely to discharge their anger physically. Most often mothers discussed feeling frustrated

about what had happened [their trauma], and described their anger in more diffuse terms, without discussing this anger being directed at people or objects.

"*I was just angry. I hadn't asked for this to happen and it wasn't my fault that the [accident] had happened. Everything went wrong. I broke up my relationship at the time, my drinking, I was just angry."* (PID 003, mother).

Sub-theme three: Problems with hypervigilance, which ranged on a spectrum from less severe to extreme thoughts or behaviour. Most parents discussed behaviours that were linked with hypervigilance. Both mothers and fathers discussed experiencing a range of hypervigilant behaviours, including jumping at loud or sudden noises, being overly cautious and overly alert, having a lack of trust in other people and feeling unsafe in their environments. Parents described their efforts to make themselves feel calmer and safer, such as ensuring the doors and windows were locked before going to sleep or when leaving the house. Some parents described more passive approaches, which included not leaving the house, or avoiding busy places where there were too many people and loud noises (e.g., cinema or shopping centre), while others took a more active approach. There were no notable differences between mothers and fathers in the types of approaches taken. At the more extreme end of these vigilant behaviours, a parent (who had experienced military trauma) described going out for walks around their neighbourhood at night, as they believed this would keep them and their families safe. A small proportion of parents also displayed paranoid behaviour, including believing people were 'tapping' phone lines or revealing they believed in conspiracy theories.

> *If I went to a supermarket, it wasn't a supermarket. It was this whole, massive place where I would feel very exposed and I had eh, episodes of um, delusions and hallucinations. Everything started to wobble and be quite distorted and I think that*

was because of the heightened state of anxiety I was in. The world was a very, very scary place for me at that time. You know? I could never, ever feel safe…I always felt on edge, exposed, whatever you want to call it, but you know, it wasn't a, a time where I could say I was happy, settled and content. I was just completely on this high alert, on edge. (PID 015, mother).

Yeah, oh yeah. There were times as well where I would go out late at night…maybe about midnight and just patrol around where I lived. The amount of burglars I caught was unbelievable…but what I would do is go around with a big…uh…with a big combat knife, which got me into quite a bit of trouble with the police. (PID 030, father).

Sub-theme four: Withdrawal from social relationships. Participants also discussed a noticeable change in their willingness to be around other people. Parents stated following their trauma, most often they wanted to be left alone and withdrew from those around them, and there were several reasons why this was the case. While some parents expressed a need to be in their own bubble with no interruption from the outside world, others did not want to be seen as vulnerable or not coping. Parents also discussed removing themselves from situations where they could feel themselves becoming triggered by trauma reminders (e.g., around loud noises that may encourage flashbacks). At the most extreme end of these behaviour changes some parents discussed seldom ever leaving the house, which meant their contact with anyone was severely restricted.

I think it was the insecurity of leaving the house. If I'm honest, I just didn't really want to go anywhere and so it was almost like a bit of an excuse I think, to go out and because my house had become like my security really. It just became my life to stay

inside. I didn't leave the house. I didn't leave the house for months. (PID 023, mother).

I wouldn't go out. I wouldn't go out or socialise. I cut myself off from people, I avoided things. I didn't want to be seen to be vulnerable, which is what I felt. I didn't want neighbours to see me. (PID 007, father).

Although parents described their own need to withdraw, the resultant isolation was also seen as problematic.

I mean, I was classed as antisocial because I didn't want to speak to people. Or go out with people where it was noisy and loud. And so, you lose your circle of friends. Because you're not that person you were, and you can't put, you can't tell them why. So, they all walk away and then you become lonely. (PID 026, father).

Sub-theme five: Key functional impairments had a wider impact on the parent's lives. As a result of some of the changes to behaviour mentioned in the above sub-themes, in some cases coupled with negative physical outcomes of the trauma, parents noted they were unable to do activities they were previously able to do. This often led to a sense of being a lesser person, being more dependent than they were previously, which could be devastating or increase a feeling of helplessness.

So physically I wasn't…physically I was still…y'know not a cripple, but I was…I don't think I was in a wheelchair then, but I'd gone from the wheelchair to crutches to a walking stick and it was horrendous. It was awful having a walking stick and I got…umm…I was out socially, but yeah I had people taking the mick out of me with the walking stick which was quite a horrible time. And also just really like a felt like I

had regressed by moving back home with my mum and dad. Yeah, just a very angry time. (PID 003, mother).

I couldn't do the same things. It was very hard for my wife to cope with me. And with the three boys. It was hard enough. I wasn't there for my wife…I wasn't there at all – I was there but I couldn't do anything. In them days, my wife would tell me things, but I just couldn't help. It was horrible. (PID 008, father).

Theme two: Trauma related difficulties have a perceived impact on parenting

As well as changes to their own behaviour following their trauma, parents also discussed how they felt these behaviour changes had fed into their parenting, and how their parenting had changed following their trauma. For those who had experienced their trauma before becoming parents, they were also invited to discuss how they felt their parenting had been impacted by their early childhood maltreatment but could not reflect on any changes to their parenting, as they were not already parents when the trauma occurred.

Sub-theme one: Increased anger and reactivity meant having a short fuse with their children. Similar to a previous sub-theme (Theme 1, sub-theme 2), a number of parents discussed their increased reactivity and anger also feeding into their parenting, which meant that following their trauma they became easily irritable with their children. Most parents talked about getting angry and yelling at their children for no reason other than the children were "just being children". Recalling the fact they had done this was upsetting, as these reactions were perceived to be inappropriate. As already described, some fathers described episodes during which anger would discharge as physical violence, including hitting or breaking inanimate objects, and sometimes hitting or harming their spouse or partner. With one exception, fathers who discussed being physically violent were clear that they were not violent towards their children, but they were aware their children sometimes witnessed their outbursts. Again, this realisation made them feel guilty and upset. While some mothers also

spoke about being overly irritable or angry, this appeared to be more contained to specific contexts or reflected isolated incidents, and never resulted in physical violence. Comparatively, fathers spoke in more general terms, with some describing overwhelming feelings of rage and many incidents where they were physically violent.

> *I'd smash my house up, I smashed up the house and the house was smashed to pieces…I was yelling in the house and she [daughter] couldn't understand. I strangled my wife and nearly killed her. It was hard for them [family] and I felt guilty. It's not nice having flashbacks or panic attacks in front of your daughter you know? She didn't know what's wrong with me. It was hard, it was hard for me. I wanna say never, ever laid a finger on my daughter but X, my wife I did strangle and hurt her and she put up with a lot from me.* (PID 009, father).

> *And I'd take it out on him [husband] and I'd be shouting at him and my son. I would be exploding on them even more then, and then I take myself off and then they'd be worrying about me and then I'd be upstairs crying and they'd be down here and then one of them would come upstairs then and I would be like "what the f'ing hell do you want, just leave me alone."* (PID 012, mother)

> *No, I have never raised a hand in my life. I've never smacked the children, but have yelled at the children. What I would say would be worse than what I would do. I would put my hands through a wall or smash the door and they used to be petrified. And as soon as I calmed down, I would apologise and say, 'I'm not being malicious, I'm not being mean to you, it's just stuff that came out of my mouth'.* (PID 014, father).

Sub-theme two: Overprotective and strict parenting. Parents noted that their hypervigilance fed considerably into overprotective behaviours with their children. While the

majority expressed great concern for the safety and wellbeing of their children, those at the more extreme end of overprotective behaviour were predominately mothers. It was apparent that while fathers tended to become more violent and aggressive, which would result in withdrawing from their child, mothers instead wanted to spend all their time around their child in order to keep them safe. At the time of the interview some parents had children that were growing into teenagers, meaning they were becoming increasingly independent. For those parents this was an extremely difficult and stressful time, especially as they tried to allow their child to have independence while still making sure their child was safe. While this is commonplace for parents with teenagers, some parents discussed more excessive behaviours, such as asking their child to text them every 30 minutes with an update of where they were and what they were doing.

> *When they [children] went into town, obviously it's going to cause worry, yeah I'm jumping at the slightest noise, feeling jumpy, so y'know even the phone vibrating, I would be jumping out of my seat…the fear that it was going to be 'that' phone call. I just needed to know where they were and who they were with, y'know. So I would say to them "okay, my anxiety is higher, so S when you go into town today with your friends, that's fine but could you just let me know when you get to down there, who you're with, if that changes then tell me, and then let me know when you're coming home'*. (PID 031, mother).

Some parents also became distrusting of the capacity of others to care for their children (e.g., parents concerned about leaving their child with nursery school employees, because they could not be trusted to make sure nothing bad happened to their child).

> *It was really difficult, I think because she wasn't going to be with me. And I was going to have to entrust her to another human being, and I didn't want to. She would have*

to be on her own with a person that I didn't know for hours, and she was toilet training. I was so worried something was going to happen…So, obviously I had the conversation with her to explain to her that these are her places and that people mustn't ever make you feel uncomfortable. (PID 020, mother).

Other parents discussed that after-school activities their child had previously taken part in had to be stopped after their trauma, as the thought of their child being harmed was too much to cope with. While parents discussed this coming from a place of love and concern, it was difficult to let go of their children, sometimes literally. One mother described her children commenting that she was hurting them because she used to hold onto them so tightly. Parents found it difficult to deal with these feelings and behaviours. While they understood that they could not keep their children safe at all times, the desire to do so made it extremely difficult to control their own behaviour and the reality often caused them considerable distress.

Oh no, no. I didn't want him to become harmed in any way, so I wouldn't take him to ice hockey or things. I just wouldn't go. It was just sheer anxiety. I was so concerned for his [child] safety…I'd already had one accident and that was the only time I'd had an accident and I certainly didn't want to have another one. (PID 007, father).

Even parents who had experienced indirect trauma, whereby their child had experienced a trauma, noted also feeling anxious, which led to overprotective behaviour.

[At this time her child was a teenager]. Horrible. Similar to when he was first born, I just want to be with him all the time in case it happens again. I wanted the control for myself; so for quite some time afterwards, I wanted to have some sort of monitor in his room…quite frankly…the first night he came back home from hospital I actually slept on his bedroom floor. I then wanted to go dig out the baby monitor, y'know. I

did and put it in his room. It was horrendous, I couldn't sleep! The slightest little noise that he made, I'd be awake. So, it wasn't productive and in the end my husband actually hid it from me and told me that he had it and that he was going to be the one to keep an ear out. (PID 028, mother).

Sub-theme 3: Withdrawal from children. Fathers in particular talked about their withdrawal from others extending to their children. This was most often rooted in, what the parents believed, was protection for their children. Fathers noted that they could feel themselves becoming irritated or angered by their children's behaviour and decided to remove themselves from that environment in order to prevent any outbursts. It should be emphasised that this behaviour was not linked to a specific trauma type.

Sometimes it does happen, I'll have to go to bed early, because it is all just too much. My son will be like "why are you going to bed early dad?" if I'm going to bed at 6pm, instead of going to the cinema with him. But those feelings have come back and I can't explain it to him…I feel like I can't explain it to him and I don't think I should tell him that…tell him what's going on you know? I think I should protect him. (PID 007, father).

I didn't show them [children] the affection I wanted. I never explained to them why I was in bed all the time. But I'd just go upstairs out of the way. I didn't stop them playing with their toys or anything like that. If it was a noisy toy, I would go to the other room, I would go away from it. (PID 014, father).

I would get in moods. I mean, I've never, ever been…I always say would never take, never took it out on the children. But I did lock myself away or I become unresponsive, I used to go and I'd go in sit in the room for hours and hours on end. Because it was I had to get rid of the frustration or I'd, there's times where I would

get in the car and drive and I didn't want to be…and I'd go and sit in the countryside, away from everybody…The last thing I want to do is start, you know, upsetting people and shouting things and saying this, that…because it's nobody's fault. Nobody's fault. It's my fault, it's my fault. (PID 026, father).

Sub-theme 4: Communication with children – sharing but not sharing. Parents spoke a lot about changes to their communication as a family following their trauma exposure, stating they felt it was important to have an open line of communication between them and their children. Parents spoke positively about the fact they felt their child could talk to them about anything, and would come to them if something bad had happened and they needed someone to talk to. Parents encouraged their children to have no secrets from them, as they felt after what they had experienced there was nothing their child would say that could shock them. For example, "*I always made it safe for them if they ever wanted to tell me anything I was there. They could be open with me. Nothing they could have said would have offended me or shocked me or…because nothing…nothing could"* (PID 002, mother).

Of note, while most behaviours did not seem to be particularly linked to a type of trauma, it was apparent that parents who had experienced child maltreatment also discussed having very frank conversations with their child about their bodies and what they should do if they felt uncomfortable with how another adult interacted with them. Thus, some parents particularly encouraged discussion about subjects linked to their own trauma.

I would say to her [daughter] 'if you don't want to talk to Mum or you don't want to talk to Dad' then you can speak to…and I named all the people that she's close to that she can speak to. I'm always pretty good at fixing things, and I said to her, "Don't you worry, Mum will fix it." So, we've broached the things when it comes to private areas in the bathroom and things that are appropriate and things that aren't. I felt

that if anything untoward, I think she would talk to me. I think I'd notice as well. (PID 020, mother)

In contrast to the openness parents expected from their children, the majority of parents said they had not and would not talk to their children about what they experienced during their own trauma. Parents felt that their children did not need to know what happened in any detail, and that their role as a parent was not to traumatise their child by sharing this information. Some parents stated their child was aware that they experienced mental health difficulties or knew that they had PTSD, but that was as far as the discussion would go. Other parents were not as forthcoming about instigating conversations around their mental health difficulties with their children, but did say that they did not hide their medication bottles and if their child ever asked about them they would tell them, but not until then.

Because it was a nasty event and I really didn't want them bothered with it. I really didn't want them knowing that. Because when I was with them [children] it was nice and it was different and it had absolutely nothing to do with [trauma], so that can stay where it is. And my kids don't have to be involved with any of it, y'know? (PID 004, father).

Erm, because I didn't want him to… I didn't want him to know that I'd been sexually abused, erm he knows that I'd been physically abused but he doesn't know that I've been sexually abused so I just wanted to protect him from that really because I didn't want him to be upset and to have all that to deal with so I suppose it's me protecting him from knowing that. (PID 012, mother).

And ever since then I've never really spoke about the accident to the boys, because again, I just felt it was inflicting all this sadness on them because it was a huge part of their lives. I just kept it to myself really. (PID 019, father).

Theme three: Perceived parenting self-efficacy

Through discussions during the interview about how their parenting had changed, parents were very quick to criticise their own behaviours and efforts. While this could be argued to be a common practice among parents, parents' trauma experiences appeared to have an influence on these beliefs, as well as encouraging other negative thoughts, such as they were letting their children down, damaging their children, or in some extreme cases the belief that their children would be better off without them.

Sub-theme 1: Perceptions of falling short meant parents felt the needed to compensate. Parents spoke a lot about their efforts to maintain normal routines for their children post-trauma. This included still being the one to take children to after-school activities, or take them shopping for school uniforms, or to carry on doing similar family activities to the ones prior to the trauma taking place. However, parents were very aware that this was not always possible. For some, their symptoms of PTSD, or physical impairments as the result of the trauma, prevented them from doing the things they used to do, which made them feel like a terrible parent. Noticeably, while some fathers did discuss compensating or making up for past behaviour, this behaviour was more prominently discussed by mothers. Some fathers did discuss making up for lost time, but this was in respect to their now grandchildren, who they viewed as a fresh start in terms of parenting.

> *Well as I say, normal children who have normal parents are able to go out; they go to the park or for walks, they go to the movies. I can't even do a simple thing like go to the movies. I can't tolerate being in crowds. I can't tolerate being locked in a room. And I just feel guilty. I will buy them that movie they want to see when it comes out on DVD and we'll sit here at home as a family and watch it. But that's kind of the life*

that we have to have and I feel inadequate as a parent. Because as a parent, I should be able to do all these normal things that normal parents do, but I can't do because of my condition. And from that perspective I feel as though that I am a bad parent. (PID 025, mother).

Parents often discussed ways in which they would try and compensate for their inability to do activities that were done previously, but even if that involved spending time with their child, parents were incredibly critical that it still just 'wasn't good enough'. This was typically because it was not what they used to do, or it not what other parents would do.

I used to try and overcompensate, just thinking back now. Um, you know, I, if I didn't feel very well or I'd order them a new toy. You know, to try and spoil them in other ways…I would feel so bad that I hadn't done what I wanted to do, or we hadn't gone to somebody's house or I was feeling quite crap and they picked up on it. So, I'd overcompensate and spoil them. (PID 015, mother).

Well things like their birthdays, the accident was on September 12th, and [son's] birthday was November 17th, and I went to my savings and I gave him £1000. And I gave him loads of money for passing his exams…I did it because I knew, or I felt, as a mother I was letting them down elsewhere. (PID 023, mother).

Sub-theme 2: Parents had extensive beliefs about what they had done wrong as a parent, but struggled to identify what they had done well. During the interviews, parents were invited to talk about what they felt they did well as a parent. For the majority of parents, this question was found to be challenging. Most were quick to identify a number of examples that evidenced they were a 'poor parent', often stating that they could sooner name a longer list of things they had done wrong. When prompted again to discuss what they had done well,

examples provided were often vague and non-specific, or were inferred only due to good child outcomes. For example, "*well the fact we can talk on a one-to-one basis as adults and also that they are both successful."* (PID 004, father). Another father stated, "*well, I know I've done a good job – I got two boys that are both married, one with two children, one with one child."* (PID 019, father). Lastly, a mother provided what she felt made her a good mother:

> *I think as a mum, I think well I'm obviously doing something right because both the boys are doing really well. Really, really well and I know in my heart of hearts that neither of them have actually suffered because of my accident, and I know that because they're great, they're happy, they're healthy…well… [thinking] I suppose now that the kids are older, I've got that friendship back again haven't I? 'Cause I lost that friendship with them for a while I think and that was difficult.* (PID 029, mother).

Sub-theme 3: Feelings of regret relating to aspects of parenting. All parents in the sample had received some form of formal treatment for PTSD and for most, their trauma had occurred over five years ago. Taken together, these two elements had provided parents with the opportunity to be reflective about their parenting and how it had changed through the process of treatment and over time. Parents often discussed past behaviours with the emphasis on past mistakes that they made and wished they could take back.

> *At that time, my son and I were at a point where we were never going to have a relationship because everything I stood for he appeared to rile against to a point that he wanted to go into [city] with his friends. He was 15 at the time, and I didn't want him to go. I said I've got a busy day ahead and he said I'll behave, I said don't let me down. And that, that was the big thing for me. Anyway, about an hour and a half later*

I get a phone call, Dad we're in trouble, we've been caught shoplifting. I literally drove as fast as I've driven anywhere. Got out of my car where they were. My son walked up to see me and I just punched him in the face. That was the only time and I knew then that I crossed the line and I know that. (PID 014, father).

Obviously at the time I didn't think it affected her, stupidly, but she was talking about it the other day and she was saying 'remember that time when you said you said you were drinking 'Scottish water' and I was like, 'no, Russian water''. So I used to tell her what vodka was. Now I'm able to explain to her that it should never have happened. I should never have been drinking while you kids were in the house. I reassured her, if you ever want to talk about anything that's fine, but that should never have happened. I know that now. (PID 018, mother).

I still find it very difficult… I am better at sort of listening to my eldest. But it's kind of difficult… but I just take it on board as what a bad parent that I am. That I never spotted it, or never did anything. I should have noticed and all these 'I should haves.'. (PID 025, mother).

Sub-theme 4: Concerns about potential negative impacts on children compounded parental feelings of low self-worth. A number of parents discussed how they feared that their parenting behaviour had damaged their child. As their children grew up, parents noticed certain behaviours, such as their child worrying excessively, and questioned whether this was the result of their own behaviour following the trauma. This caused parents additional concern, as they did not want to be the source of their child's anxiety or damaging behaviour (e.g., self-harm or substance abuse), but feared that it was their PTSD that caused this ripple effect. At the more extreme end, a number of parents admitted to thinking perhaps their child would have been better off if they [the parent] had not been in the child's life.

…during the time of my PTSD, when he [son] was younger. I always feel quite sure that it affected him, y'know? There was a brief period of time where he went through a bit of drinking as well, which was wrong" (PID 004, father).

Yes. I find that quite hard but um, no. It, I think in the early years, yes, it, it has impacted…I see it because my oldest daughter, she is a worrier and I honestly feel that's because of my state of mental health and I've you know, children are a product of their environment…I think that is down to me, she is such a worrier. I am disappointed and sad about that, but I can't change what it…it is what it is now. Isn't it? (PID 015, mother).

I do feel guilty because there are children put there who don't have a parent with this condition. Therefore … of course my PTSD affects them and affects my parenting. And so I do feel incredibly guilty and it is very hard when I have bad time, that they would be better off without me, because they would then be brought up by someone who doesn't have PTSD. (PID 025, mother).

Theme four: Recovery, coping and support

Discussions around recovery varied between parents, and included both positive (e.g., exercise) and negative (e.g., substance abuse or self-harm) coping strategies. While the methods of coping varied, the underlying tone around the topic of recovery was similar for the majority of parents: parents' views of their own recovery for themselves as individuals versus recovery for their parenting outcomes were seen as two separate elements.

Sub-theme 1: Traditional/formal treatment for PTSD brought improvements, but not a return to how parents were pre-trauma. Prior to participating in the current study, all participating parents had received some form of clinical treatment for PTSD. Treatments

included Cognitive Behavioural Therapy (CBT), Eye Movement Desensitisation and Reprocessing (EMDR), or counselling, with most parents also taking medication, such as anti-depressants. Those who had received a psychological intervention and experienced their trauma at least three years previously, were more reflective about past coping behaviours, including when those behaviours were 'not healthy' or were 'damaging'. They recognised that after therapy or support from relevant services that they were in a better place. It was acknowledged that they would never be the person they were prior to their trauma taking place and they still felt a level of damage had been done that was irreparable, resulting in them not ever being able to return to doing all the activities they once did before the trauma. However, after treatment, there were significant improvements in functioning relative to when their PTSD was at its worst.

> *In the last six months, eight months but I've had two lots of PTSD treatments, so now I'm okay. Whereas if, a year ago or two years ago, I wasn't. I had quite extreme PTSD from it all, but I've had two lots of EMDR, so because I've had that, I'm in a much better place now.* (PID 031, mother)

> *I never say I'm cured. I live with PTSD now. It [treatment] has helped with that acceptance. I have the skillset that allows me to be partly in control of what happens now. If I have a panic attack when I'm out in my car I know I can work through that really easily just by doing breathing exercises or grounding myself in the moment and whatever. That gives me a bit of that control back which means I can live with this now…I go for coffee now, I go into town, I can change coffee shops and everything. I can go to the cinema now. I couldn't do any of these things when I was in the grip of the worst part of PTSD.* (PID 035, father).

Sub-theme 2: The importance of children as a key motivating factor for coping.

Parents also discussed their own ways of coping, which incorporated both positive (e.g., exercise, starting a new hobby) and negative strategies (e.g., misuse of drugs and/or alcohol). There was little consistency in this, with few parents discussing similar activities or coping methods. One thing that was agreed upon by most parents during the interviews was that their child had helped with their coping and recovery. All admitted that it was extremely stressful to be a parent, and even more challenging to be a parent that had PTSD. However, their children were a constant and often provided a distraction for them when they themselves were feeling overwhelmed. In contrast to a previous sub-theme in which a number of parents had admitted believing their families, including their children, would be better off without them, other parents believed that if it was not for their child, they would no longer be here - having their child provided them with a reason to keep getting up in the morning.

> *Summing it up, I think my son got me through all of it. I don't think I'd be alive today having taken that overdose, every time I've contemplated it, I think about my son and how upset he would be and I don't want him to have that with him for the rest of his life. He's my anchor, that's what I'd say he was. He keeps my feet on the ground.* (PID 007, father)**.**

> *But, the love, it's just… I'd never felt anything like it before. It was incredible. I've got to be honest, it has driven me over the years to do some incredibly wonderful things. When everything kicked off with my husband and he took my daughter and he went off, it would have been so easy for me to just lie down and die, but I didn't. I went to a solicitors and I fought. It's having that fight and that desire, which I think came from having my little girl. I can't give up, because I'm forever and a day going to be a mother. No matter what I want to do, I can't give up, because there's*

somebody relying on me who's always going to rely on me. I'm always going to be mummy. (PID 020, mother)

It sounds really bizarre, but if like he [child] wanted new school shoes, I would almost kill myself to get in that car to get him to get school shoes. The drive to keep the kids normal overpowered everything, and at the point of it almost killing me, literally. Because I would just put everything on hold and just grit my teeth, take a tablet and just think, I've got to do this, I've got to do it. But as soon as we got back in the house, I would just be a crumpled wreck for days. (PID 023, mother).

Sub-theme 3: Ongoing impacts of PTSD on parenting, despite having received PTSD treatment. There appeared to be a dichotomy on how parents viewed and discussed their recovery. For most parents it was evident that while they acknowledged they would never be the same again, they were adjusting to their 'new normal' and that they were at least better than they were before. However, when it came to discussing their parenting, they did not view this in the same way. Parents seemed to see their parenting as a separate entity that was stuck in the past and unable to recover. In their view, the damage had been done and their parenting behaviours would not recover from this, despite the fact they, as an individual, could.

It's still quite restricting going anywhere, but it has got me to the stage now, nearly a decade later, where I can actually go on short trips away, if there's not too many people around. It's sort of expanded my world a bit. However, for the kids' birthdays and stuff, I still can't. That's absolutely impossible, I couldn't possibly get into a crowd like that…Just reminds me of all the things I can't do and I felt pretty useless. (PID 010, mother).

It is hard, even now, I usually get more anxious when he's [child] having difficulty adapting to a new situation. And consequently, I didn't want to let him out of my sight because I needed to know he wasn't hurting himself. And then it is always just a case of making sure he was alright, but that that didn't overlap onto my daughter, so I would end up having to check in on her constantly as well. (PID 028, mother).

I'm in a much better place now. Before, I was a mess and it affected my whole being. Basically, like two years ago, I was sitting outside the school, rocking back and forth because I just thought he [son] was going to, you know, something was going to happen in school. I would check on him seven times a night because I thought he might die in his sleep. You know, I had no reason to think that was going to happen…I became neurotic and I mean, really neurotic and I gave myself a mental breakdown. So it [treatment] has helped, but I think if I can, if I look at him, if he's been ill or she as well, mind. If they've been ill, until they're better, I can't function. (PID 031, mother).

Discussion

The current qualitative study provides further insight into the lived experiences of parents with PTSD, by exploring parents' own experiences of how they felt their PTSD had had an impact on their parenting and their family dynamic. Four main themes were identified, which included the noticeable changes parents perceived to themselves following their trauma, the associated changes to their parenting, parental perceptions of their own efficacy as a parent, and their experiences with treatment and recovery.

Parents in the current study were able to describe in detail changes in their personality and behaviour following their trauma, as well as identifying specific PTSD symptoms. Such

perceptions of change may have been enhanced among parents in the current study by access to formal therapy and treatment, as well as the length of time that had passed since the trauma had taken place. Therapy often allows for an increase in an individual's knowledge and understanding of their disorder, as well as offering the ability to be more reflective about the impact it has had (Jorm, 2000). Parents were also able to highlight the noticeable temporal change their trauma and PTSD had had on their entire lives, with most stating they were no longer the person they were before their trauma had taken place (Atwoli, Stein, Koenen, & McLaughlin, 2015;Kessler et al., 2017; Yehuda et al., 2015). Such perceptions are entirely consistent with a large literature that discusses the wide-ranging impact to an individual following trauma exposure and PTSD development (Bisson, Cosgrove, Lewis & Roberts, 2015; Brewin, Andrews & Valentine, 2000; Kessler et al., 2017). In the current sample, feelings of uncontrollable anger and associated aggression, hypervigilance, and social withdrawal were highlighted as being particularly problematic and distressing.

Findings from the current study also highlight how parents feel their PTSD symptoms have impacted on their parenting. Most of the PTSD symptoms and changes that parents described earlier in the interview could be identified as having a role to play on impacting specific parenting behaviours. Parents noted that their hypervigilant behaviours often lead to more overprotective parenting behaviours as well as being concerned for their child's safety. This is in line with previous research, suggesting parents' hyperawareness of their environment (e.g., how unsafe it may be), can lead to more protective behaviours (Bosquet-Enlow, Egeland, Carlson, Blood & Wright, 2014; El-Khani et al., 2016). Parents also discussed how anger and increased aggression as the result of their PTSD often also fed into their parenting behaviours, which subsequently gave rise to an increase in aggressive outbursts that their children experienced or witnessed. In line with previous research, findings

have suggested that parents with PTSD are more likely to use harsher parenting practices, including yelling and hitting (Leen-Feldner et al., 2011).

Although there were many areas of overlap in terms of the difficulties highlighted by mothers and fathers, there were apparent sex differences with certain parenting behaviours. Specifically, fathers (particularly those who had experienced military trauma) reported being more persistently angry and physically aggressive, sometimes uncontrollably so by their own description, which could result in violence towards their spouse, and severe displays of aggression in front of their children. In turn, this perception of being on a short fuse could lead to withdrawal from their children: if fathers felt themselves becoming irritated by their child's behaviour then they frequently coped by removing themselves from the situation, which has been evidenced in previous work with military fathers (Galovski & Lyons, 2004; Samper, Taft, King & King, 2004). Previous literature has highlighted similar findings, with military fathers reporting a poor parent-child relationship, along with reports of being reactive and aggressive (Creech & Misca, 2017; Cohen, Zerach & Solomon, 2011; Galovski & Lyons, 2004). The current findings highlight not only the presence of such responses, particularly among fathers, but also the significant distress and self-recrimination that accompanies them, and the shutting down of family relationships that was a primary way of coping for many fathers. These observations highlight the key importance for clinicians to take into consideration the wider family environment when a patient discusses aggressive outbursts as a consequence of PTSD.

By contrast, mothers did not describe such pervasive irritability/anger, and any displays of physical aggression were isolated. Nonetheless, displays of anger and aggression in mothers were equally associated with feelings of self-recrimination and distress. In addition, whereas fathers frequently reported withdrawing from their children, mothers described wanting to spend all their time around their child posttrauma, in an overprotective,

hypervigilant manner, to ensure their child was safe. Previous evidence has found that avoidance symptoms of PTSD can prevent fathers from engaging with their children (Brockman et al., 2016; Sherman et al., 2016), as well as emotional numbing being predictive of a lack of warmth or empathy being displayed by fathers to their children (Davidson & Mellor, 2001; Samper et al., 2004). Furthermore, evidence suggests that following a traumatic event parents can become more overprotective of their children and are less willing to grant their child autonomy. This has consistently found in a number of contexts: following a trauma directly experienced by the parent (Bryant et al., 2018); following trauma directly involving the child (Williamson et al., 2016); or a trauma involving both the parent and the child (e.g., a natural disaster; Cobham & McDermott, 2014). More widely, both mothers and fathers described a level of disability that they perceived to make them unable to meet their children's needs, and this falling short often led to unsuccessful attempts to compensate. Both mothers and fathers struggled to identify specific positive aspects of their parenting and expressed overall extremely low perceptions of their parenting efficacy. In some cases, this was reinforced by beliefs that their parenting had significant negative impact on their child.

Parents in the current study described a dichotomy at the heart of their communication with their children. All children were encouraged (and expected) to be open and honest with their parents, yet this appeared to be a one-way agreement. Parents were reluctant to discuss any aspect of their trauma with their child, including what they experienced and how it had impacted on their mental health. Some parents did express a desire to communicate with their child about the changes they had experienced, but admitted to not having the 'right tools' to do so. As has been suggested in previous studies (Berkowitz, Stover, & Marans, 2011; El-Khani et al., 2016; 2018; Horesh & Brown, 2018), findings from the current study could be used to argue for a more family-centred approach to treatment of parental PTSD. In their recent editorial, Horesh and Brown (2018) discuss the concept of the 'posttraumatic family'

calling for more treatment options that address the needs of immediate family members in close proximity to the individual with PTSD. Within this more family-centred approach, parents may be provided with the tools and safe space to discuss their disorder and the impact it has, as well as generating more understanding and support from family members.

All parents in the current study had received formal treatment for their PTSD, which was evident in their ability to reflect on past behaviours, as well as their discussions about how the extent of their recovery. This finding is a positive acknowledgement of the benefits of therapy in treating PTSD (Bisson, Roberts, Andrew, Cooper, & Lewis, 2015). However, parents did not perceive their treatment as a cure for their PTSD. Parents reported being able to function more positively as a result of therapy, but still acknowledged they were not the same person as before the trauma. Treatment had aided in the acceptance of this, as well as helping parents adjust to living with their PTSD and managing this more effectively. Of great interest was the distinction between parent's descriptions of themselves following treatment and their parenting following treatment. Despite acknowledging the positive outcomes of treatment for their recovery, parents did not share the same view about their parenting abilities.

The current paper offers novel and valuable insight into the impact of parental PTSD from the perspective of the parent, exploring the daily challenges faced by parents with PTSD. The current project has utilised a heterogenous trauma sample, with nearly an equal number of mothers and fathers discussing their experiences of parental PTSD. However, limitations of the current study must also be acknowledged. The range of current ages of the parents' children in this study was large (4-46 years; *M = 23; SD = 11*); therefore, memory recall may not have been completely accurate for some parents, although arguably the persistence of perceptions and self-appraisals among parents is more important than their

veracity. However, future research may seek to focus on a more specific and narrow age range of children.

Secondly, most parents had experienced their trauma more than five years prior to participating in the interview, and had also received therapy within this time. While this provided an interesting insight given how reflective parents were, most also admitted to being in a 'better place' as a result of being able to function better. Some parents noted that had the interview taken place prior to treatment their answers and responses may have been different. While this is a positive finding in respect to successful treatment outcomes, there appears to still be a lack of understanding around challenges faced by parents while experiencing more extreme PTSD symptoms prior to treatment commencing. For example, it is important to understand whether when symptoms are at their most severe, parents still have insight into those negative aspects of their parenting that are related to their PTSD. Therefore, future studies should be conducted with a population of parents who are still awaiting treatment to gain a fuller understanding of this experience.

Conclusion

Results from the current study emphasise the multiple challenges faced by parents currently living with PTSD, which included negative impact on themselves and their functioning, their parenting behaviours, and their perception of their parenting abilities. Parental PTSD symptoms appear to impair certain parenting outcomes, such as communication, beliefs about competency as a parent, and overprotective and/or aggressive behaviours, all of which may have future implications for the parent-child relationship and child outcome. Findings emphasise that, while treatment can promote recovery and allow for more positive functioning of the parent as an individual, parents still felt that certain aspects of their parenting remained impaired, even following treatment. The current study offers

several clinical implications towards a more family focused treatment approach, as opposed to treating the parent on a more individual basis.

Chapter 6

Paper 5: The impact of parental trauma on mental health and parenting: A qualitative study in a high adversity South African community

Manuscript is currently submitted and is under review for publication in Social Science and Medicine

Chapter rationale

Findings from Papers 2, 3 and 4 have provided multiple perspectives into understanding how parental PTSD impacts the parent and their parenting outcomes in a Western, low-risk context. However, as emphasised by findings in Paper 1, there is a dearth of qualitative research, which means that our understanding of *how* parents feel their trauma exposure and PTSD is affecting their parenting is very limited. Furthermore, a substantial proportion of research in the parental PTSD field has been conducted in high income countries (HICs) with primarily Western populations. Thus, it is unclear how parents in low-middle income countries (LMICs) may be impacted by trauma and PTSD. Therefore, Paper 5 seeks to address these gaps in the literature through a qualitative study in the township of Khayelithsa, Cape Town, South Africa. South Africa is a LMIC, with inhabitants experiencing a greater mean number of traumas during their adult lives compared with those in European countries. Thus, the aims of the following paper were to explore the lived experiences of parents from Khayelithsa, in order to gain a more in-depth understanding of how they felt their trauma had impacted on their parenting as well as on their family dynamic.

Statement of Authorship

This declaration concerns the article entitled:			
The impact of parental trauma on mental health and parenting: A qualitative study in a high adversity South African community.			
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Statement from Candidate	This paper reports on original research I conducted during the period of my Higher Degree by Research candidature.		
Signed		**Date**	

The impact of parental trauma on mental health and parenting:

A qualitative study in a high adversity South African community

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Abstract

Research suggests that parenting behaviours are negatively affected by parental trauma. However, thus far, the evidence base has provided limited insight into why this occurs. Further, the available evidence has focused largely on high income contexts (HICs), and we know much less about the experiences of parents in low- and middle-income countries (LMICs) who are frequently coping with multiple adversities. The current qualitative study aimed to gain a more in-depth understanding from the parent's perspective about whether and how their trauma impacted themselves and their parenting behaviours. We conducted interviews with 30 Xhosa speaking parents (28 mothers) from Khayelitsha, a township outside Cape Town in South Africa. Five key themes were identified: consequences for parents as individuals (in terms of mental health, physical health); the centrality of community and cultural context to parental experiences; consequences in terms of parenting capacity; trauma related effects on the child and how this may influence parental coping; and mechanisms of coping and achieving recovery. Findings highlight the difficult nature of parenting following trauma due to impacts on multiple areas of life, and suggest potential avenues for the development of parenting interventions in order to support parents and families more effectively following trauma.

Keywords: Posttraumatic stress disorder, trauma, parent, family, parenting, low and middle income countries, South Africa

Introduction

Recent findings from two nationally representative studies of adults living in the United States estimate that over 15 million people will experience posttraumatic stress disorder (PTSD) in their lifetime, as well as have at least one biological child in their care (Lauterbach et al., 2007; Leen-Feldner et al., 2011). Research into the impact of parental trauma has emphasised the risk to the child due to their parent's poor mental health. Children of trauma exposed parents may be at elevated risk for negative social, developmental, and psychological outcomes in their own lives (Bosquet Enlow et al., 2014), as well as experiencing a poorer relationship with their parents (Scharf, 2007). This is consistent more broadly with social ecological and parenting models, which may suggest that in a family environment post-trauma reactions are not experienced in isolation (Bronfenbrenner, 1979; Cook & Kenny, 2005). Both parents and their children can be affected by parental trauma, with each influencing the other (El-Khani et al., 2016; Williams, 2012), and impaired parenting and family relationships have been identified as one possible factor underlying poorer child outcomes in the context of parental PTSD. Associations have been identified between parental PTSD and reduced parental satisfaction, more negative parenting practices, and poorer parent-child relationships, although whether such effects are causal remains to be established (for reviews, see Christie et al., 2019; Creech & Misca, 2017; van Ee, Kleber, & Jongmans, 2016). The largely quantitative evidence based also provides little information about how or why such impacts occur, and how they are experienced from the parent's perspective (Christie, et al., 2019). This omission limits the clinical relevance of observations in the literature, and arguably predisposes to a less sensitive understanding of parents who are struggling with the consequences of trauma.

Qualitative studies have the potential to provide a more in-depth understanding of the processes via which parental trauma and PTSD may impact parenting domains. Emerging

qualitative evidence suggests that parents are faced with a number of challenges following traumatisation, including dealing with their own mental health and concerns about their child's wellbeing (refugee populations: El-Khani, Ulph, Peters & Calam, 2016), as well as perceiving negative impacts to specific parenting outcomes such as parent-child communication (military populations; Sherman, Larsen, Straits-Troster, Erbes, & Tassey, 2015). Moreover, in their study of refugee parents coping with displacement from their country of origin, El-Khani et al. (2016) identified a vicious cycle that can develop following trauma exposure. Specifically, the parent's trauma leads to negative impacts to parenting outcomes, which subsequently increases their child's distress, which in turn may cause further distress for the parent. The available evidence also suggests that parental trauma is likely to be experienced differently in contexts of high adversity or continuous trauma exposure, where unsafe environments may considerably exacerbate parental distress, particularly in relation to their parenting role (El-Khani et al, 2016; Fazel, Wheeler & Danesh, 2005; Williamson et al., 2017a). Given this, it is striking that research to date has largely focused on high income countries and relatively low risk contexts.

To address this, we conducted a qualitative exploration of the experiences of parents following trauma exposure in a South African informal settlement community ('township'). South Africa is considered an upper-middle-income country (gross national income per capita of USD 12,055 or less; World Bank Independent Evaluation Group, 2018). Recent evidence from World Health Organization surveys (Atwoli, Stein, Koenen, & McKaughlin, 2015) has highlighted higher trauma prevalence rates in low and middle income countries (LMICs) report (70.3%) in comparison to high-income countries (HICs; 54 – 64%). Consistent with this, South Africa has reported rates of trauma exposure as high as 80% in some studies (Atwoli et al., 2013). Township communities in particular are typically characterised by high levels of community violence and other risk factors for trauma exposure (e.g., insecure

housing, limited policing, and alcohol and drug abuse). We interviewed parents who had been exposed to a range of different types of traumatic events. We defined trauma exposure according to the Diagnostic Statistical Manual of Mental Disorders (DSM-5; American Psychiatric Association, 2013) stressor criterion for PTSD; that is, an event involving "exposure to threatened death, serious injury or sexual violence" (p. 271). Study parents were living in a high risk, LMIC community, and consequently comprise a group that is underrepresented in the current PTSD literature (Fodor et al., 2014). We aimed to gain a more in-depth understanding from the perspective of the parent about whether and how their trauma impacted their parenting behaviours. In order to achieve this, we focused on parents who currently had primary or sole custody of a child or children in their home, and who had experienced trauma since the birth of their child(ren).

Method

Study Design and Setting

We conducted the current, qualitative study in the township of Khayelitsha, located outside of Cape Town. Khayelitsha is recognised as one of South Africa's largest townships, and is home to approximately 700,000 people, residing in both formal and informal (e.g., shacks) housing. Rates of unemployment are high in Khayelitsha, which contributes to the high rate of poverty experienced by residents. Exposure to trauma and violence, including persistent gang violence, violent crime, and sexual assault are also prevalent (Brunn & Wilson, 2013).

At the beginning of recruitment, we used opportunity sampling (Robinson, 2014) to identify trauma exposed parents within the Khayelitsha community, assisted by community members, church leaders, and nongovernmental organisations, who were informed about the study and distributed information to known parents who met the inclusion criteria. Parents

were also identified by members of the research team. Then, during the course of the study, the purposive sampling method of snowballing (Heckathorn, 2011) was used, as participating parents often referred others in the community to the researchers. Following referrals, researchers would contact potential participants to confirm their eligibility before providing them with more information about the study and inviting them to the research centre for an interview. Parents were included in the study if they:

i) were the biological parent of at least one child;
ii) had at least one child in their care [defined as living at home, or under their (shared) custody)];
iii) had experienced a trauma over four weeks ago;
iv) their child was born prior to the trauma taking place.

Parents were excluded if:

i) they suffered from an organic brain injury or intellectual disability which inhibited their ability to understand the purpose of the study;
ii) had infrequent contact with their children;
iii) their trauma occurred fewer than four weeks prior to study participation.

Measures

Posttraumatic Diagnostic Scale (PDS; Foa, Cashman, Jaycox, & Perry, 1997). The PDS is a 49-item self-report measure that indexes DSM-IV criteria for PTSD, including a trauma screen and a 17 item PTSD symptom scale (rated 0='not at all'; to 3='5 or more times a week'). Symptom scores showed a high level of internal consistency in the current study (*Cronbach's alpha* = 0.92). The scale has good test–retest reliability and external validity (Foa et al., 1997). The measure has been validated across international contexts (Foa et al., 1997), including with African populations (Ertl et al., 2010). Further, the PDS has been

used in a number of empirical studies with African and South African populations (Martin, Fincham, & Kagee, 2009; Odenwald et al., 2007; Steyn, Vawda, Wyatt, Williams, & Madu, 2013).

Semi-Structured Interview. The development of the semi-structured interview was informed by the available evidence relating to parenting in the context of PTS (Christie et al., 2019), as well as key papers in the wider parenting field (Darling & Steinberg, 1993; O'Connor, 2002). The interview schedule was also piloted by members of the research centre in Khayelitsha to ensure appropriateness and accuracy of the questions when translated into Xhosa.

During the interview participants were asked to identify and discuss one trauma that they had found particularly distressing. The interview guide then invited participants to discuss: (i) their parenting styles and broader relationships prior to the event, (ii) the focal trauma, (iii) parenting styles and relationships following the trauma, and (iv) coping and support seeking behaviours. Specifically, the interview guide included prompts relating to the extent and quality of parent-child communication (e.g., "Would you and your child generally talk about things?"), closeness of the parent-child relationship and any perceived relationship problems (e.g., "Can you describe your relationship with your child?"), the parent's own satisfaction with of themselves in their role as a parent (e.g., "Can you tell me what pleases you about being a parent?"), and parental anxious behaviours towards the child (e.g., "Do you think you are protective of your child?").

Qualitative interviews were conducted in Xhosa, the primary local language in Khayelitsha, by experienced data collectors from the local community. Data collectors received training in qualitative interview methods, interviewing trauma-exposed individuals, and risk and referral procedures, which was provided by an experienced qualitative

researcher with a background in trauma research (JS). Detailed feedback on interview content was given through weekly supervision, in order to ensure that appropriate prompting was used to keep the interviews focused on relevant material. During this time, the wellbeing of data collectors and transcribers was also discussed and monitored. Quality checks of transcribed interviews were conducted throughout data collection as follows. First, interviews were transcribed in Xhosa and then translated from Xhosa to English. Next, they were checked by the data collector who conducted the interview to ensure accurate representation of information. Finally, transcripts were reviewed by the coder for areas where the grammar or meaning was unclear, and these issues were resolved by reference back to the original interview recording and/or explanation of any culturally specific terms as appropriate.

Procedure

Participating parents were provided with an information sheet and informed consent form, which had been translated from English to Xhosa, and then back-translated to ensure accuracy (as recommended, e.g., Brislin, 1970). These forms were read aloud to participants, and participating parents were asked to summarise the study in their own words in to ensure full understanding. At this point any misunderstandings were addressed before participants signed the consent form. Participants were also given a copy of the information sheet to keep, which had researcher contact details, and reminded participants of their right to withdraw from the study at any time should they no longer wish to participate.

The assessments were conducted face-to-face by female data collectors. Data collectors first asked participants for demographic information, and then administered the PDS, before beginning the qualitative interview. Questionnaire items were administered verbally and data collectors recorded responses by hand. Following their participation, parents were given a ZAR 120 (approximately USD 8.23) voucher as appreciation for their participation in the study the standard amount required by Stellenbosch University Health

Research Ethics Committee. All caregivers were debriefed and were given the opportunity to discuss their experience and ask any questions about the research. In addition, caregivers were offered a letter of referral to local mental health services for themselves or their child if they desired to pursue such services. Participants were also made aware that transport could be provided to allow them to attend the mental health service. A standard protocol for managing risks was approved by the ethics committee, but no risk events were experienced.

Data Analysis

Transcripts were analysed using qualitative analysis software Atlas.ti. Inductive Thematic Analysis (TA; Braun & Clarke, 2006). This was judged the most appropriate method of analysis given its epistemological and theoretical flexibility, a capacity to capture the in-depth, rich account of participants' experiences through identifying, analysing, and reporting patterns (themes) within data (Braun & Clarke, 2006). The first author initially read transcripts through once without coding to allow for familiarisation with the data, and clarification of any sections that were unclear (e.g., due to slang words) with the interviewers and transcribers. Next, initial codes were generated and ten potential themes were identified. In accordance with the steps outlined by Braun and Clarke (2012), following the development of these initial ten themes a thematic map was produced and discussed with authors [REMOVED FOR BLINDING]. During this discussion, all themes were reviewed and refined; overlap in codes across themes was identified, and these themes and subthemes were condensed and redefined, while ensuring that participant views were still accurately represented.

Following this redefining process, five main themes were identified, each with a number of subthemes. These four themes were then discussed with [REMOVED FOR BLINDING]. This step was of particular importance as these co-authors are all residents of

Khayelitsha and familiar with Xhosa culture. Discussing the final five main themes with these authors provided additional assurance that these results were an accurate reflection of the data, and supported triangulation of data (Shenton, 2004), ensuring the experiences and viewpoints identified in the data are validated by others, in this case the data collectors and authors on the paper. Several additional steps were taken to ensure limited assumptions, biases or premature interpretations of the data were made. During the process of analysis, the first author kept a reflexive journal (Mason, 2002), and an additional coder [REMOVED FOR BLINDING] was asked to blind code one third (30%; *n* =10) of the transcripts. Following blind coding, both authors met to discuss codes and themes to examine for agreement, coherence and accuracy. The analysis process was made transparent through study researcher's annotations and notes, from initial thoughts, to clusters of ideas, to themes (Shenton, 2004).

Results

Sample Characteristics

Participants were 30 Xhosa-speaking parents who lived in Khayelitsha. The sample comprised 28 (93%) mothers and two fathers, aged 24 – 61 years (M = 44.57, SD = 9.41). Parents had a median of three children in their care; the median number of biological children was two, but households often also included other children, such as nieces, nephews and grandchildren, with number of children per household ranging from one to seven. One third of the sample (30%) were single, 13% were married for the first time, 17% had remarried, 13% were divorced or separated, 17% were widowed, and 10% were cohabiting with a partner. Half of the sample (50%) was unemployed at the time of data collection. More than half of the sample (53%) reported that they had gone without food at least one day in the

previous week (range 0 – 5 days). Further demographic information can be found in Table 6.1.

Table 6.1

Sample demographics

Demographic characteristics	Statistic ($N = 30$)
Parent demographics	
Age in years (M [SD])	26-61 [45.50]
Proportion of mothers	28 (93%)
Proportion married or cohabiting	12 (40%)
Number of children in household	
Biological children	1-6 [2]
Total including grandchildren, nieces and nephews	1-7 [3]
Number of days without food in the previous week	0-5 [1]
Length of time since index trauma	
1-3 months	3 (10%)
6 months – 3 years	7 (23.5%)
3-5 years	7 (23.5%)
More than 5 years	12 (40%)
Did not wish to say	1 (3%)

Although participants identified a focal trauma that was discussed during the qualitative interview, most participants reported more than one trauma on the PDS, ranging from one to seven traumatic experiences (*Mdn* = 2) (see Table 6.2 for full details of sample trauma exposure). For the majority of parents their focal trauma had occurred at least three years previously. Two thirds of the sample (67%) were found to have moderate to severe symptom severity scores on the PDS (range 21 – 42; *M* = 28.25).

Table 6.2

Summary of trauma types experienced as measured by the Posttraumatic Diagnostic Scale

Trauma Type	Focal (*N* = 30)		Experienced (*N* = 29)	
	n	%	n	%
Serious accident	10	33	13	44
Natural disaster	0	0	3	10
Non-sexual assault by stranger	14	47	12	4
Non-sexual assault by family member	3	10	18	62
Sexual assault by family member	1	3	3	10
Sexual assault by stranger	1	3	2	7
Military combat	0	0	0	0
Sexual contact younger than 18	0	0	1	3
Imprisonment	1	3	4	14
Torture	0	0	2	7
Life threatening illness	0	0	2	7
Other*	0	0	4	14

Note. *Other trauma refer to witnessing husband killed inside the house

Qualitative Results

Five themes were identified by participants as being of central importance to their experiences of being a parent following a traumatic event, each with a number of subthemes.

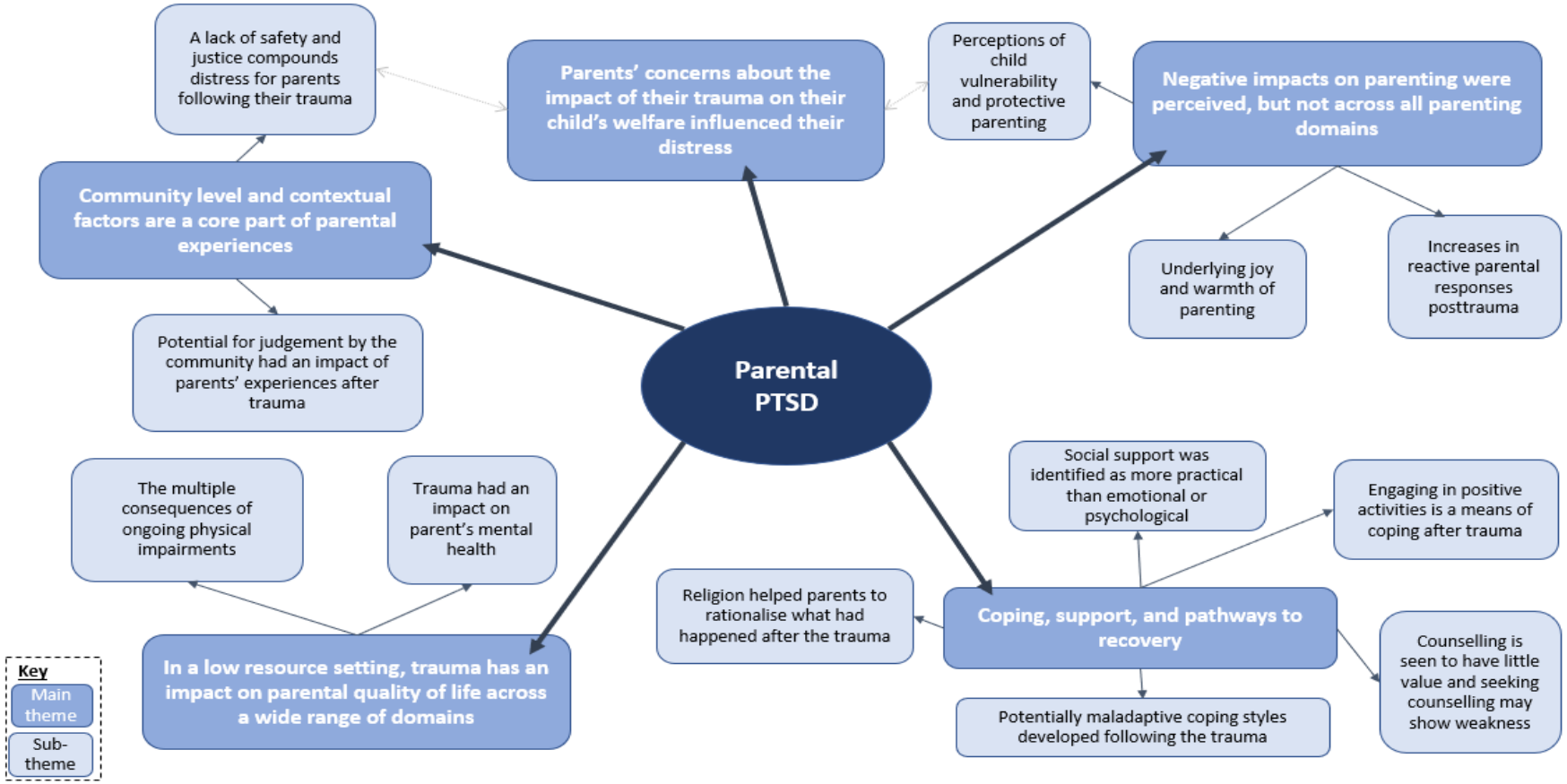

Figure 6.1. Thematic map depicting the five main themes and multiple sub-themes from the qualitative interviews, and how they link with one another

Theme One: In a low resource setting, trauma has an impact on parental quality of life across a wide range of domains

Parents highlighted a number of areas in their life that had been affected by their trauma, which included their mental and physical health, interpersonal difficulties, as well as more practical difficulties. Across domains, it was apparent that impacts were often particularly keenly felt due to the minimal resources present in this LMIC sample.

Subtheme one: The multiple consequences of ongoing physical impairments. A number of parents remained physically injured or incurred persistent physical damaged as a result of the trauma. This had an impact on their quality of life across a range of domains, including their ability to manage domestic tasks or hold down employment, to provide physical care for their child, or to engage in sexual relations. These physical consequences of trauma frequently invoked distress. For example, one mother noted that *"it affected me because my doctors told me that I must never be with a male [physically] again…It makes him [husband] sleep on the floor when I am sleeping on the bed. He would also be out drinking."* (PID 004, mother). Further, another mother discussed the physical consequences that she had experienced:

> *..since I know that my child used to be bathed by me … I wish I could bath him myself. I wish I can choose clothes for him. I wish I could feed him now. I wish I could cook for him now, you see? But I can't.* (PID 013, mother).

Where they were unable to work, participants noted numerous practical difficulties that primarily stemmed from a lack of financial resources. Parents reported a perception that they were unable to provide for their families post trauma, which caused distress and had a negative 'knock-on' effect on their view of themselves as parents.

Not having a thing and saying "if I would stop what I am doing, what would I eat before I sleep?" Because I do not have a job, I am a struggling person and I also have a child that is studying that benefits nothing from me. (PID 006, mother).

For a number of mothers, their husband or partner was killed during the trauma, leaving them as the head of the household. In such instances, not only did they have to process the grief of losing their husband, but the practical difficulties associated with raising their children alone were a major source of stress and difficulty.

I can say that what was hard for me after their father died, [the children] were left alone. I had to work, I was working for them, but then they were left alone. The child got pregnant and my heart was very painful because of that. I blamed myself a lot and said that if I was with them she would have never got pregnant. You see? The older ones had nothing and the little one got pregnant, she was still studying at the time. (PID 002, mother).

Lastly, for some parents, their injuries were so severe that they resulted in a prolonged stay in hospital. This period away from one's children was also highly distressing, with participants discussing that the most pressing issue for them at that time was not their own recovery, but the welfare of their children (e.g., who was caring for them?), and when they could get home to be with them.

Subtheme two: Trauma had an impact on parent's mental health. Parents spontaneously described a number of PTSD symptoms that had arisen since the trauma had taken place. All parents discussed experiencing symptoms from the main symptom clusters of PTSD, which included re-experiencing, avoidant behaviour, hypervigilance, and negative alterations to cognition and mood. Most strikingly, following their trauma, parents reported experiencing negative changes in the way they viewed themselves, the world/their

community and, on occasion, their children. While it is symptomatic of PTS to experience negative alterations in cognitions and mood, and perceptions of danger are realistic in high adversity settings, parents referred to becoming more aware or vigilant of the dangers in their community, as well as being distrusting of community members.

> *People are cruel on the outside, they do not want to work, they work on people…We are not safe. A person is not safe even at work because most people did not understand how I got robbed at work. The [workplace] gate was opened for people who came to fetch their children but it was a chance for criminals to get in too to do their things.* (PID 020, mother).

> *Children will never tell you the truth…They tell the truth, but you would find that there are things that they are hiding. I thought my son was a good child, I was living with [my son] in the house, but he was still shot, he must be doing things he is not telling me about to be shot at.* (PID 018, mother).

Parents also frequently discussed feeling overwhelming feelings of anger. They were unsure where this had come from and they often described themselves as "not right". This evident change made them uncomfortable, and uncertain how to return to how they were before. As one father noted, "*yes, in the house it is not right, that anger is there all the time…there is anger all the time…In the house nothing would be said, I would just get angry and I would get nervous a lot."* (PID 028, father).

Theme two: Community level and contextual factors are a core part of parental experiences

During the interview, parents discussed a number of community/contextual factors that played a role in their own distress and in their experiences as a parent post-trauma.

Subtheme one: A lack of safety and justice compounds distress for parents following their trauma. Parents described the judicial system within Khayelitsha, and, in particular, the endemic corruption within it. This, combined with the lack of disclosure about crimes resulting from fear of judgement, meant that perpetrators were often not arrested and remained in the community. Parents described continuing to see the perpetrator, or being contacted by the perpetrator as a means of intimidation. For example, *"I was shocked…he [attacker] called me saying "It is me, I am in jail". He said he had a picture of me and if I said anything I can be found easily"* (PID 017, mother).

The lack of justice was linked with parental fear or perceptions of lack of safety, and also with overwhelming feelings of anger. These feelings of anger led some parents to make their own plans for protecting themselves and their families.

> *He [criminal] was chased and he went in another house that is at the back of our street. I felt that if he ran into my home, those people or the police would arrive and I would have sorted him myself first… I would have boiled water for him, I have that thing that I would have boiled water and burn him with it…he would be down because I still have that thing, that anger.* (PID 003, mother).

Parents noted feeling extremely unsafe in their environment, which may in part have been linked to hypervigilance occurring in the context of PTSD, but also reflected the unsafe environment in which they lived. This constant feeling of being unsafe naturally fed into their parenting. In particular, parents described the trauma coupled with ongoing contextual threat

as underpinning significant fears for their children and an overwhelming desire to keep them safe in a dangerous world.

> *I see the world as very bad and very ugly, more especially the place I live in, because that place we live in is full of drugs on every corner. You would never go to [residential area] walking alone, because on the corner you will meet these gangsters…The place we live in is not alright…Like in the past week, a child was raped…they raped her and killed her and threw her on the rails of the train. Can you feel those things are painful? We as parents didn't cope when we heard it. I felt sick. I have a picture of my baby waking up, going to work, oh my God we live in an ugly life especially in [residential area].* (PID 017, mother).

Subtheme two: Potential for judgement by the community had an impact of parents' experiences after trauma. Being subjected to gossip and judgement by other community members was described by parents as highly prevalent in their community. Parents also spoke about the drive to avoid shaming the family name, which is a key commonality in Xhosa culture, meaning that when a negative incident occurs those who have been involved or affected by this experience typically do not discuss it. Consequently, parents frequently felt they were unable to talk to others about what they had experienced due to fear of judgement. This could leave parents feeling isolated or unsupported. For example, *"I have to swallow everything inside and keep what happened to me inside, because what will the people say?"* (PID 001, mother).

> *It was like if a person asks about it, they are asking about it because…… they are not asking about it because they are asking, they are just asking because they want to go tell the others that now it is like this, it is this way, it was that.* (PID 018, mother).

Theme three: Negative impacts on parenting were perceived, but not across all parenting domains

During their interviews, parents discussed the impacts of their trauma and related symptoms on parenting. Sometimes changes were described at a superficial level, suggesting that parents themselves had limited insight into what they were experiencing. Other parents highlighted more specific negative changes post-trauma, and aspects of parenting that had remained positive were also identified.

Subtheme one: Increases in reactive parental responses posttrauma. Some symptoms of PTSD were spontaneously discussed in relation to their resulting in negative changes in parenting following the trauma. Irritability and aggression are amongst the hyperarousal symptoms of PTSD (APA, 2013). Many parents discussed strong feelings of anger that developed posttrauma, and the impact their anger had on their parenting practices. Specifically, this change in them caused them to become more reactive with their children, and manifested in new or increased levels of hitting their children, as well as yelling at them. Some parents discussed their children being unwilling to enter the household for fear of being shouted at or hit. For example, "*I have stress, I would beat the children and I would insult them in a bad way and tell them that they are not wanted in the home."* (PID 007, mother). Another mother stated:

> *Yes, I used to be angry, then I would quickly cut him [son] off. Like for an example, I used to tell him that I don't have money so he would cry, I would take his hand and hit him on top of it.* (PID 013, mother).

Subtheme two: Perceptions of child vulnerability and protective parenting. Parents also discussed a heightened awareness of their child's fragility developing posttrauma, consistent with a general elevation in perceptions of threat summarised in Theme two.

Parents perceived children to be highly unsafe in their current environment. Negative alterations in cognitions, particularly perceiving the world as extremely dangerous, are a key symptom of PTSD. The thought of being unable to keep their child safe at all times evoked feelings of dissatisfaction and distress in parents. In addition, parents described perceptions of child vulnerability leading to extremely protective behaviours and encouragement of children to be vigilant. This was achieved through discussing in detail the specifics of the trauma the parent had experienced, as a means of preventing the same situation arising again with their children. Or, in more extreme cases, this was achieved through the children remaining within sight of the parent at all times.

> *I was being overprotective. When a child went out, I was worried the same would happened to them, so I wouldn't be ok…They might come back maybe being raped. It's the thing that whenever she wants to go out with her friends it does not feel good, I don't feel ok. [The children] could stay at home, it is better.* (PID 012, mother).

Subtheme three: Underlying joy and warmth of parenting. Parents reported receiving a great deal of joy from being a parent, with many parents reporting warm, positive relationships with their children. This comes as an interesting contrast to the previous sub-theme, highlighting the complex nature of parenting in which some individuals can compartmentalise, and still preserve positive aspects even following a traumatic event. Thus, mothers could report exceptional warmth within their relationships, even while also describing exhibiting aggressive behaviours towards their children, and described feeling strong emotional bonds to their children. Despite feeling dissatisfied with aspects of their parenting, such as their ability to provide for their child or keep them child safe, their parenting role still fundamentally brought parents in the study significant satisfaction.

If she [daughter] is at school or she is not home and she has left her thing [toy], I would talk to her thing and tell it that my daughter is loved by her mom. Even her shoe I would say it smells of the child. Even if there is something that I am eating, I would hide it till she comes back and when she arrives I would tell her that mom has hid a certain thing for her…I love my child that is what I am saying. (PID 005, mother).

Theme four: Parents' concerns about the impact of their trauma on their child's welfare influenced their distress

Parental narratives alluded to the dyadic nature of parenting, with parents discussing the roles of their child often during, and always after their trauma. During some of the traumatic events, the child or children were also present; and were either also involved or witnessed the incident take place. Having the child present added an additional amount of distress to the parent's experience.

I could hear, I could hear when they [gangsters] were beating up my children. I sat there and endured. I heard that they were beating up my child. They were beating her and beating her. They were also beating the ones that are young men, they were still boys then, they were still young. They were beating them up. My heart did not want me to stay there, it said that I must go and save my children. (PID 002, mother).

Parents also noted concern about the impact of their trauma on their child's wellbeing, with some noticing changes in their child post-trauma, which caused the parent a great amount of distress.

It hurts my sister, to see him [child] this way. He would be wrong, he would be wrong, you would see that the child is wrong, you would see that he was not even working well in school. Because in his mind he was thinking, what are the things that

> *are happening to mom, what is happening to mom? Because he loves me. When I see him, he says he is feeling bad and painful, wondering why his mom had this thing happen to her? That hurt me. It is painful.* (PID 009, mother)

This same focus of concern on their child's welfare was also apparent in trauma descriptions. For some parents, even when children were not present during the trauma, they described being less concerned about the threat to their own life, but rather who was going to take care of their children if they died.

> *I would think, if I am stabbed here and I die, what about my child? What will she do as she is young? What was in my heart, it was painful imagining myself leaving the child with her father while she is young, especially with situations that happen here; children get raped, you understand and you cannot fully trust a man. Do you understand? I felt my heart pained.* (PID 010, mother).

In some cases, parents would discuss their perceptions of their children and how, at times, the child's behaviour seemed out of character. This was attributed to the fact their children may have witnessed or been directly involved in their parent's trauma. This could result in the children 'acting out' what they had witnessed, which also caused the parents a great deal of distress and sometimes led to harsh physical parenting responses.

> *My problem is that when I got injured and when I came back from the hospital, it is said that when my child plays with the others, she would take a lace or plastic and try to choke others or take a knife. For this I would beat her…I would beat my child and ask her, what are you doing?...she was crying, she did not want to see it, she was*

crying…Even now she is easily frightened. Even when she is sleeping she wakes up in her sleep frightened. (PID 005, mother).

According to the parents, most of the children were aware of negative changes in family life that had occurred as the result of the trauma. Parents noted that their children would be quick to point out those changes that affected them and ask why they had occurred. Having their children notice this change was upsetting, and further solidified their feelings of dissatisfaction with their own parenting and ability to provide for and care for their family.

She [daughter] would not want to get in the house and when I asked her why she is not coming in she would say 'I know mom that you are going to hit me or you are going to shout at me'…And when she sees something on the TV that is being advertised, maybe burgers from [local restaurant] she would say 'When you had money mom, you would take me on Fridays, but now you do not do that'…She would say 'At that time you were working you were giving me money, I would carry R10 at school or R20 but now you only give me R5 or maybe R2, it is not like that time anymore.' (PID 003, mother)

Theme five: Coping, support, and pathways to recovery

Finally, parents often discussed ways in which they had coped with their traumatic experience, who they had sought support from, and what ideal support looked like for them. Coping strategies were individualistic, and there was limited consistency across interviews. Although parents mainly discussed coping and support with respect to their own adjustment, where their coping was problematic this had consequences for their parenting, which were also described.

Subtheme one: Potentially maladaptive coping styles developed following the trauma. The most commonly used coping strategy was avoidance. Parents discussed trying to forget

that the trauma had taken place as a way to help them move forward, which was a strategy that was encouraged by many others around them. A minority of parents also described overtly negative coping behaviours, particularly alcohol and substance abuse, as a direct means of managing trauma related thoughts, feelings of anger, and sleep problems.

> *The problem is the moment I get angry I then start drinking a lot in order to solve the problem that makes me angry…It helped me a lot, because I wouldn't sleep, I would think a lot, but sleep comes very quickly when I am drunk.* (PID 012, mother).

This not only had an adverse impact on the parent, but parents also identified that it was substantially detrimental to their wellbeing of their children, to the extent that others were sometimes forced to intervene.

> *I do not want to lie my sister, it leads me to want to drink, let me tell the truth…When I drink [the trauma] vanishes a little, but when I have stopped it would come back…I would see myself hurt and my heart would be painful. I would say 'God you must just take me'. I would say that God must just take me; but I would then say, if God would take me and I would leave the children then that would be painful too…When I am drinking my mom would lock me in her room and say I am not right…She says she is afraid for the children that they will not be right, they will grow up frightened and stressed.* (PID 009, mother).

Subtheme two: Religion helped parents to rationalise what had happened after the trauma. Religion played a large role in many parent's lives and was a way of rationalising the trauma. Parents discussed their faith in God, and the plan that he had for them. Most discussed praying for themselves and their families and described this as a major source of comfort. Parents also described their faith helping them to make sense of and accept their trauma, or to take a positive perspective in that their faith provided protection from a worse

outcome. Religion thereby acted as a facilitator for moving forward. For example, "*I prayed and said 'God, you are the only one that knows what this is'"* (PID 008, mother). Another mother discussed having a similar outlook, "i*t is because of Jesus he survived; because of Jesus and because of the prayers, because they could have killed B [son] in the house".* (PID 029, mother).

Subtheme three: Social support was identified as more practical than emotional or psychological. Support from others that was regarded as most helpful came in the form of food parcels, or aid in activities that parents could no longer do, such as housework or looking after the children. The biggest issue for many parents was being unable to provide for their child in the same way they had done before, or the inability to do activities together. Practical support helped, but limits to that were also acknowledged, and the lasting feeling of change still had an impact on parents.

> *I saw he [man who caused participant's accident] was very caring, because there are other people who hit you with a car then they run away, but he showed his kindness…He used to provide money and take my family to the hospital….* (PID 013, mother).

Subtheme four: Engaging in positive activities is a means of coping after trauma. Parents consistently described engagement in an activity that they had enjoyed previously as a means of escape from trauma related distress.

> *In order for me to sleep well I must think about the garden and not think about other things…I must just think I will wake up and plant a certain thing, and I would sleep well that day…When I think about that I get happy.* (PID 014, mother).

Some parents also described finding ways to channel what had happened to them into something positive. This was particularly expressed through helping others in the community,

which may translate into community-level benefits and help prevent future incidents from taking place.

> *Since [the trauma], I am a volunteer at [organisation] …I get strength through that, through the volunteer work that I do, because they tell us that if you are abused you must go to the place that I am telling you about. We work together with the police in what we are doing.* (PID 007, mother).

Subtheme five: Counselling is seen to have little value and seeking counselling may show weakness. Parents discussed their thoughts and opinions around counselling generally, as well as sharing their views on seeking support through counselling following their trauma. Most parents had a lack of understanding around what counselling specifically was, and the role it could potentially play in aiding recovery. Most parents chose not to access counselling services. This was due to: lack of access to counselling services, a disbelief in the value of counselling, an unwillingness to attend sessions, or a lack of awareness of where to seek support from. Most parents commented on a desire to recover through forgetting their traumatic experiences. For example, "*A person that wants counselling is someone that cannot deal with their problem."* (PID 010, mother).

Notably, consistent with these perceptions, parents also discussed the belief that their child did not require counselling, even if they had witnessed or also been involved in the trauma. As was highlighted by a mother, *"I just thought that it has passed, it has happened to my children. There is nothing else that will happen. I must forget."* (PID 019, mother).

Subtheme six. Being part of the interview and disclosing certain experiences was cathartic for some participants. While parents were averse to the concept of counselling, all discussed a feeling of relief at the end of the interview. For most parents, this was the first time disclosing their experiences to anyone, which was reflected in the length of the

interviews (approx. 2.5 hours). Parents reported being thankful to the interviewer for allowing them to discuss their experiences, as well as feeling like a burden had been lifted from them.

> *Oh sis I am also thankful about everything, I do not know if I will say I have bad luck or a big luck…Because even the day that I saw you, I was just walking around, with that thing of mine saying, let me get out…Not knowing I will come across something like this. I am very thankful, I will now feel right.* (PID 016, mother).

> *…by talking with you I even feel better…It is nice to talk to someone you don't know and take out everything you want to take out, not speak to someone you know and talk about it and say it in a wrong way. It is good and I am happy.* (PID 017, mother).

Discussion

Our examination of the lived experiences of parents following trauma in a South African township identified key themes describing: consequences for parents as individuals (in terms of mental health, physical health, and associated financial and social outcomes); key aspects of the community and cultural context that were central to parental experiences; consequences in terms of parenting capacity; ways in which trauma related effects on the child influenced parental coping; and mechanisms of parental coping and achieving recovery. Although our sample focused on parents, the resultant themes also referenced more general elements of experiences of trauma, coping and support in a context of high adversity.

Parents reported experiencing significant behavioural and psychological changes from pre- to post-trauma, several of which could be linked directly to symptoms of PTSD. These changes included increased feelings of anger; increased reactivity; increased sense of hypervigilance/threat; perceptions of others/the community as being extremely dangerous; and problems coping with memories and reminders of the trauma. Strikingly, although parents described their feelings of anger as a sequelae of the trauma, they simultaneously frequently described not understanding where they stemmed from. More broadly, no parent described their distress with reference to PTS. This suggests a lack of awareness of psychological, psychosomatic, and behavioural changes that may develop following trauma exposure. This phenomenon has been noted in other populations including military veterans with PTSD, who have reported experiencing difficulty communicating their difficulties in their intimate partnerships, as well as with their children (e.g., Gewirtz, Polusny, DeGarmo, Khaylis & Erbes, 2010).

In the current study, parents also described an unwillingness to talk about the trauma, which they linked to concerns about stigma in the community and a desire to forget,

consistent with some previous work in the same community (e.g., Williamson et al, 2017a). However, the lack of use of mental health terminology suggests more fundamental limitations in understanding of the psychological consequences of trauma. Lack of mental health literacy is an issue internationally (Jorm, 2015), and particularly in LMIC contexts, including in Southern Africa (Sorsdahl & Stein, 2010). Mental health literacy may empower those who suffer from mental health difficulties, as understanding why behaviours have changed can restore an individual's sense of control (Tol et al., 2011). In the context of PTSD, knowledge of common sequelae of trauma may limit more negative interpretations of symptoms (e.g., as being a sign of damage or weakness), which can exacerbate posttraumatic distress (see Ehlers & Clark, 2000). In parents, a lack of mental health literacy may also inhibit conversations with their children about their trauma or access to relevant services. Consistent with this, parents in the current study did not typically seek counselling for themselves or their children.

Several of the PTSD symptoms described by parents as developing posttrauma were also mentioned in relation to detrimental effects on parenting, most particularly feelings of anger and associated aggression. Previous research has established that parental anger can be associated with increased reactivity in parents, leading to more aggressive behaviours directed at the child (Leen-Feldner et al., 2011), and parental PTSD has been linked to the endorsement of more aggressive parenting practices such as yelling or hitting in some studies (for a review, see Christie et al., 2019). Our findings support such observations, and indicate that PTSD symptoms of irritability and anger in particular can be a major contributor to aggressive parenting practices. Verbal or physical aggression in parents has been widely linked to poor child outcomes, and in the current study, parents also described negative reactions in their children that were evoked by their anger.

Another key PTS-linked change in parents related to their heightened sense of vulnerability/threat, which was directly linked to increased vigilance, protection, and communication of threat in their interactions with their children. Of course, in contexts where levels of risk are relatively high, a protective approach to parenting is essential, but parents in the current study particularly reported an escalation in their need to keep their children safe following their own trauma. Parental perceptions of threat and negative parenting styles have each been linked to elevated levels of child posttraumatic distress (e.g., Hiller at al., 2017; Williamson et al., 2017b). Further, it is understood that overprotective parenting, as well as an unwillingness to grant autonomy, can inhibit the child's ability to develop a mastery of their own environment, or regulate their own emotions appropriately, which may subsequently increase their vulnerability for poor psychological recovery following any future traumas (Wood, McLeod, Sigman, Hwang, & Chu, 2003). As has been evidenced by previous qualitative work (El-Khani et al., 2016), when children display distress this can further add to the parents' distress, which may only serve to exacerbate their own PTSD symptoms.

Although parents described negative changes in their parenting following trauma, they simultaneously described strong underlying bonds with their children and a sense of satisfaction in their parenting role, suggesting that trauma related impacts could be circumscribed and /or time limited. Previous research has tended to focus on reductions in parental satisfaction in association with trauma and posttraumatic stress disorder (Hershkowitz, Dekel, Fridkin, & Freedman, 2017). Therefore, it is particularly positive to see in the current study that core elements of the parent-child relationship remained strong posttrauma, at least from the parent's perspective. Positive parent-child relationship qualities can serve as protective factors for resilient outcomes in developing children (Brennan, Le Broque, & Hammen, 2003). Nonetheless, as the majority of parents had experienced the

trauma more than 3 years previously, the current findings simultaneously highlight the potential for chronic difficulties in elements of parenting to develop.

Parents in the current study highlighted broader trauma-linked inadequacies in their parenting role (such as their inability to provide for their child due to financial difficulties), as well as their inability to keep their child safe in their current unsafe environment. Previous research with caregivers within Khayelitsha found strong opinions were held about what qualities make for a good caregiver (Worthman, Tomlinson, & Rotheram-Borus, 2016). These qualities included ensuring the child was clean and fed, being loving and attentive towards the child, and ensuring the home was child friendly. Instrumental care is taken very seriously and, in the caregivers' eyes, is a strong indicator of love for their children. Engaging in conversations between generations is not always viewed as culturally appropriate; therefore, displays of love are demonstrated more through buying of gifts for children. Meeting these qualities of a good standard of care allows caregivers to feel that they are doing a good job (Worthman, Tomlinson, & Rotheram-Borus, 2016). In the current study, where the trauma compromised parental financial means to provide for their children, or their ability to provide basic elements of physical care, this led to strong feelings of dissatisfaction with their ability to parent. Research with refugee parents has highlighted a 'downward spiral' that involved parents changing following trauma exposure, which led to child emotional and behaviour changes, which subsequently affected the parents' overall feelings of competence, ultimately impacting parenting outcomes (El-Khani et al., 2016). Similarly, in the current study parents identified changes in their behaviour which also changed how their children behaved. This, in turn, exacerbated parental distress due to child related concerns.

Parents in the current study provided inconsistent reports of potential support structures that they used or accessed, with little uptake of psychological interventions. These findings were in line with previous research (Williamson et al., 2017a), and may be related to

several cultural factors (Ruane, 2010). There was a desire to forget about what had happened and move on, suppressing any thoughts of the trauma. Cognitive models would understand thought suppression as leading to the exacerbation of PTSD symptoms, and avoidant coping generally leading to the maintenance of distress chronic (Ehlers & Clark, 2000). This study adds to previous work (Hiller et al., 2017b; Williamson et al., 2017a) that emphasises the need for a better understanding of how avoidant coping styles influence mental health in contexts where they are culturally normative, in order to inform the provision of effective and appropriate support for parents and their families living in high-risk contexts following trauma.

Lastly, it is important to acknowledge the context in which this study was conducted. It is evident from the parents' discussions that culture and context had a large role to play in their experiences as parents post trauma. In particular, factors outside parents' control, such as living in an unsafe environment, may influence their parenting outcomes; in high-risk environments, parenting behaviours that would be judged overprotective in other contexts may be normative, and in some cases a necessity (Eagle & Kaminer, 2014; Wood, 2006). Furthermore, community gossiping and judgement also seem to play a significant role in a parent's experiences, by promoting an avoidant coping style. Fear of being judged or shamed may also have played a role in a parent's reluctance to seek formal mental health support. Interviews in the current study lasted for 2.5 hours on average, demonstrating a willingness, and potentially a need, to discuss their experiences. Parents also reported feeling relieved following the interviews, suggesting that talking to someone about what their trauma was beneficial. However, it appears that having a trustworthy confidant is crucial (Ruane, 2010).

The current study provides insight into parental experiences of trauma related distress in contexts of high psychosocial adversity. Further research is needed to provide systematic evidence of associations between parenting and trauma in such settings. In particular, our

qualitative study did not consider child age or gender, each of which may be key factors that influence parental responses. Moreover, although the majority of parents in the current study had moderate to severe PTSD symptoms, we did not recruit a sample of parents who had a current PTSD diagnosis, or attempt to measure other psychological symptoms that can arise following trauma (e.g., depression). Establishing the extent to which the current observations are specific to parental PTSD versus other mental health problems will be important in future research. Finally, while parents in our study described numerous changes to their own wellbeing and their parenting role following their trauma, our study was cross-sectional. Longitudinal research is needed to confirm temporal effects.

Conclusion

Parents face many challenges following trauma exposure while living in a high-risk context. Negative impacts of trauma on parenting arise not only as a consequence of associated mental health difficulties, but also due to negative physical health, financial and wider practical outcomes. Although some of the difficulties described by parents in the current study bore striking similarities to those faced by parents in Western contexts following trauma, particularly in relation to mental health related changes in thoughts and behaviours, differences were also apparent. In particular, financial, contextual and cultural factors were a fundamental to both the consequences of trauma for parents and the coping mechanisms adopted, and in many cases seemed to exacerbate parental difficulties. Providing mental health interventions that are sensitive to these differences is essential to bridging cross-cultural differences and providing psychological services to best meet the needs of the communities that they are meant to serve (de Jong & Kleber, 2007). Intervention adaptation or co-design in collaboration with key community stakeholders and end users is likely to be central to achieving this. The current study also emphasises the many challenges faced by parents in LMICs involved the scarcity of resources for formal mental health support. Any

interventions to support LMIC families in coping with trauma will need to be mindful of the physical as well as psychological sequelae that can be present particularly pressing difficulties in low resource contexts.

Chapter 7. Discussion

7.1 Brief Summary of Thesis Aims

Given our knowledge of PTSD in adults and how the disorder can cause behaviour and personality changes, as well as negative effects on psychological and physical functioning, the aims of this thesis were to consider the impact of PTSD both on parents themselves and on their parenting. The empirical research considered both PTSD following direct or indirect trauma, as well as looking at similarities and differences within different cultural contexts.

The overall aim of the current thesis was to gain a deeper understanding of the impact of parental PTSD with the parent being the predominant focus. Adopting a mixed methodological approach, this thesis aimed to achieve a more in-depth qualitative insight into how parents themselves feel their PTSD has impacted on their parenting and why they believe this is the case, as well as discussing the challenges and difficulties of being a parent with PTSD. The papers also aimed to address particular trauma types that perhaps have been less researched, such as trauma that has happened to the parent's child. The impact of trauma and PTSD was examined in parents in a lower-risk setting and a higher-risk LMIC setting, in order to begin to examine differences in the experiences of parents across cultures and contexts.

7.2 Summary of Main Findings

7.2.1. Paper 1: The Impact of Parental Posttraumatic Stress Disorder on Parenting: A Systematic Review

Paper 1 reported on a systematic review of the fragmented parental PTSD literature. The review provided a comprehensive and critical synthesis of research findings in order to

answer the research question: what impact does parental PTSD have on parenting domains and the parent-child relationship?

Papers included in the final review (k = 27) examined the impact of a broad range of trauma types on several different parenting domains. Overall, findings from Paper 1 suggested that parental PTSD is associated with impaired functioning across several parenting domains. More specifically, parental PTSD was found to be associated with increased levels of parenting stress, as well as having a detrimental effect on parenting satisfaction, the parent-child relationship and increasing the use of more negative parenting practices such as yelling or hitting. While these effects were found relatively consistently across studies, it is unclear whether these effects are equally likely to apply across all trauma populations.

Further, there were several limitations noted in Paper 1, which caution against any firm conclusions being drawn. First, certain types of trauma (e.g., birth and military) are disproportionately represented in the literature, with most research focusing on a specific trauma type. Therefore, it remains unclear whether impacts to parenting domains can be generalised across different trauma populations. Second, there was a strong reliance on self-report measures, highlighting the need for a triangulation of methods including self-report, observational and qualitative interviewing. In particular, the limited qualitative exploration of the impacts of parental PTSD on parenting in turn limit insight into how and why these impairments are experienced. Finally, evidence from Paper 1 suggested a lack of representation from low and middle-income countries (LMICs), or high-risk contexts. Understanding the experiences of parents living in LMIC contexts would aid in broadening our understanding of the impact of parental PTSD on parenting domains.

7.2.2. Paper 2: The Development and Maintenance of Posttraumatic Stress Symptoms in Parent-Child Dyads Following a Child's Accidental Injury: A Longitudinal Study

Results from the systematic review (Paper 1) highlighted the lack of causal evidence linking parental PTSD to child outcomes, and vice versa, particularly due to a heavy reliance in the literature on cross-sectional data. One key context in which both parents and children are vulnerable to developing PTSD is after the child's exposure to significant trauma. Therefore, Paper 2 reported on results from a longitudinal study, which investigated the potential reciprocal effects of parent and child PTSD symptoms (PTSS) on one another across a six-month period following the child's exposure to trauma.

Results from Paper 2 highlight that, consistent with broader literature, parents are vulnerable to developing PTSD following their child's exposure to trauma (Bryant, Mayou, Wiggs, Ehlers, & Stores, 2004; Kassam-Adams, Fleisher, & Winston, 2009; Le Broque, Hendrikz, & Kenardy, 2010). Findings supported previous evidence of associations between parent and child PTSD symptoms (PTSS), and demonstrated that parental PTSS had a significant predictive effect on their child's PTSS at six-months post-trauma (de Vries et al., 1999; Nugent, Ostrowski, Christopher, & Delahanty, 2007; Morris, Gabert-Quillen, & Delahanty, 2012). By contrast, child PTSS was not found to be associated with maintenance of parent PTSS.

A strength of Paper 2 is that it provides new longitudinal evidence, which indicates that parents are vulnerable to mental health difficulties following indirect trauma and that their PTSS is a longitudinal predictor of PTSS in their child, even when initial levels of child symptoms and symptom stability over time are taken into account. However, findings in Paper 2 must also be considered within the context of its limitations. Firstly, the sample size was modest (N = 119 and was lower than the recommended sample size for the type of analysis conducted (N = 200; Muthén & Muthén, 1998–2011). Further, the sample utilised

would be considered relatively low-risk, with the most common trauma experience reported being a road traffic accident. Future studies may endeavour to recruit larger samples of children who have experienced a larger range of traumas in order to build upon these findings further.

In sum, findings from Paper 2 highlight that parents are vulnerable to PTSD development following their child's trauma exposure, whether they were present or not, and that their PTSS is predictive of child PTSS six-months post-trauma. A recent meta-analysis has suggested that a possible mechanism that may influence child psychological recovery is parenting behaviours (Williamson et al., 2016). However, little is still known about the impact of parental PTSD, as the result of child trauma exposure, on parenting outcomes. In addition, results from Paper 1 emphasised a lack of observational methods when investigating the impact of parental PTSD. Therefore, Paper 3 sought to further investigate the potential impact of parent PTSD on parenting outcomes across two observational tasks.

7.2.3. Paper 3: Investigating the Effect of Parent Mental Health on Observed Parenting Behaviours Following Child Trauma Exposure

Based on methodological concerns raised in Paper 1, particularly regarding the strong reliance on parental self-report, and findings reported in Paper 2 regarding parents' potential for poor mental health outcomes following trauma;Paper 3 investigated potential associations between parental PTSD and observed positive (warmth and sensitivity) and negative (intrusiveness and parental expressed anxiety) parenting domains. This study utilised the same sample described in Paper 2, and assessed parenting during two tasks, which were trauma-focused and non-trauma focused. Co-occurring parental depression and anxiety were also taken account of.

Findings of Paper 3 provided no evidence for associations between parental PTSD symptoms and a more negative parenting style. In fact, there was tentative evidence that during trauma focused narrative discussions, parents with higher levels of symptoms demonstrated more warm and sensitive behaviours towards their child, which was an unexpected finding. Parents overall were more warm and sensitive towards their child during a trauma focused task than a more general parenting challenge. More expectedly and as hypothesised, results from Paper 3 did find parental anxiety and depression were associated with more negative parenting outcomes. Finally, it must be emphasised that positive associations between parental PTSD and observed parenting behaviours only became apparent after parental anxiety and depression were controlled for. This not only emphasises the need for caution when interpreting this finding, but also underlines the importance of controlling of other mental health difficulties that are known to be co-morbid with PTSD, such as depression and anxiety (Bisson, Cosgrove, Lewis, & Roberts, 2015; Shalev, Liberzon, & Marmar, 2017).

Limitations also need to be acknowledged. While this data was utilised as part of a larger, longitudinal data set, the current study only provided a cross-sectional perspective of the impact of parental PTSD, depression and anxiety four-weeks after their child's trauma. Longitudinal data on parenting outcomes would provide a more detailed insight into the prolonged impact of PTSD to parenting outcomes and the family environment. Nevertheless, the study's strengths must also be acknowledged. The observed parenting tasks were conducted within the family home, thus providing ecological validity by conducting the task in a naturalistic environment (Gardener, 2000; Ritchers, 1992). Furthermore, the tasks were directly observed, which provides another methodological perspective to understanding the impact of parental PTSD.

While not all of the hypothesised outcomes were found during the observed tasks, there are a number of potential explanations for these unexpected findings. The extant literature showing associations between parental PTSD and less positive parenting has relied heavily on self-report findings, which may be subject to reporting-bias, as existing evidence has emphasised that parental PTSD may negatively influence parents' perceptions of their own parenting ability (Christie et al., 2019; Hershkowitz, Dekel, Fridkin & Freedman, 2017). Parents may also be attempting to overcompensate for their own levels of distress for their child's benefit, especially during conversations about the trauma. Parents have reported in previous qualitative work a desire not to burden their child with their own distress, which is seen as a way to protect their child post-trauma (Christie et al., under review; El-Khani et al., 2016). While speculations can be made about the findings from Paper 3, it does highlight limitations to our understanding of the experiences of parents living with PTSD, which was also highlighted by the findings in Paper 1. Therefore, in order to further investigate this, Paper 4 comprised a qualitative exploration of the lived experiences of parents with PTSD, conducted with the aim of gaining a deeper understanding of how parents felt their PTSD had impacted them, their parenting and their family dynamic.

7.2.4. Paper 4: Qualitative Study Investigating Parents' Experiences of Trauma Exposure while Living in the United Kingdom.

Paper 4 reported on an in-depth qualitative exploration of how parents felt their PTSD had impacted on their parenting as well as on their family dynamic. It provides a deeper insight into the day-to-day challenges faced by parents, residing in a low risk environment (e.g., the United Kingdom), currently living with PTSD. Such an investigation was necessary as highlighted by findings in Paper 1 (Christie et al., 2019), it had been noted in the literature that there exists little evidence around how parents feel their PTSD impacts on their parenting

behaviours. Paper 4 offered a novel contribution by reporting on a heterogenous trauma sample, with a near equal representation of both mothers' (53%) and fathers' (47%) experiences.

Paper 4 emphasised some sex differences with impaired parenting domains. In keeping with the broader literature (Galovski & Lyons, 2004; Orth & Wieland, 2006; Taft, Watkins, Stafford, Street & Monson, 2011), fathers reported more aggressive parenting behaviours and were also more likely to discuss withdrawing from their child in an attempt to not have a reactive outburst. In contrast, mothers in Paper 4 discussed exhibiting overprotective hypervigilant behaviour, and admitted to never wanting to be apart from their child(ren), as well as not trusting their children into the care of others (including nursery or school staff). However, in line with previous qualitative research with veteran parents (Sherman et al., 2015; 2018) all parents in Paper 4 had the same view regarding parent-child communication; in that they expected and encouraged an open and honest line of communication from their child, but did not always model this behaviour, especially in relation to their own difficulties experienced post trauma.

Lastly, parents in Paper 4 had all received formal treatment for their PTSD, which became evident throughout discussions. Following treatment, parents regarding themselves as being able to function better although they accepted they were not cured. However, of interest, was their view of their parenting efficacy: despite being able to function better as an individual, parents maintained an extremely negative view of their parenting. Parents often discussed ways they had compensated or tried their hardest with their child in spite of their PTSD, but often regarded this as 'not good enough' given this was not 'what normal parents would do'.

Findings reported in Paper 4 must also be considered within the context of its limitations. A long time had passed since therapy, so most parents at the time of interview

noted improvements to their quality of life, which limits our insight into how bad their experiences may have been prior to treatment. Parent's children also ranged in age from 4-46 years at the time the study was conducted, and many had already moved out of the family home. As such, parental perceptions at the time of the interview may not always be an accurate reflection of their actual experiences of raising their children. Relatedly, although the conversations were candid, parents may have been overly cautious about reporting certain behaviours with a fear of being reported to social work or child protective services.

Collectively, Papers 2, 3 and 4 built up a detailed picture from multiple methodological perspectives of the impact of parental PTSD for parents residing in a low-risk, high income country (HIC). However, there is still a lack of understanding of the experience of parents with PTSD residing in a higher risk, low- to middle-income country (LMIC), which was also highlighted during the findings in Paper 1. Therefore, Paper 5 was conducted to address this gap, as well as address the lack of qualitative research that has been conducted within the parental PTSD field.

7.2.5. Paper 5: The impact of parental trauma on mental health and parenting: A qualitative study in a high adversity South African community.

Building upon the evidence from Paper 1, Paper 5 addressed several gaps within the current literature. First the lack of work with trauma exposed populations residing in high-risk, LMIC contexts. Second, the lack of qualitative evidence that exists within in the parental PTSD field. While a small number of studies (Ayers, Eagle & Waring, 2006; Sherman, Larsen, Straits-Troster, Erbes, & Tassey, 2015; El-Khani, Ulph, Peters & Calam, 2016; El-Khani, Ulph, Peters & Calam, 2018) have qualitatively explored parent's perceptions of how their PTSD has impacted on their parenting domains, their focus has been on a specific trauma type (e.g., birth trauma; Ayers, Eagle & Waring, 2006) or on a specific domain of

parenting (e.g., parent-child communication; Sherman et al., 2015). Therefore, Paper 5 recruited a heterogenous trauma sample, residing in a high-risk context, which provided evidence for impairments to parenting domains cutting across different trauma types.

Findings from Paper 5 provide an insight into the multiple aspects of parents' lives that are disrupted by PTSD, which is not limited to impaired parenting domains. In line with findings from Paper 4, results from Paper 5 found parents reporting multiple impacts to their life as the result of PTSD that included, but extended beyond impairments to parenting behaviours. Consistent with findings from Paper 4, as well as the wider literature (Atwoli, Stein, Koenen, & McLaughlin, 2015; Yehuda et al., 2015; Kessler et al., 2017), parents in Paper 5 reported a distinct temporal change in behaviour and personality following their trauma exposure, highlighting they were no longer the same person they were before.

Parents in Paper 5 also highlighted several key factors that were integral to their experiences post-trauma, such as the role of the community and parent's perceptions of how their trauma had impacted their child. Paper 5 highlighted that in line with previous research (Christie et al., 2019; Creech & Misca, 2017; Lambert, Holzer, & Hasbun, 2014; Leen-Feldner et al., 2013) parents did note key changes to their parenting post-trauma, which included increased vigilance leading to an unwillingness to grant their child autonomy, and anger leading to bursts of sudden aggression and violence towards children.

A promising finding from Paper 5 was that parents reported strong bonds with their children that appeared to be unaffected by their trauma exposure. However, where the trauma compromised parental financial means to provide for their children, or their ability to provide basic elements of physical care, this led to strong feelings of dissatisfaction with their ability to parent (Williamson et al., 2017a). Findings with refugee parents discuss a 'downward spiral' that involved parents changing following trauma exposure, which led to child emotional and behaviour changes, which subsequently affected the parents' overall feelings

of competence, ultimately impacting parenting outcomes (El-Khani et al., 2016). Similarly, in Paper 5, parents identified changes in their behaviour, which also changed how their children behaved. This, in turn, exacerbated parental distress due to child related concerns, which is supportive of the hypothesised explanations of findings from Papers 2 and 3, in that parents are concerned about their child's distress and do attempt to minimise this.

7.3. Strengths and Limitations

While the findings of the five papers provide novel insights to the field of parental PTSD, it is important to consider the findings within the context of the limitations.

7.3.1. Methodological strengths and limitations

Taken as a whole, this thesis has approached the aim of understanding the impact of parental PTSD on parenting from multiple methodological standpoints, utilising interviews, questionnaires and observational data.

As noted by Shenton (2004), researchers can take a number of steps to work towards the credible and trustworthy collection and analysis of qualitative data. For the data collected, analysed and reported on in Papers 4 and 5 this was ensured in several ways.

In Paper 5 interviews were conducted with trained female interviewers who had all received training in qualitative interview methods, interviewing trauma-exposed individuals, and risk and referral procedures. This training was provided by an experienced qualitative researcher with a background in trauma research. In addition, the interviewers were native Xhosa speakers, who were residents of Khayelitsha and were extremely familiar and understanding to Xhosa traditions and cultural practices. Interviewers were used in Paper 5 as they would be able to facilitate the building of rapport with participants, as well gaining and building upon the participant's trust; thus ensuring the collecting of information rich data

(Morrow, 1992; Morrow, 2005). This was reflected in the majority of interviews being over two hours in length, with participants noting they had disclosed information during the interview that had never disclosed to anyone else.

Morrow (1992) also highlights the importance of contextual grounding of researchers when conducting qualitative research. Therefore, while not interviewing participants, I did live in South Africa for several months, spending considerable amounts of time within the community of Khayelitsha. This allowed me to fully immerse myself within the context of my data in an attempt to better understand the experiences of the participants.

The method of data collection used in Paper 4 was telephone interviews, which can be argued to be a methodological strength, as this may have elicited more honest participant responses as, when interviewing participants regarding sensitive subjects, telephone interviews may increase perceptions of anonymity and result in better data quality (Fening & Levav, 1993; Sturges and Hanrahan, 2004).

For Papers 4 and 5 following data collection, analysis of the qualitative data was conducted utilising a well-recognised method of data analysis (Braun & Clark, 2000). Thematic analysis (TA) was conducted for a number of reasons: firstly, as highlighted by Braun and Clark (2012), TA allows for theoretical flexibility, whereby it is not limited or constrained by one particular epistemological standpoint, unlike other qualitative analytical approaches such as Interpretive Phenomenological Analysis (IPA). An inductive TA approach was chosen over a deductive method, as the qualitative studies that were conducted (Papers 4 and 5) were exploratory in nature. During the analysis the researcher did not want to be driven by theory, but rather identify themes that were strongly linked to the data, even if they were not related to specific questions asked prior to the interviews taking place (Braun & Clark, 2006; Patton, 1990). However, Braun and Clark (2006) also emphasise that despite having a data-driven approach to analysis, researchers themselves cannot completely remove

themselves from their data. This was acknowledged during data collection and analysis, and several steps were taken to reduce investigator bias and ensure accurate representation of participants' views and experiences. First, in Paper 5, triangulation of the data was carried out with the study data collectors and transcribers, as well as members of the local community when preliminary findings were presented at a community forum. Triangulation of data often involves the use of multiple methods, or in the case of Paper 5, multiple informants upon which to discuss findings (Morrow, 2005). Through discussing findings with those who lived in the community, this goes towards ensuring investigator bias is reduced, as well as increasing credibility and conformability of the data (Patton, 2002; Shenton, 2004).

It should be noted that triangulation of data was not carried out in Paper 4, which is regarded as a limitation. However, preliminary findings of Paper 4 were discussed with three clinicians who have considerable experience treating adults with PTSD. To further ensure credibility and trustworthiness of data, in Papers 4 and 5, a second coder was invited to blind code 10% of the transcripts. Similar to interrater reliability in quantitative research, the use of second coders can increase trustworthiness by checking experiences and views of participants have been accurately represented and not driven by the preconceptions of the investigator (Lincoln & Guba, 1985; Thomas, 2006). Lastly, a reflexive journal was kept throughout data collection and analysis (Morrow 2005; Shenton, 2004), which can aid in the reduction of investigator bias by ensuring conformability whereby the investigator evaluates the project continually throughout all processes of the project. The reflective log was also used to record the researcher's preconceived thoughts and feelings towards data collection, as well as initial impressions of each data collection session, and how this may have affected the researcher individually as well as their perspective of the research itself (Guba & Lincoln, 1985).

With reference to Paper 3, direct observations were conducted in the home environment, as opposed to a lab-based setting. This can be considered as a methodological

strength, as despite other activities that may have been going on in the home at the time of task participation (e.g., other siblings interrupting task), which may have caused participants to become distracted, the home environment is often seen as more naturalistic and should be used where possible to put participants at ease (Gardener, 2000). While participants can often still be put off or made to feel on edge by the presence of the researcher, recording equipment or both, conducting a study in the home environment often provides a more accurate insight into interactions that may occur day-to-day when the researcher is not present (Gardener, 2000; Ritchers, 1992). Further, coding of the observational data was carried out by trained coders, who underwent rigorous training and interrater reliability testing before being allowed to code interactions.

While Paper 3 did report on observational data, which is seen as a strength; Papers 2, 4 and 5 relied on parent's own report of their mental health and opinions on their parenting. As is often the case, mental health can often lead to biases in self-report data (Brenner & DeLamater, 2016; Rosenman, Tennekoon & Hill, 2011) with little agreement. This was found to be the case as parents reported distress levels of their child causing them distress in Papers 4 and 5, which was not found in Paper 2. Further, in Papers 4 and 5, parents reported withdrawing from their children and being unwilling to speak with them about their own trauma. However, findings in Paper 3 were contrary to this, suggesting parents were warm and sensitive towards their child during discussions of the trauma. This could perhaps be because the source of the trauma was different (e.g., indirect), or that parents are possibly overcompensating for their own distress. Either way, future research is required to investigate this further.

7.3.2. Sampling strengths and limitations

The current thesis had many sampling strengths, including: the recruitment of different genders of parents, researching samples of parents from different cultural contexts, and utilising samples of parents who had experienced different types of trauma, without excluding any trauma types.

The majority of responding parents in Papers 2, 3 and 5 were mothers. However, Paper 4 reported on an almost equal representation of mothers and fathers' experiences, which can be considered to be a great strength. Further, within the context of South Africa, interviewing two fathers was also considered a strength. Often in South African communities, particularly Xhosa culture, not only are females are seen as primary caregivers, but culturally it is seen as inappropriate for males to discuss their feelings, through tolerance of pain and isolation, men are believed to become powerful by proving themselves to be worthy of manhood (Beck, 2004; Vincent, 2008; Cain, Schensul & Mlobeli, 2010).

Nevertheless, future research should endeavour to recruit a more even distribution of mothers and fathers, most especially in the parental PTSD field, whereby fathers' experiences are typically represented following military trauma only (Berz, Taft, Watkins, & Monson, 2008; Creech & Misca, 2017; Galovski & Lyons, 2004). A significant weakness of Papers 2, 3, and 4 was a lack of ethnic diversity, which limits the generalisability of study findings to parents of varied ethnic backgrounds. Future research should also endeavour to recruiting more ethnically diverse study samples.

It is considered a great strength that parents in Papers 2, 3, 4 and 5 all experienced a variety of traumas, respectively. Previously, as highlighted in Paper 1, parental PTSD research has tended to focus on a specific trauma type (Christie et al., 2019), with a few

exceptions utilising larger cohort samples (Herschowitz et al., 2017; Lauterbach et al., 2007; Leen-Feldner et al., 2011). Findings from Papers 2, 3, 4 and 5 have the capacity of generalising parents who have experienced a variety of traumas. Further, noted impairments to parenting behaviours can be generalised again across trauma type, which can offer valuable insight.

Traumas experienced by parents and their children in Papers 2 and 3 were classed as relatively low risk. However, those experienced by parents in Papers 4 and 5 could be viewed as more severe. Participants recruited for Papers 2, 3, and 4 were all residents in the United Kingdom, a high-income country and low-risk setting. However, data from Paper 5 was collected in a higher-risk setting; World Mental Health data has argued that incidences of trauma exposure are higher in countries such as South Africa, compared to European countries (Atwoli et al., 2015). When drawing comparisons between parenting behaviours, thought must be given to the wider context in which these behaviours occur. For example, parents in Paper 5 reported placing restrictions on their child's autonomy, which included not allowing them to play outside for fear of them being harmed. While similar behaviour was discussed by parents in Paper 4, the environment was considerably different. It may be argued that hypervigilance and overprotectiveness by parents in Paper 5 may have been a symptom of parental PTSD, but also an adaptive behaviour to prevent any harm coming to their child (Williamson et al., 2017a).

Papers 3, 4, and 5 were cross-sectional, which is considered to be a limitation of the current study. This limitation means that the evidence presented in this thesis, while novel, can only present causal evidence to demonstrate that parental PTSD has an impact on parenting domains. Paper 2 reported on more longitudinal research, which provided insight into the maintenance of parent and child PTSS scores across a six-month period. Further, there is a significant possibility that there are pre-existing factors (e.g., a poor family

environment or additional mental health difficulties) that may also have a role to play in detrimental impacts on parenting behaviours. A limitation of Papers 2, 4 and 5 is that these additional factors were not taken into consideration. Papers 4 and 5 did their best to establish as much about the parent's experiences as possible, and Paper 3 took into consideration co-morbid mental health difficulties such as depression and anxiety. However, more broadly these were not taken into consideration in the majority of the papers included in this thesis. Therefore, more rigorous, longitudinal studies are needed.

7.4 Implications

Several implications can be taken from the findings of the five papers presented in this thesis.

7.4.1. The role of parental PTSD on parent-child communication

In Papers 4 and 5, parents in South Africa and in the United Kingdom reported experiencing a difficulty talking about their trauma with their children. Parents frequently reported feeling they were unable to discuss any aspect of their trauma with their child, as well as a reluctance to discuss the consequences of the trauma (e.g., their mental health difficulties). Across Papers 4 and 5 parents cited a number of barriers that prevented them from talking to their child about their trauma, which included not wanting to burden their child with their experiences, or fear of stigmatisation, looking weak or losing authority as a parent. If information needed to be discussed it was extremely basic such as "I was in an accident" or "I fought in the war". These findings are in line with the hypothesised explanations of findings in Papers 2 and 3, where parents aim to minimise their child's distress in a number of ways, which may avoid discussions of the trauma.

In line with the wider literature, parents in Paper 5 discussed being unwilling to speak to anyone about their trauma experiences in fear of community gossip and stigmatisation (Abrahams & Jewkes, 2012; Stadler, 2003; Visser, Makin, Vandormael, Sikkema & Forsyth, 2009), citing that their interview was the first time that they had discussed their trauma experiences with another individual. Findings reported in Papers 4 and 5 were consistent across all trauma types and both mothers and fathers. These findings are in line with the wider parental PTSD literature that has demonstrated similar impairments to parent-child communication. Qualitative work has noted that military veteran parents found great difficulty in communicating with their children about their trauma as they did not want to appear weak or lose any authority with their child. Further, there was also a fear that their child may tell other people about their disorder, an outcome which veteran parents admitting to being undesirable (Sherman et al., 2015). In addition, quantitative evidence suggests veteran parents with PTSD have rated their family communication as significantly less healthy, indirect and vague compared to veteran parents without PTSD (Davidson & Mellor, 2001). Further, more recent evidence has highlighted parental PTSD to be linked with problem parent-child communication (Creech & Misca, 2017; Sherman et al., 2016). Of note, most of the current evidence around parental PTSD and parent-child communication has been gathered from predominantly military veteran samples, while insightful, given the specific and complex nature of military trauma, there is little room for generalisation or transferability of findings for other samples. This further emphasises the importance of findings in the current study, as similar evidence was reported across a range of trauma types.

As evidenced in Paper 5, another potential barrier to parent-child communication may be a lack of mental health literacy. However, it was evident in Paper 4 parents had a greater understanding of their PTSD and displayed great reflective ability around how this had impacted on their parenting, which they attributed to the treatment they had received. Mental

health literacy may aid in the recovery process, as well as empowering those who suffer from mental health difficulties. Understanding why behaviours have changed can give individuals a sense of ownership over occurring changes, which can restore an individual's sense of control (Tol et al., 2011). Therefore, perhaps treatment can provide parents with the tools to better understand their disorder, but cannot provide the ability or confidence to discuss this with their child. This is something that should be considered in future research, but also by clinicians currently treating parents for PTSD. Research surrounding parent-child communication about parental physical health problems including cancer (Asbury, Lalayiannis, & Walshe, 2014) and genetic health conditions (Metcalfe, Coad, Plumridge, Gill, & Farndon, 2008) found that more open communication was associated with more positive family functioning. Further, researchers have reported a strong parental desire to educate and reassure children around more serious parental mental health difficulties, but parents note uncertainty around how to do so (Ferguson, 2011; Gladstone, Boydell, Seeman, & McKeever, 2011; Sherman et al., 2015). This is in line with findings from Paper 4, where parents did express a want to talk to their children about certain parenting changes, in an effort to make them understand what has changed and what this meant for them.

Interestingly, when prompted (e.g., taking part in a trauma narrative discussion), it was found that in Paper 3 parental PTSD was associated with warmer and more sensitive parenting behaviours. Recent evidence also suggests that a structured task can help provide parents with the ability to begin a conversation with their child, which can help both the parent and child to understand each other's feelings and in respect to Paper 3, also help the child to process their trauma (McGuire, Hiller, Cobham, Haag & Halligan, 2019). Taken together, the findings suggest that parent-child communication can be impaired by parental PTSD. However, a positive note is that parents do have the desire to have this conversation with their child, but require tools in order to facilitate this discussion. Future research is

required to investigate this further, as well as potentially developing a tool in order to help facilitate parent-child communication, about PTSD and the potential impacts it may have on the family environment.

7.4.2. The role of parental PTSD in overprotective behaviours and autonomy restriction

Overprotective behaviour can be described as the parent's excessive involvement in their child's activities, including restrictions placed on autonomy (Williamson et al., 2017b; Wood, McLeod, Sigman, Hwang & Chu, 2002). Parents in Papers 4 and 5, predominantly mothers, reported a spectrum of overprotective behaviours as a consequence of their PTSD. Following their trauma, parents noted feeling extremely unsafe in their environment. In addition, parents reported being extremely distrusting of others, both of which are common hypervigilant reactions in PTSD (APA, 2013; Bisson et al., 2015; Liberzon & Sripada, 2007). However, overprotectiveness in the form of intrusive behaviours was not found to be significantly associated with parental PTSD in Paper 3. This may be attributable to a lack of observational methods utilised in the wider literature when investigating the association of parental PTSD with parenting behaviour (as highlighted in Paper 1); or it may be the case that the increase in more positive behaviours (e.g., warmth and sensitivity) was related to parents' desire to protect their child from further distress.

Parents (Papers 4 & 5) reported never wanting to be apart from their children, stating that if something bad were to happen they would be there to protect them. At the more extreme end of these behaviours, parents were unwilling to allow their children to play outside, where in their eyes their children were "open and exposed to many dangers"; parents were unwilling to leave their child in the care of anyone other than themselves (i.e., nursery or pre-school staff) and where their child did have to be left in the care of someone else, such as when the child attended school, parents would wait outside the school for the entire day in the event something may happen. In certain environments, such as a high-risk context in

South African township, factors outside the parent's control, such as living in an unsafe environment, may influence their parenting outcomes; such as the desire to keep their children indoors at all times in order to keep the safe.

In the broader literature, parental PTSD and its association with overprotective parenting behaviours has been investigated largely through the lens of how this behaviour may impact on child outcomes. Williamson et al. (2016) noted during their qualitative study that parents' concern for their child's vulnerability and safety gave rise to overprotective behaviours such as closer monitoring and implementing changes to routines. The authors suggest that these types of behaviours may be associated with the parent's hyperarousal trauma response. Work with mothers and their children following the Khmer Rouge Regime in Cambodia found evidence of PTSD and increased hyperarousal in the mothers, which was significantly associated with increases in their child's anxiety, but no association was reported between maternal hyperarousal and overprotective parenting behaviour (Field, Muong and Sochanvimean, 2013). Findings reported by Field et al. (2013) in relation to children's increased vulnerability to poor developmental outcomes should also be highlighted. As noted by several studies (McLeod, Wood & Weisz, 2007; Williamson et al., 2016; Wise & Delahanty, 2017) parental overprotective behaviours have the potential to restrict child autonomy development, reducing the child's mastery of their own environment and increasing the child's perceived vulnerability to threat. Therefore, overprotective behaviours are thought to play a key role in the development of child anxiety. While the potential influences parental PTSD can have on their child's psychological outcomes, as noted in Paper 2, are important to note; it is evident from Papers 4 and 5 that parental PTSD does have an effect on overprotective, autonomy restrictive behaviours.

Overall, while this behaviour may be perceived as overprotective, in high-risk environments, this behaviour may be more commonplace, and in some cases a necessity

(Eagle & Kaminer, 2014; Wood, 2006). However, similar levels of overprotective behaviours were also found in the sample of parents in the United Kingdom, which can be argued to be a low-risk environment. This finding suggests that parental PTSD does substantially impact on parent's beliefs about their child's safety in their current environment. Support could potentially be provided for parents within the United Kingdom and/or any other low-risk context, around the reassurance that their environment is safe for them and their children. However, further research is required within higher risk contexts where the same approach would not be appropriate. Future research should seek to understand how best to support parents within this context, as this particular aspect of parenting behaviours appears to be context-specific.

7.4.3. The role of parental PTSD in perceptions of self-efficacy and parenting satisfaction

Findings from Paper 1 emphasised a strong association between parental PTSD and poor parenting satisfaction, which was further supported from findings across both qualitative studies (Papers 4 & 5). For parents in Paper 5, this sense was predominantly rooted within the parent's inability to provide instrumental care for the child (e.g., no longer being able to work and therefore unable to buy children gifts), as well as an inability to keep their child safe within the unsafe environment. It is understood from previous work with township communities that parents take instrumental care very seriously and this is considered a strong indicator of their love for their children. Engaging in conversations between generations is not always viewed as culturally appropriate; therefore, displays of love are demonstrated more through buying of gifts for children (Worthman, Tomlinson, & Rotheram-Borus, 2016). If, as the result of trauma, parents no longer have the financial means to buy items for children, this may lead to anger and frustration, but also feelings of dissatisfaction with their

ability to parent (Williamson et al., 2017a). Parents in Paper 4 appeared to be more aware that they no longer had the ability to do what 'normal parents' would do with their child (e.g., go shopping or go to the cinema). Across both samples in Papers 4 and 5, parents reported broad feelings of inadequacy within their parenting role. They noted that as the result of their trauma they were no longer able to do activities with their children they had previously done (e.g., family days out), which left them feeling like a failure as a parent as they were letting their children down. These feelings only served to further compound parent's distress, and in some extreme cases left parents feeling like their children would be better off without them.

It is widely understood that PTSD is associated with negative alterations to cognitions and mood (APA, 2013), which also includes negative beliefs and expectations of oneself (Sareen, 2014). Findings from Papers 4 and 5 draw attention to the possibility that parent's own negative self-concept may also feed into their perceptions about their parenting. Reviewing the wider literature, findings from Paper 1 provided relatively consistent evidence that parental PTSD is associated with reduced parenting satisfaction, albeit with some contradictory findings. Effect sizes, as well as sample sizes, were generally small, and positive findings derived predominantly from studies of male military veterans – further evidence is needed to establish their generalisability. While there is clearly potential for reduced parenting satisfaction to result in actual impairments in the parent-child relationship, one study addressing this failed to identify a pathway from satisfaction to parenting behaviour (Hershkowitz et al., 2017), and this question was generally underexplored. Even if direct implications for parental behaviour and/or child outcomes are not established, poor parental satisfaction seems likely to compound parental distress, which is important in clinical terms (Sherman et al., 2015). The consequences of reduced parenting satisfaction in the context of PTSD warrant further examination.

Findings from both qualitative studies (Papers 4 and 5) highlight that this negative view of one's parenting ability is not restricted to a military veteran sample. Further, at the more extreme end, this perception has the potential to be associated with suicidal ideation, with substantial clinical implications. Further, when considering impact on the child, a recent review highlighted strong evidence linking parental self-efficacy with parental psychological functioning. Findings suggest parental self-efficacy has potential impacts on child adjustment both directly and indirectly through parenting behaviours and practices (Jones & Prinz, 2005). Further, in military samples, poor parental satisfaction can have substantial ramifications on other parenting domains (including the parent-child relationship and parent-child communication), as well as having the potential to further compound the parent's PTSD symptoms (Galovski & Lyons, 2004; Berz, Taft, Watkins, & Monson, 2008). This area demands further research with samples other than military veterans in order to better understand the impact of poor parenting satisfaction and how best to support parents to improve their negative outlook.

7.4.4. The role of parental PTSD in reinforcing other negative behaviours (e.g., withdrawal, aggression and reactivity)

Mothers in Paper 5 and fathers in Paper 4 reported more negative changes to their parenting behaviours following their trauma, including withdrawing from their child or becoming more reactive, which consequently resulting in increased aggressive and violent behaviour. Paper 1 reported similar findings from the broader literature with regards to parental PTSD being associated with increased instances of violent behaviour towards children. Evidence around parental withdrawal from children is limited. While active withdrawal is commonly associated with PTSD (APA, 2013; Bisson et al., 2015; Galovski & Lyons, 2004), often as the result of the individual no longer having a desire to be around

people or socialise. Interestingly, parents in Paper 4 stated they withdrew from their children in order to prevent any angry or violent outbursts from taking place. This finding suggests different motivations for this behaviour and is of particular note, as parents appear to be attempting to protect their child from any negative outbursts, which may have also been an effort to preserve the parent-child relationship.

In the broader literature, the associations between PTSD and increased anger and aggression are widely recognised (Galovski & Lyons, 2004; Orth & Wieland, 2006; Taft, Watkins, Stafford, Street & Monson, 2011). Most commonly this association is found within military populations, which often leads to intimate relationship difficulties (Galovski & Lyons, 2004; Jordan et al., 1997; Taft et al., 2011). With several studies also highlighting poor parent-child relationship outcomes as a result of increased anger and aggressive behaviour from the parent (Berz, Taft, Watkins & Monson, 2008; Cohen, Zerach & Solomon, 2011; Jobe-Shields, Flanagan, Killeen & Back, 2015). It has been proposed that perhaps one reason for seeing this strong association among military populations is primarily the nature of combat-related stressors and its impact on information processing and anger (Chemtob, Novaco, Hamada, Gross & Smith, 1997; Orth & Wieland, 2006). While this suggestion is in line with fathers in Paper 4, who were predominantly veterans that reported increased anger and reactivity. Interestingly, it was mothers in Paper 5 who also reported being angry and taking this out on their children. This is in-keeping with the reviewed findings in Paper 1, as well as findings from large cohort studies, suggesting that parental PTSD is associated with the adoption of more harsh or critical parenting practices across trauma types and sex of parent (Lauterbach et al., 2007; Leen-Feldner et al., 2013). While there has been very little in the way of investigating associations between parental PTSD and withdrawal, in an observational study with military veterans, Brockman et al. (2016) noted that withdrawal was reliably associated with less positive engagements with their child and more ‘distress

avoidance' (i.e., actively removing oneself from a situation when the child becomes aversive or distressed). While the authors conclude that this can cause potential problems around reintegration into the family following deployment, this may also be the case for any parents that spend time away from their child (e.g., if the parent has had to spend time in hospital as the result of their trauma).

Taken together, while this finding was not reported by every parent within Papers 4 and 5, it was a strong theme that arose in each sample. This raises important issues around the safety of members in the household, most particularly if other objects within the house are being damaged or destroyed. While it appeared to be the case that parents did not actively seek to be physically abusive towards their children, this finding does raise concerns around the increased likelihood of parents using more harsh parenting practices as a consequence of their PTSD. Future research should aim to be conducted with samples who have not experienced military trauma, particularly fathers, to understand if this behaviour is also frequently discussed or reported.

7.4.5. Parental PTSD does not impair the parent's love for their child

Contrary to previously discussed sections relating to negative associations of parental PTSD with parenting domains, there was an evident dichotomy of parenting in Papers 4 and 5; where despite listing a number of negative changes that had occurred to both the parent and their parenting domains, parents still maintained they had a good and strong relationship with their child, at least from their own perspective. Further, Paper 3 also emphasised parents' PTSD being significantly associated with warm and sensitive behaviour during the trauma narrative discussion task. Across both samples in Papers 4 and 5, parents displayed evident love and adoration for their children, stating that they would not be alive today if it weren't for the motivation and drive they gained from their children. Parents frequently

reported that their children gave them strength and encouragement to keep moving forward, despite not feeling like they wanted to on occasions. Children appeared to be a central feature in parent's discussions in Papers 4 and 5, whereby parents were always conscious about their child's wellbeing and any potential distress they may be causing their child as the result of their PTSD. While Paper 2 did not confirm this dyadic association between child PTSD symptom scores and parent PTSD symptom scores across time, this may have been largely due to Papers 4 and 5 utilising samples where parents had directly experienced their trauma; but Paper 2 was reporting on indirect trauma exposure. As such, it may be the case that parents perceive their child's distress to be influencing their own, but rather their perception may be based on their own mental health difficulties following their child's trauma.

Within the parental PTSD literature, positive outcomes are seldom reported. This may be due to a largely quantitative methodological approach, leaving little room for investigating positive associations between parental PTSD and parenting domains. However, qualitative accounts provide more scope for such discussions and disclosures. Findings from a qualitative study with fathers suffering from psychosis found that fathers described parenting as beneficial to their mental health. It provided them with a sense of purpose and meaning in life, which often motivated them to manage their illness well and use healthy coping strategies (Evenson, Rhodes, Feigenbaum, & Solly, 2008). Relatedly, recent evidence suggests that parenthood among a veteran sample can both be a risk factor for poor parent-child outcomes, but also be a source of resilience and motivation to engage in treatment (Tsai, David, Edens & Crutchfield, 2013). Further, in a recent review of first-time parents transitioning into parenthood following childhood maltreatment, findings indicated some parents viewed the birth of their child as a 'new beginning' and a chance to start over again (Christie et al., 2018; Fava et al., 2016).

Overall, while the positives in no way nullify the negative implications of parental PTSD on parenting domains, it is important to also report that parents do love their children. Often research focuses on the intergenerational transmission of parent mental health negatively impacting on their child's social, emotional and psychological outcomes (Berg-Neilson et al., 2002; Rosenheck & Nathan, 1985;). However, findings from Papers 3, 4, and 5 highlight parents' effort to support their children as best they can, often at the detriment to themselves and their own recovery. Relatedly, Williamson et al. (2017a; 2017b) reported similar findings of caregivers' experiences offering sensitive support and reassurance to their child following a trauma, while still experiencing their own distress. Thus, it is important that future research makes a considerable effort to understand the multifaceted process underlying parental PTSD and parenting outcomes, in order to provide the best support for parents and their families.

7.5. Clinical Implications

Evidence from Papers 4 and 5 highlighted differences between parents who had and had not received formal psychological treatment for their PTSD. For parents who had received treatment, they appeared to have a greater understanding of their PTSD and the affect that this had had on their past behaviours. Further, parents discussed how grateful they were for the psychological treatment they had received, highlighting that the support had allowed them to function better and provided them with tools to cope. In comparison, parents in Paper 5 discussed not accessing any form of psychological treatment. This was largely to do with embedded cultural factors, which future work should aim to overcome for the benefit of this sample. However, the lack of psychological support may contribute to a lack of mental health literacy for parents in Paper 5. Furthermore, a considerable number of the parents in Paper 5 admitted that their interview was the first time they had disclosed their trauma to

another individual. It must be highlighted that this lack of disclosure may be attributable to cultural expectations around gossiping, shame and stigma in the community, but following disclosure, parents in Paper 5 did acknowledge a feeling of catharsis.

In addition, longitudinal evidence from Paper 2 provides insight into potential points of intervention for both parents and their children following trauma exposure. Taken together, findings from this thesis have the potential ability to provide a number of clinical implications, which may be of relevance to the treatment and support offered to parents with a diagnosis of PTSD.

It must be noted that a number of the clinical recommendations listed below could have the potential to be implemented at a community level, as opposed to being implemented through a formal treatment model, such as counselling. Recent reviewed evidence has highlighted that evidence-based treatments for PTSD have the potential to be successfully applied in a wide variety of settings through enlisting the assistance of community based participatory practices (Dixon, Ahles, & Marques, 2016; Wallerstein & Duran, 2010). This could have important implications for the application of successful interventions for parents with PTSD. As noted by Wallerstein and Duran (2010), utilising lay community health workers can allow those who require help and support to access the treatment they need through removing previous barriers to treatment such as stigma or limited access to treatment facilities.

7.5.1. Parenting support or parenting workshops should be provided as part of treatment for PTSD with parents

PTSD treatments are often individualistic in their focus, with the primary outcome to aid in a more positive functioning of that specific individual. Evidence from Paper 4 highlights that often the individual feels that they will never be entirely free from their PTSD

('cured'), but psychological and pharmacological treatment can aid in the development of effective tools allowing the individual to process their trauma, and move forward effectively. Anecdotally, parents in Paper 4 described using coping strategies during the interview to allow them to discuss their trauma. In contrast, findings reported in Paper 5 also highlighted a lack of access to formal treatment, which may have contributed to the lack of literacy around mental health, as well as difficulty in disclosing and discussing trauma experiences. However, within this context, cultural factors also cannot be ignored (Ruane, 2010). Findings from Paper 2 also emphasise a need for support around parenting behaviours, as previous evidence suggests one of the maintaining factors of child PTSD symptoms is parenting behaviours, which has subsequent implications for the child's psychological recovery (Trickey, Siddaway, Meiser-Stedman, Serpell & Field, 2003; Williamson et al., 2017b).

While Paper 4 does highlight many positive outcomes of formal PTSD treatment that has evidently benefited the individual, discussions around parenting behaviours were often less positive, with thoughts expressed that the participant's parenting was often detrimental or damaging to their child. However, there was little discussion on positive strategies learned from treatment around how to deal with more negative parenting behaviours. Although parents in Paper 5 had received no formal treatment, discussions around negative parenting also arose with parents being unsure where these negative behaviours had stemmed from. Lastly, although in Paper 3 parental PTSD was significantly associated with more positive parenting behaviours (e.g., warmth and sensitivity), findings from Paper 2 (utilising the same sample) still highlighted parental PTSD as predicting child PTSD 6-months post-trauma. Commonly, clinicians would wish to prevent potential detrimental outcome that children may experience as a consequence of their parents' PTSD, or at least to curtail any further negative impact (Galovski & Lyons, 2004; Horesh & Brown, 2018). However, it could be argued that before addressing and attempting to treat the child's dysfunctional outcomes that the

caregivers' needs are tended to first (Scheeringa and Zeanah, 2001). Therapy has evidently aided the recovery of the parent individually; however, similar support and improvement for their parenting abilities is lacking.

Taken together, it may be considered that when meeting patients for the first time, clinicians should bear in mind family demographic information, specifically whether there are any children in the household. This is important because individualistic models of therapy may neglect the importance of family relationships, relationships with the wider community and the needs of the children of parents with mental health difficulties (Evenson et al., 2008). Findings from the current thesis suggest that parenting skills or workshops could be integrated into formal treatment models. Such workshops could allow parents to understand how to adapt to a change in their parenting behaviour, as well as providing reassurance that just because their parenting behaviours have changed as the result of their PTSD, does not make them a bad parent, which was a common feeling discussed in Papers 4 and 5. Therefore, consideration of the adoption of a more 'family-centric' approach following treatment progress with the individual parent may be warranted. Thus, the parent's parenting behaviours can also be assessed and supported. Approaches such as Integrated Family Treatment have been found to be successful in improving parenting skills of parents suffering from severe mental illnesses (Brunette, Richardson, White, Bemis, & Eelkema, 2004). While this can be a sensitive topic, some adults with mental illness can certainly benefit from parenting support and education (Aldridge & Becker, 2003; Hinshaw, 2004).

7.5.2. Psychoeducation could be offered for parents and other family members; treatment for parental PTSD should consider becoming more family-focused

Evidence from Paper 2 emphasises the importance of the dyadic relationship between parents and their children post trauma. Further, as evidenced in Paper 2, in families that have been affected by the child being involved in an accident (de Vries et al., 1999), or becoming suddenly critically ill (Landolt, Boehler, Schwager, Schallberger, & Nuessli, 1998), parents may be unaware that they are also vulnerable to the development of PTSD. This may lead to parents neglecting their own distress in an effort to focus on minimising the distress of their child, which may have serious implications for parents' mental health in the future (Ehlers & Clark, 2000; Halligan, Michael, Clark, & Ehlers, 2003).

In paper 4, it was apparent that formal treatment for PTSD had provided parents with the tools to reflect on past behaviours, that they now could acknowledge to be attributable to their PTSD. However, in Paper 5, parents often described behaviours that were in line with PTSD symptoms, yet were unsure why these behaviour changes had occurred, or linked them to another cause rather than their trauma exposure. Misunderstanding or misinterpreting changed behaviours as the result of PTSD may cause individuals to suppress thoughts or feelings that arise post-trauma, or actively avoid contexts that may trigger symptoms. Previous research has emphasised the importance of post-trauma risk factors such as maladaptive cognitions including negative appraisals of the self or trauma, rumination, or active thought suppression (Ehlers & Clark, 2000b; Halligan, Michael, Clark, & Ehlers, 2003).

Psychoeducational interventions can offer education to individuals around psychological disorders or physical illnesses (Donker, Griffiths, Cuijpers & Christensen, 2009). Further, as noted by Wessely et al. (2004), within the PTSD field, the aim of

psychoeducation is to ameliorate or alleviate the effects of trauma exposure. Psychoeducation can be provided in multiple forms in either a passive or active context; including physical briefings, classes and workshops, bibliotherapy (e.g., providing information leaflets or books on the subject), or the use of websites (Donker et al., 2009; Sherman et al., 2003 Wessely et al., 2004).

The evidence surrounding the effectiveness of PTSD psychoeducation is limited and equivocal. While some evidence suggests PTSD psychoeducation can effectively reduce PTSD symptoms compared to a waitlist control at a two-week follow-up (Yeomans, Forman, Herbert and Yuen, 2010). Other reviewed findings suggest at a three-month follow-up benefits of PTSD psychoeducation were no longer apparent (Sloan, Bovin & Schnurr, 2012). These findings are support findings of an early review of PTSD psychoeducation published by Wesseley et al. (2008), who argue that while there is insufficient evidence to suggest PTSD psychoeducation will cure trauma survivors, PTSD psychoeducation may still have the potential to serve an important function in their recovery. This evidence has focused primarily on PTSD psychoeducation for the individual with the disorder; however, within the context of parental PTSD and in line with results from the current thesis a more family-focused rather than individualistic approach is likely to be appropriate. Family members often have a substantial responsibility to care for loved ones who suffer from mental health difficulties, without the necessary knowledge, skills, and support (Cuijpers & Stam, 2000; Sherman, 2003). This often results in family members becoming, as termed by Thompson and Doll (1982, p.379), “de facto therapists”.

Family psychoeducation programmes would offer the family unit as a whole the opportunity to gain a deeper understanding around the parent’s PTSD and the implications this may have for the parent, as well as for the family unit. Currently, there exists evidence around the effectiveness of family psychoeducation programmes with a focus on a specific

mental illness such as schizophrenia (e.g., Amenson, 1998; Atkinson & Coia, 1995; McFarlane et al., 2002), bipolar disorder (e.g., Miklowitz & Goldstein, 1997), or mood disorder (McFarlane, 2004; Sherman, Fischer, Owen, Lu & Han, 2015). Findings suggest that family members reported improved knowledge of the disorder, as well as increased implementation of family coping strategies, in both those suffering with the disorder and their family members (McFarlane, 2004; Sherman, Fischer, Owen, Lu & Han, 2015). Further research is needed into this type of intervention in order to assess its effectiveness. Having a potential intervention that could be implemented early on while waiting for formal treatment to begin may be advantageous, as it may potentially curtail the development of more chronic PTSD symptoms within the individual, as well as increasing familial understanding and support. Families are complex systems which, when facing stress or crisis, undergo dramatic changes involving parents, children and spouses. By taking a more family integrated approach to therapy and treatment, this may aid in supporting positive parenting behaviours as well as improving family understanding and awareness of the disorder, thus having the potential to improve family cohesion (Evenson et al., 2008; Sherman et al., 2015b; Horesh & Brown, 2018).

7.5.3. There may be the potential for multiple points of intervention, which should be considered

Evidence reported in Paper 2 highlights the persistence of PTSD symptoms six-months following indirect trauma exposure. Trauma that involves the parent's child also has additional factors that need to be taken into consideration, such as the parent's negative appraisals of their child's recovery (e.g., "my child is permanently damaged by this event and will never recover), which may also influence their parenting style, as seen in Paper 3. Findings in Paper 2 are in line with previous research that has found this to maintain parental

PTSD, but also negatively affect the child's psychological recovery (Hiller et al., 2016; 2018; Williamson et al., 2016). An important question often considered by clinicians is *when* to offer treatment to those experiencing PTSD symptoms. However, treatment cannot always be delivered when it is intended due to numerous constraints on health care providers. Therefore, more immediate or early interventions should be considered following trauma exposure.

Many parents within the qualitative studies reported not accessing psychological services at all (Paper 5), or having to wait a minimum of two years before gaining access to formal treatment (Paper 4). Diagnostically, it is recognised that individuals must experience their PTSD symptoms for at least four weeks prior to receiving a diagnosis (APA, 2013; The National Institute for Health and Care Excellence, 2018: NG116). While a substantial proportion of people within this four-week period will recover and their PTSD symptoms will decline, at least one third of individuals will experience PTSD symptoms for up to three years or longer (Kessler et al., 1995). Further, as acknowledged by the National Institute for Clinical Excellence (NICE, 2005) often those who continue to experience PTSD symptoms and do not receive treatment are at risk of developing secondary issues such as substance misuse and the development of co-morbid disorders.

Psychological debriefing (PD) is most commonly implemented as an early intervention following exposure to a potentially traumatic event. However, there is growing evidence that PD does not prevent the development of PTSD symptoms, with some research finding the intervention can make them worse (Bisson, McFarlane & Rose, 2000; Litz, Gray, Bryant & Adler, 2002; Rose, Bisson & Wessely, 2001). Further, in their Cochrane Review, it was concluded that compulsory single-session PD following a potentially traumatic event should be ceased (Rose et al., 2001). Currently, there is no strong evidence base for any type of early intervention for PTSD, with a recent review evaluating a number of potential

psychosocial and pharmaceutical options, but concluding future research was still required (Kearns, Ressler, Zatzick & Rothbaum, 2012). However, a potential avenue that could be considered is the role of social support or peer support groups, as a potential early intervention for those exposed to potentially traumatic events. It is understood that social support can act as a protective factor against further development and maintenance of PTSD symptoms (Brewin, Andrews & Valentine, 2000; Bromet, Sonnega & Kessler, 1998; Ozer, Best, Lipsey & Weiss, 2003). Further, peer-support models may also be conducive to this population as parents in Papers 4 and 5 often reported feeling alone, or admitted to consistently comparing themselves to other 'normal parents' (Paper 4), which had negative impacts on their parenting satisfaction. The implementation of a peer support group may aid in alleviating these feelings and may also serve to empower parents. In samples similar to those in Papers 2 and 3, peer support may also provide reassurance for parents around how best to support their child and themselves following their child's trauma. Further, in communities where discussion of PTSD may be heavily stigmatised (such as in Paper 5), discussions in a private and trusted peer group may also support those feeling isolated or blamed for their trauma by family members. These approaches may also provide some much needed reassurance for parents that they are doing a good job, despite how they may feel as the result of their PTSD.

While this area of treatment or support was not explored with parents in the current sample, previous research has found parents express a want for support in this way. In one example, a study with refugee mothers taking part in a focus group, the researchers note it was not long before all mothers opened up about parenting challenges, which normalised these difficulties making them easier to discuss (El-Khani et al., 2018). It was apparent in both groups of parents during the qualitative work that they feel heavily stigmatised, either by their community (Paper 5), by family members (Paper 4 and 5), or by themselves. Asking

parents to open up about difficulties or challenges they are experiencing is a delicate task, which is largely to do with the societal perspective around parents needing to do a 'good job' at all times, leaving them to feel like they cannot open up when they are struggling.

While research has produced little in the way of robust and valid evidence of an effective early intervention tool for parents who have experienced trauma, there is a unanimous agreement in the literature that effective early interventions are needed. Effective early interventions may have the potential to curtail the development of more chronic PTSD symptoms that, as evidenced by Papers 4 and 5, can have an extreme impact on the parent and their parenting behaviours (e.g., not wanting to leave the house or not allowing the child to leave the house due to safety concerns or abusing substances to cope). In the context of indirect trauma, while Paper 3 suggests that parental PTSD may be predictive of more positive behaviours towards the child, Paper 2 found that parental PTSD was still predicting child PTSD 6-months later. This suggests that there is still potential benefit from interventional support. Intervening at an earlier stage may prevent symptoms of PTSD becoming chronic, whereby more severe behaviours begin to develop that may be detrimental to the parent and the wider family dynamic. Furthermore, impaired functioning as a parent may lead to subsequent feelings of inadequacy and feeling they have let their family down. These negative feelings have the potential to perhaps increase the risk of suicidal ideation by the parent, which is known to be a common association with PTSD (Bisson, Cosgrove & Roberts, 2015; Krysinska & Lester, 2010; Sareen et al., 2007). Therefore, peer support should be further investigated as a potential early intervention to be implemented in the interim and possibly in conjunction with formal treatment.

While beyond the scope of this thesis, it must be acknowledged that there exists a vast literature around the impact of poverty on mental health (Lund et al., 2010; Saraceno & Barbui, 1997; Saraceno, Levav, & Kohn, 2005). As highlighted by the literature, poverty is

not a single factor, but is multifaceted and can be characterised by physical, psychological and social stressors (Lund et al., 2010). Socioeconomic status (SES) is often used to assess an individual's or family's economic and social position, based on educational attainment, occupation and income (Santiago, Kaltman & Miranda, 2013). Low income adults or families, or those living in low SES, are at an increased risk of living in poverty due to lack of education, or lack of employment, which may lead to a limited income. This may subsequently cause families to live in poverty, which then puts individuals at an increased risk for psychological difficulties, such as depression and anxiety (Hollingshead & Redlich, 1958; Santiago et al., 2013; Wender, Rosenthal, Kety, Schul-singer, & Welner, 1973).

Regardless of the underlying mechanism, the strong association between low SES and poor mental health is extremely well documented (Lund et al., 2010; Santiago et al., 2013; Saraceno, Levav, & Kohn, 2005). Consistent with this, low SES has also been found to be a strong predictor of PTSD development in adults following trauma exposure (Kessler et al., 1995). Further, low SES may prohibit those with PTSD from accessing support services. In a study with low-income adults, it was found that while 22% met the diagnostic criteria for PTSD, only 13% accessed trauma-related treatment (Davis, Ressler, Schwartz, Stephens, & Bradley, 2008). In a recent review, Santiago, Kaltman and Miranda (2013) found factors such as single parent households, residing in disadvantaged neighbourhoods and social isolation were also all linked to less uptake of support services. Further, families with low SES, or with a single parent were also found to be more likely to drop out of a treatment program prematurely.

Observations of associations between mental health and poverty also apply to low-to-middle-income countries (LMICs). A recent review (Lund et al., 2010), identified several factors - including education, food insecurity, housing, and financial stress - that had a strong association with poor mental health outcomes. Several of these factors were found to

contribute to parents' levels of distress in Paper 5, particularly around the lack of financial security due to lack of employment post-trauma. While these factors were not discussed in relation to barriers to accessing mental health support, parents in Paper 5 often commented on how financial or practical support (e.g., food packages or clothes donations from members of the community) was helpful in their recovery.

Parents in Papers 2, 3 and 4 did not experience low SES (assessment based on annual income); in Papers 2 and 3 SES was not found to be associated with PTSS, and in Paper 4 parents did not discuss financial burden as a contributing factor to their PTSD or as a hindrance to their recovery. Nevertheless, understanding the SES context of individuals seeking support post-trauma has important implications for the type of intervention that would be most effective for them and their families.

7.6. Future Directions

As has been highlighted in numerous sections throughout this discussion and this thesis as a whole, a substantial programme of research is still needed to gain further understanding of how parental PTSD impacts parenting domains and wider family functioning.

Firstly, there is a need for further longitudinal research to be conducted. Findings from Paper 2 highlighted parental PTSS to be a maintaining factor for child PTSS over time, as well as emphasising that the reverse relationship did not have the same affect (i.e., child PTSS did not significantly maintain parent PTSS over time). This finding highlights the continued vulnerability of parent and child mental health over a six-month period following an indirect trauma for the parent. However, what is less clear is how this may have impacted parenting outcomes over time. Work with the same sample in Paper 3 found parental PTSD did have a significant association with positive parenting domains (e.g., warmth and

sensitivity), but it would have been of interest to see if this association was maintained over time. Approaches informed by data in Papers 2 and 3 would include recruitment of parents four-weeks post trauma with comprehensive longitudinal follow up. Parents in Papers 4 and 5 had experienced their trauma a number of years prior to the interview taking place, with parents in Paper 4 specifically commenting on the fact they felt they had benefitted from treatment and if the interview had been conducted two or three years earlier their answers would have been very different. This is important information that needs to be captured during more difficult stages of PTSD development, potentially providing further insight into how to best support parents during more difficult periods (e.g., maintaining support while parents are on waiting lists for treatment). While recruiting parents at this time may be challenging, following them over time would provide invaluable evidence that we still currently do not possess.

Another possible route for potential research would be to recruit multiple informants. As has been highlighted through differences between findings in Papers 4 and 5, and findings reported in Papers 4 and 5, parents may not always be the most reliable source of information when discussing their own parenting skills. Poor parenting satisfaction and PTSD causing increased negative self-concept (Gewirtz, Polusny, DeGarmo, Khaylis & Erbes, 2010; Hershkowitz, Dekel, Fridkin & Freedman, 2017) may cause parental reports of parenting to be biased and possibly unreliable. There is strong evidence for the benefits of multiple informant reports when investigating psychopathology (Alexander, McKnight, Disabato & Kashdan, 2017; Grucza and Goldberg 2007; Lieberman et al. 2016). Interviewing spouses and children in addition to parents about their own parenting and the family dynamic may provide unique and novel insight into the reliability of information provided by the parent, as well as identifying potential new avenues for support and intervention for the parent as well as other family members.

Mixed methodological work should also continue to be conducted within the parental PTSD field. Findings from all empirical papers in the current study (Papers 2-5) highlight the valuable information that can be produced as the result of a mixed methodological approach. Work should also continue to represent parent's voices in LMIC and high-risk contexts, where we have identified differences to the experience of parents residing in HICs and low-risk contexts. Comparisons between Papers 4 and 5, indicate that parents residing in communities like Khayelitsha have differing support needs. Parents in Paper 5 reported feeling relieved following the interviews, suggesting that talking to someone about what their trauma was beneficial, which builds upon previous work (Hiller et al., 2017b; Williamson et al., 2017a) that emphasises the need for a better understanding of how avoidant coping styles influence mental health in contexts where they are culturally normative. While there is evidence to suggest effective counselling models that work in these contexts (Bolton, Bass & Betancourt, 2007) continued research is required, as de Jong and Kleber (2007) emphasise the importance of bridging cross-cultural differences in order to adapt psychological services to best meet the needs of the communities that they are meant to serve.

7.7. Conclusion

The aim of the current thesis was to investigate how and why trauma impacts parenting, paying particular focus to the experience of the parents themselves. Overall, findings suggest parental PTSD does impair certain parenting domains; including parent-child communication, parenting satisfaction and the endorsement of overprotective and occasionally aggressive behaviours. This research has provided a unique insight into the experiences of parents following trauma exposure in both high- and low-risk contexts, gathering evidence via multiple methods including self-report, qualitative interviews and direct observation. Further, this thesis contributes generalisable findings that cut across

different trauma types, through utilising heterogenous trauma samples. There is strong evidence to suggest being a parent living with posttraumatic stress disorder is extremely challenging, as the effects of PTSD are far reaching and impair several aspects of the individual's life. Some evidence provided by the current thesis adds to an already growing evidence base around the detrimental impact of PTSD to the parent as an individual, as well as highlighting the vulnerability of parental mental health following indirect trauma; this thesis has contributed novel insights into how parenting behaviours are impacted by PTSD, most particularly as experienced from the parent's perspective.

Our findings provided little consistent evidence around effective coping and support strategies. This limits recommendations for effective support offered to parents and families following trauma exposure (either direct or indirect), while they may potentially be waiting to receive treatment. This programme of work offers several implications for prospective clinical practice, including the implication of earlier intervention, increased parenting support and more psychoeducation being offered to the parents themselves and their closest family members.

While it is evident study that parental PTSD impairs a number of parenting behaviours, in spite of these impairments parents maintain a strong and robust love their children, which should not be overlooked. Future research must endeavour to continue to focus on the needs and experiences of parents living with PTSD, with an ultimate aim to provide effective, tailored support for parents and their families following trauma exposure.

References

Abidin, R. R. (1995). *Parenting stress index: Manual* (3rd ed.). Odessa, FL, US: Psychological Assessment Resources.

Abrahams, N., & Jewkes, R. (2012). Managing and resisting stigma: a qualitative study among people living with HIV in South Africa. *Journal of International AIDS Society, 15*(2), 17330.

Ainsworth, M., D, S., Blehar, M. C., Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the Strange Situation*. Oxford, England: Lawrence Erlbaum.

Ainsworth, M. D. S. (1969). Object Relations, Dependency, and Attachment: A Theoretical Review of the Infant-Mother Relationship. *Society for Research in Child Development, 40*(4), 969 - 1025.

Ainsworth, M. D. S., & Bell, S. M. (1970). Attachment, exploration, and separation: Illustrated by the behavior of one-year-olds in a strange situation. *Child Development, 41*(1), 49-67.

Ainsworth, M. D. S., & Bowlby, J. (1991). An ethological approach to personality development. *American Psychologist, 46*(6), 333-341.

Aldridge, J. (2006). The experiences of children living with and caring for parents with mental illness. *Child Abuse Review, 15*(2), 79-88.

Alexander, L. A., McKnight, P. E., Disabato, D. J., & Kashdan, T. B. (2017). When and How to use Multiple Informants to Improve Clinical Assessments. *Journal of Psychopathology and Behavioral Assessment, 39*(4), 669-679.

Alisic, E., Boeije, H. R., Jongmans, M. J., & Kleber, R. (2012). Supporting children after single- incident trauma: parents' views. *Clinical Pediatrics (Phila), 51*(1), 274-282.

Alisic, E., Gunaratnam, S., Barrett, A., Conroy, R., Jowett, H., Bressan, S., . . . Mehl, M. R. (2017). Injury talk: spontaneous parent–child conversations in the aftermath of a potentially traumatic event. *BMJ Evidence-Based Mental Health, 20*(4), e19.

Alisic, E., Jongmans, M. J., Van Wesel, F., & Kleber, R. J. (2011). Building child trauma theory from longitudinal studies: a meta-analysis. *Clinical Psychology Review, 31*(5), 736-747.

Allison, P. D. (2003). Missing data techniques for Structural Equation Modeling. *Journal of Abnormal Psychology, 112*(4), 545-557.

Amenson, C. S. (1998). *Schizophrenia: A family education curriculum*. Pasadena, CA, US: Pacific Clinics Institute.

American Psychiatric Association. (1994). Diagnostic and Statistical Manual of Mental Disorders (4th ed.). Washington, DC: American Psychiatric Association.

American Psychiatric Association. (2013). Diagnostic and Statistical Manual of Mental Disorders (5th ed.). Washington, DC: American Psychiatric Association.

Appleyard, K., & Osofsky, J. D. (2003). Parenting after trauma: Supporting parents and caregivers in the treatment of children impacted by violence. *Infant Mental Health Journal, 24*(2), 111-125.

Asbury, N., Lalayiannis, L., & Walshe, A. (2014). How do I tell the children? Women's experiences of sharing information about breast cancer diagnosis and treatment. *European Journal Oncology Nursing, 18*(6), 564-570.

Atkinson, J. M., & Coia, D. A. (1995). *Families coping with schizophrenia: A practitioner's guide to family groups*. New York, NY, US: Wiley

Atwoli, L., Stein, D. J., Koenen, K. C., & McLaughlin, K. A. (2015). Epidemiology of posttraumatic stress disorder: prevalence, correlates and consequences. *Current Opinions in Psychiatry, 28*(4), 307-311.

Atwoli, L., Stein, D. J., Williams, D. R., McLaughlin, K. A., Petukhova, M., Kessler, R. C., & Koenen, K. C. (2013). Trauma and posttraumatic stress disorder in South Africa: analysis from the South African Stress and Health Study. *BMC Psychiatry, 13*(182), 1-12.

Ayers, S., Eagle, A., & Waring, H. (2006). The effects of childbirth-related post-traumatic stress disorder on women and their relationships: A qualitative study. *Psychology, Health & Medicine, 11*(4), 389-398.

Ayers, S., Wright, D. B., & Wells, N. (2007). Symptoms of post-traumatic stress disorder in couples after birth: Association with the couple's relationship and parent-baby bond. *Journal of Reproductive and Infant Psychology, 25*(1), 40-50.

Balluffi, A., Kassam-Adams, N., Kazak, A., Tucker, M., Dominguez, T., & Helfaer, M. (2004). Traumatic stress in parents of children admitted to the pediatric intensive care unit. *Pediatric Critical Care Medicine, 5*(6), 547-553.

Beck, D. (2004). *Men and ARVs: How Does Being a Man Affect Access to Antiretroviral Therapy in South Africa? an Investigation Among Xhosa-speaking Men in Khayelitsha.* . Retrieved from University of Cape Town

Belsky, J. (1984). The determinants of parenting: A process model. *Child Development, 55*(1), 83-96.

Belsky, J., & Jaffee, S. R. (2006). The multiple determinants of parenting. In D. Cicchetti & D. J. Cohen (Eds.), *Developmental Psychopathology: Risk, disorder, adaption* (pp. 38-85). Hoboken, NJ, US: John Wiley & Sons Inc.

Berg-Nielsen, T. S., Vikan, A., & Dahl, A. A. (2002). Parenting Related to Child and Parental Psychopathology: A Descriptive Review of the Literature. *Clinical Child Psychology and Psychiatry, 7*(4), 529 - 552.

Berkowitz, S. J., Stover, C. S., & Marans, S. R. (2011). The Child and Family Traumatic Stress Intervention: Secondary prevention for youth at risk of developing PTSD. *Journal of Child Psychology and Psychiatry, 52*(6), 676-685. doi:10.1111/j.1469-7610.2010.02321.x.

Bernal, M., Haro, J. M., Bernert, S., Brugha, T., de Graaf, R., Bruffaerts, R., . . . Investigators, E. M. (2007). Risk factors for suicidality in Europe: results from the ESEMED study. *Journal of Affective Disorders, 101*(1-3), 27-34. doi:10.1016/j.jad.2006.09.018.

Berz, J. B., Taft, C. T., Watkins, L. E., & Monson, C. M. (2008). Associations between PTSD symptoms and parenting satisfaction in a female veteran sample. *Journal of Psychological Trauma, 7*(1), 37-45. doi:10.1080/19322880802125969.

Bisson, J. I., Cosgrove, S. C., Lewis, C. S., & Roberts, N. P. (2015). Post-traumatic Stress Disorder. *The British Medical Journal, 351*(h6161). doi:10.1136/bmj.h6161.

Bisson, J. I., McFarlane, A., & Rose, S. (2000). Psychological Debriefing In E. B. Foa, T. M. Keane, & M. J. Friedman (Eds.), *Practice guidelines from the International Society for Traumatic Stress Studies: Effective treatments for PTSD* (pp. 39-59). New York, NY, US: Guilford Press.

Bolton, P., Bass, J., Betancourt, T., Speelman, L., Onyango, G., Clougherty, K. F., . . . Verdeli, H. (2007). Interventions for depression symptoms among adolescent survivors of war and displacement in northern Uganda: A randomized controlled trial. *JAMA, 298*(5), 519-527.

Bosquet Enlow, M., Egeland, B., Carlson, E., Blood, E., & Wright, R. J. (2014). Mother-infant attachment and the intergenerational transmission of posttraumatic stress disorder. *Development and Psychopathology, 26*(1), 41-65. doi:10.1017/s0954579413000515.

Bowlby, J. (1969). *Attachment and loss, Vol. 1: Attachment.* (Vol. 1). New York: Basic Books.

Brand, S. R., Engel, S. M., Canfield, R. L., & Yehuda, R. (2006). The effect of maternal PTSD following in utero trauma exposure on behavior and temperament in the 9-month-old infant. *Annals of the New York Academy of Sciences, 1071*, 454-458. doi:10.1196/annals.1364.041.

Brand, S. R., Schechter, J. C., Hammen, C. L., Brocque, R. L., & Brennan, P. A. (2011). Do adolescent offspring of women with PTSD experience higher levels of chronic and episodic stress? *Journal of Traumatic Stress, 24*(4), 399-404. doi:10.1002/jts.20652.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77-101. doi:10.1191/1478088706qp063oa.

Braun, V., & Clarke, V. (2012). Thematic Analysis In H. E. Cooper, P. M. Camic, D. L. Long, A. T. Panter, D. Rindskopf, & K. J. Sher (Eds.), *APA Handbook of Research Methods in Psychology, Vol. 2: Research designs: Quantitative, qualitative, neuropsychological, and biological* (Vol. 2, pp. 57-71). Washington, DC, US: American Psychological Association .

Brennan, P. A., Le Brocque, R., & Hammen, C. (2003). Maternal depression, parent-child relationships, and resilient outcomes in adolescence. *Journal of the American Academy of Child & Adolescent Psychiatry, 42*(12), 1469-1477.

Brenner, P. S., & DeLamater, J. (2016). Lies, Damned Lies, and Survey Self-Reports? Identity as a Cause of Measurement Bias. *Social Psychology Quarterly, 79*(4), 333-354. doi: 10.1177/0190272516628298.

Breslau, N. (2009). The epidemiology of trauma, PTSD, and other posttrauma disorders. *Trauma Violence & Abuse, 10*(3), 198-210.

Brewin, C. R. (2001). A cognitive neuroscience account of posttraumatic stress disorder and its treatment. *Behaviour Research and Therapy, 39*(4), 373-393.

Brewin, C. R. (2015). Re-experiencing traumatic events in PTSD: new avenues in research on intrusive memories and flashbacks. *European Journal of Psychotraumatolgy, 6*, 27180. doi:10.3402/ejpt.v6.27180.

Brewin, C. R., Andrews, B., & Valentine, J. D. (2000). Meta-analysis of risk factors for posttraumatic stress disorder in trauma-exposed adults. *Journal of Consulting and Clinical Psychology, 68*(5), 748-766. doi:10.1037/0022-006x.68.5.748.

Brewin, C. R., Dalgleish, T., & Joseph, S. (1996). A dual representation theory of posttraumatic stress disorder. *Psychological Review, 103*(4), 670-686.

Brewin, C. R., & Holmes, E. A. (2003). Psychological theories of posttraumatic stress disorder. *Clinical Psychology Review, 23*(3), 339-376.

Brislin, R. W. (1970). Back-translation for cross-cultural research. *Journal of Cross-Cultural Psychology, 1*(3), 185-216.

Brockman, C., Snyder, J., Gewirtz, A., Gird, S. R., Quattlebaum, J., Schmidt, N., . . . DeGarmo, D. (2016). Relationship of service members' deployment trauma, PTSD symptoms, and experiential avoidance to postdeployment family reengagement. *Journal of Family Psychology, 30*(1), 52-62. doi:10.1037/fam0000152.

Bromet, E., Sonnega, A., & Kessler, R. C. (1998). Risk factors for DSM-III-R posttraumatic stress disorder: findings from the National Comorbidity Survey. *American Journal of Epidemiology, 147*(4), 353-361.

Bronfenbrenner, U. (1979). *The Ecology of Human Development: Experiments by Nature and Design*. Massachusetts, MA, United States of America: Harvard University Press.

Brunette, M. F., Richardson, F., White, L., Bemis, G., & Eelkema, R. E. (2004). Integrated family treatment for parents with severe psychiatric disabilities. *Psychiatric Rehabilitaion Journal, 28*(2), 117-180.

Brunn, S. D., & Wilson, M. W. (2013). Cape Town's million plus black township of Khayelitsha: Terrae incognitae and the geographies and cartographies of silence. *Habitat International, 39*, 284-294. doi:10.1016/j.habitatint.2012.10.017.

Bryant, B., Mayou, R., Wiggs, L., Ehlers, A., & Stores, G. (2004). Psychological consequences of road traffic accidents for children and their mothers. *Psychological Medicine, 34*(2), 335-346. doi:10.1017/S0033291703001053.

Bryant, R. A., Edwards, B., Creamer, M., O'Donnell, M., Forbes, D., Felmingham, K. L., . . . Hadzi-Pavlovic, D. (2018). The effect of post-traumatic stress disorder on refugees' parenting and their children's mental health: a cohort study. *The Lancet Public Health, 3*(5), e249-e258. doi:10.1016/s2468-2667(18)30051-3.

Cain, D., Schensul, S., & Mlobeli, R. (2011). Language choice and sexual communication among Xhosa speakers in Cape Town, South Africa: implications for HIV prevention message development. *Health Educucation Research, 26*(3), 476-488. doi:10.1093/her/cyq067.

Carey, P. D., Stein, D. J., Zungu-Dirwayi, N., & Seedat, S. (2003). Trauma and posttraumatic stress disorder in an urban Xhosa primary care population: Prevalence, comorbidity, and service use patterns. *Journal of Nervous and Mental Disease, 191*(1), 230-236.

Carson, J. L., & Parke, R. D. (1996). Reciprocal negative affect in parent-child interactions and children's peer competency. *1996, 67*(5), 2217-2226.

Chemtob, C. M., & Carlson, J. G. (2004). Psychological Effects of Domestic Violence on Children and Their Mothers. *International Journal of Stress Management, 11*(3), 209-226. doi:10.1037/1072-5245.11.3.209.

Chemtob, C. M., Gudiño, O. G., & Laraque, D. (2013). Maternal posttraumatic stress disorder and depression in pediatric primary care: association with child maltreatment and frequency of child exposure to traumatic events. *JAMA Pediatrics, 167*(11), 1011-1018. doi:10.1001/jamapediatrics.2013.2218.

Chemtob, C. M., Novaco, R. W., Hamada, R. S., Gross, D. M., & Smith, G. (1997). Anger regulation deficits in combat-related posttraumatic stress disorder. *Journal of Traumatic Stress, 10*(1), 17-36.

Christie, H., Hamilton-Giachritsis, C., Alves-Costa, F., Tomlinson, M., & Halligan, S. L. (2019). The impact of parental posttraumatic stress disorder on parenting: a systematic review. *European Journal of Psychotraumatology, 10*(1), 1550345. doi:10.1080/20008198.2018.1550345.

Christie, H., Talmon, A., Schäfer, S. K., de Haan, A., Vang, M. L., Haag, K., . . . Brown, E. (2018). The transition to parenthood following a history of childhood maltreatment: a review of the literature on prospective and new parents' experiences. *European Journal of Psychotraumatology, 8*(sup7). doi:10.1080/20008198.2018.1492834.

Cobham, V. E., & McDermott, B. (2014). Perceived parenting change and child posttraumatic stress following a natural disaster. *Journal of Child and Adolescent Psychopharmacology, 24*(1), 18-23. doi: 10.1089/cap.2013.0051.

Cohen, E., Zerach, G., & Solomon, Z. (2011). The implication of combat-induced stress reaction, PTSD, and attachment in parenting among war veterans. *Journal of Family Psychology, 25*(5), 688-698. doi:10.1037/a0024065.

Collins, W. A., Maccoby, E. E., Steinberg, L., Hetherington, E. M., & Bornstein, M. H. (2000). Contemporary research on parenting: The case for nature and nurture. *American Psychologist, 55*(2), 218-232. doi:10.1037/0003-066x.55.2.218.

Compas, B. E., Jaser, S. S., Dunbar, J. P., Watson, K. H., Bettis, A. H., Gruhn, M. A., & Williams, E. K. (2014). Coping and emotion regulation from childhood to early adulthood: Points of convergence and divergence. *Australian Journal of Psychology, 66*(2), 71-81.

Cook, W. L., & Kenny, D. A. (2005). The Actor–Partner Interdependence Model: A model of bidirectional effects in developmental studies. *International Journal of Behavioral Development, 29*(2), 101-109.

Costa, N. M., Weems, C. F., Pellerin, K., & Dalton, R. (2006). Parenting stress and childhood psychopathology: an examination of specificity to internalizing and externalizing symptoms. *Journal of Psychopathology and Behavioral Assessment, 28*(2), 113-122.

Cousineau, T. M., Hobbs, L. M., & Arthur, K. C. (2019). The Role of Compassion and Mindfulness in Building Parental Resilience When Caring for Children With Chronic Conditions: A Conceptual Model. Frontiers in Psychology, 10, 1602. doi:10.3389/fpsyg.2019.01602.

Creech, S. K., & Misca, G. (2017). Parenting with PTSD: a review of research on the influence of PTSD on parent-child functioning in military and veteran families. *Frontiers in Psychology, 8*. doi: 10.3389/fpsyg.2017.01101.

Creech, S. K., Swift, R., Zlotnick, C., Taft, C., & Street, A. E. (2016). Combat exposure, mental health, and relationship functioning among women veterans of the Afghanistan and Iraq wars. *Journal of Family Psychology, 30*(1), 43-51. doi:10.1037/fam0000145.

Creswell, C., Apetroaia, A., Murray, L., & Cooper, P. (2012). Cognitive, affective and behavioural characteristics of mothers with anxiety disorders in the context of child anxiety disorder. *Journal of Abnormal Psychology, 122*(1), 26-38.

Creswell, J. W., & Zhang, W. (2009). The Application of Mixed Methods Designsto Trauma Research. *Journal of Traumatic Stress, 22*(6), 612 - 621. doi:10.1002/jts.20479.

Cross, D., Vance, L. A., Kim, Y. J., Ruchard, A. L., Fox, N., Jovanovic, T., & Bradley, B. (2017). Trauma Exposure, PTSD, and Parenting in a Community Sample of Low-Income, Predominantly African American Mothers and Children. *Psychological Trauma: Theory, Research, Practice, and Policy*. doi:10.1037/tra0000264.

Cuijpers, P., & Stam, H. (2000). Burnout among relatives of psychiatric patients attending psychoeducational support groups. *Psychiatric Services, 51*(3), 375-379.

Darling, N., & Steinberg, L. (1993). Parenting Style as Context: An Integrative Model. *Psychological Bulliten, 113*(3), 487 - 496. doi:10.1037/0033-2909.113.3.487.

Darves-Bornoz, J.-M., Alonso, J., de Girolamo, G., de Graaf, R., Haro, J.-M., Kovess-Masfety, V., . . . Gasquet, I. (2008). Main traumatic events in Europe: PTSD in the European Study of the Epidemiology of Mental Disorders Survey. *Journal of Traumatic Stress, 21*(5), 455-462. doi:10.1002/jts.20357.

Davidson, A. C., & Mellor, D. J. (2001). The adjustment of children of Australian Vietnam veterans: Is there evidence for the transgenerational transmission of the effects of war-related trauma? *Australian and New Zealand Journal of Psychiatry, 35*(3), 345-351. doi:10.1046/j.1440-1614.2001.00897.x.

Davidson, J. R. (2000). Trauma: the impact of post-traumatic stress disorder. *Journal of Psychopharmacology, 14*(2), S5 - S12.

Davies, J., Slade, P., Wright, I., & Stewart, P. (2008). Posttraumatic stress symptoms following childbirth and mothers' perceptions of their infants. *Infant Mental Health Journal, 29*(6), 537-554. doi:10.1002/imhj.20197.

Davis, R. G., Ressler, K. J., Schwartz, A. C., Stephens, K. J., & Bradley, R. G. (2008). Treatment Barriers for Low-Income, Urban African Americans With Undiagnosed

Posttraumatic Stress Disorder. Journal of Traumatic Stress, 21(1), 218-222. doi: 10.1002/jts.20313.

de Jong, K., & Kleber, R. (2007). Emergency conflict related psychosocial interventions in Sierra Leone and Uganda: lessons from Médecins Sans Frontières. *Health Psychology, 12*(3), 485-497.

de Vries, A. P. J., Kassam-Adams, N., Cnaan, A., Sherman-Slate, E., Gallagher, P. R., & Winston, F. K. (1999). Looking Beyond the Physical Injury: Posttraumatic Stress Disorder in Children and Parents After Pediatric Traffic Injury. *Pediatrics, 104*(6), 1293-1299. doi:10.1542/peds.104.6.1293.

Deater-Deckard, K. (1998). Parenting stress and child adjustment: Some old hypotheses and new questions. *Clinical Psychology Science and Practice, 5*(3), 314-332.

Deater-Deckard, K. (2004). *Parenting Stress*. New Haven, CT, US: Yale University Press.

Dekel, R., & Goldblatt, H. (2008). Is there intergenerational transmission of trauma? The case of combat veterans' children. *American Journal of Orthopsychiatry, 78*(3), 281-289. doi:10.1037/a0013955.

DiLillo, D., & Damashek, A. (2003). Parenting Characteristics of Women Reporting a History of Childhood Sexual Abuse. *Child Maltreatment, 8*(4), 319 - 333. doi:10.1177/1077559503257104.

Dixon, L. E., Ahles, E., & Marques, L. (2016). Treating Posttraumatic Stress Disorder in Diverse Settings: Recent Advances and Challenges for the Future. Current Psychiatry Rep, 18(12), 108. doi:10.1007/s11920-016-0748-4.

Donker, T., Griffiths, K. M., Cuijpers, P., & Christensen, H. (2009). Psychoeducation for depression, anxiety and psychological distress: a meta-analysis. *BMC Medicine, 7*, 79. doi:10.1186/1741-7015-7-79.

Eagle, G. T., & Kaminer, D. (2014). Traumatic stress: established knowledge, current debates and new horizons. *South African Journal of Psychology, 45*(1), 22-35. doi:10.1177/0081246314547124.

Ehlers, A., & Clark, D. M. (2000). A Cognitive Model of Posttraumatic Stress Disorder. *Behaviour Research and Therapy, 38*(4), 319 - 345. doi:10.1016/S0005-7967(99)00123-0.

Ehlers, A., Hackmann, A., & Michael, T. (2004). Intrusive re-experiencing in post-traumatic stress disorder: phenomenology, theory, and therapy. *Memory, 12*(4), 403-415.

Ehlers, A., Maercker, A., & Boos, A. (2000). Posttraumatic stress disorder following political imprisonment: the role of mental defeat, alienation, and perceived permanent change. *Journal of Abnormal Psychology, 109*(1), 45-55.

El-Khani, A., Ulph, F., Peters, S., & Calam, R. (2016). Syria: the challenges of parenting in refugee situations of immediate displacement. *Intervention: Journal of Mental Health and Psychosocial Support in Conflict Affected Areas, 14*(2), 99-113.

El-Khani, A., Ulph, F., Peters, S., & Calam, R. (2018). Syria: refugee parents' experiences and need for parenting support in camps and humanitarian settings. *Vulnerable Children and Youth Studies, 13*(1), 19-29. doi:10.1080/17450128.2017.1372651.

Elgar, F. J., Waschbusch, D. A., Dadds, M. R., & Sigvaldason, N. (2007). Development and validation of a short form of the Alabama Parenting Questionnaire. *Journal of Child and Family Studies, 16*(1), 243-259.

England, M. J., & Sim, L. J. (2009). *Depression in parents, parenting, and children: Opportunities to improve identification, treatment, and prevention.* Washington, DC, US: National Academies Press .

Epifanio, M. S., Genna, V., De Luca, C., Roccella, M., & La Grutta, S. (2015). Paternal and Maternal Transition to Parenthood: The Risk of Postpartum Depression and Parenting Stress. *Pediatric Reports, 7*(2), 5872. doi:10.4081/pr.2015.5872.

Erdmans, M. P., & Black, T. (2008). What they tell you to forget: from child sexual abuse to adolescent motherhood. *Qualitative Health Research, 18*(8), 77-89.

Ertl, V., Pfeiffer, A., Saile, R., Schauer, E., Elbert, T., & Neuner, F. (2011). Validation of a mental health assessment in an African conflict population. International Perspectives in Psychology: Research, Practice, Consultation, 1(S), 19-27. doi:10.1037/2157-3883.1.S.19.

Evenson, E., Rhodes, J., Feigenbaum, J., & Solly, A. (2009). The experiences of fathers with psychosis. *Journal of Mental Health, 17*(6), 629-642. doi:10.1080/09638230701506259.

Fava, N. M., Simon, V. A., Smith, E., Khan, M., Kovacevic, M., Rosenblum, K. L., . . . Muzik, M. (2016). Perceptions of general and parenting-specific posttraumatic change among postpartum mothers with histories of childhood maltreatment. *Child Abuse and Neglect, 56*(1), 20-29.

Fazel, M., Wheeler, J., & Danesh, J. (2005). Prevalence of serious mental disorder in 7000 refugees resettled in western countries: a systematic review. *The Lancet, 365*(9467), 1309-1314.

Fenig, S., Levav, I., Kohn, R., & Yelin, N. (1993). Telephone vs face-to-face interviewing in a community psychiatric survey. *American Journal of Public Health, 83*(6), 896-898.

Ferguson, B. (2011). *Children of parents with mental illness: Parental disclosure, children's illness beliefs and the development of a shared understanding of mental illness in the family*. Unpublished Doctoral Dissertation The University of Adelaide. Adelaide, Australia .

Field, N. P., Muong, S., & Sochanvimean, V. (2013). Parental styles in the intergenerational transmission of trauma stemming from the Khmer Rouge regime in Cambodia. *American Journal of Orthopsychiatry, 83*(4), 483-494. doi:10.1111/ajop.12057.

Figley, C. R. (1995). Compassion fatigue as secondary traumatic stress disorder: an overview. In C. R. Figley (Ed.), *Compassion Fatigue: Coping with Secondary Traumatic Stress Disorder in Those Who treat The Traumatized* (pp. 1-21). New York, NY, US: Brunner/Mazel.

Foa, E. B., Cashman, L., Jaycox, L., & Perry, K. (1997). The validation of a self-report measure of posttraumatic stress disorder: the Posttraumatic Diagnostic Scale. *Psychological Assessment, 9*(4), 445 - 451.

Foa, E. B., Huppert, J. D., & Cahill, S. P. (2006). Emotional Processing Theory: An update. In B. O. Rothbaum (Ed.), *Pathological anxiety: Emotional processing in etiology and treatment* (pp. 3-24). New York, NY, United States The Guilford Press.

Foa, E. B., & Kozak, M. J. (1986). Emotional processing of fear: Exposure to corrective information. *Psychological Bulliten, 99*(1), 20-35. doi:10.1037/0033-2909.99.1.20.

Foa, E. B., Riggs, D. S., Dancu, C. V., & Rothbaum, B. O. (1993). Reliability and validity of a brief instrument for assessing post-traumatic stress disorder. *Journal of Traumatic Stress, 6*(4), 459-473.

Foa, E. B., & Rothbaum, B. O. (1998). *Treating the trauma of rape. Cognitive-behavior therapy for PTSD.* New York: Guilford.

Fodor, K. E., Unterhitzenberger, J., Chou, C. Y., Kartal, D., Leistner, S., Milosavljevic, M., . . . Alisic, E. (2014). Is traumatic stress research global? A bibliometric analysis. *European Journal of Psychotraumatology, 5*. doi:10.3402/ejpt.v5.23269.

Forcada-Guex, M., Borghini, A., Pierrehumbert, B., Ansermet, F., & Muller-Nix, C. (2011). Prematurity, maternal posttraumatic stress and consequences on the mother–infant

relationship. *Early Human Development, 87*(1), 21-26. doi:10.1016/j.earlhumdev.2010.09.006.

Frick, P. J. (1991). *Alabama parenting questionnaire*. Alabama, US: University of Alabama.

Fukunishi, I. (1998). Posttraumatic stress symptoms and depression in mothers of children with severe burn injuries. *Psychological Reports, 83*(1), 331-335. doi:10.2466/PR0.83.5.331-335.

Galovski, T., & Lyons, J. A. (2004). Psychological sequelae of combat violence: A review of the impact of PTSD on the veteran's family and possible interventions. *Aggression and Violent Behavior, 9*(5), 477-501. doi:10.1016/S1359-1789(03)00045-4.

Gardner, F. (2000). Methodological issues in the direct observation of parent–child interaction: Do observational findings reflect the natural behavior of participants? *Clinical Child and Family Psychology Review, 3*(3), 185-198.

Gerard, A. (1994). *Parent-Child Relationship Inventory: Manual.* . Los Angeles, LA, US: Western Psychological Services .

Gewirtz, A. H., Polusny, M. A., DeGarmo, D. S., Khaylis, A., & Erbes, C. R. (2010). Posttraumatic stress symptoms among National Guard soldiers deployed to Iraq: Associations with parenting behaviors and couple adjustment. *Journal of Consulting and Clinical Psychology, 78*(5), 599-610. doi:10.1037/a0020571.

Ginsburg, G. S., Grover, R. L., Cord, J. J., & Ialongo, N. (2006). Observational measures of parenting in anxious and nonanxious mothers: does type of task matter? *Journal of Clinical Child and Adolescent Psychology, 35*(2), 323-328.

Gladstone, B. M., Boydell, K. M., Seeman, M. V., & McKeever, P. D. (2011). Children's experiences of parental mental illness: a literature review. *Early Intervention Psychiatry, 5*(4), 271-289. doi:10.1111/j.1751-7893.2011.00287.x.

Goodman, S. H., Rouse, M. H., Connell, A. M., Broth, M. R., Hall, C. M., & Heyward, D. (2011). Maternal Depression and Child Psychopathology: A Meta-Analytic Review. *Clinical Child and Family Psychology Review, 14*(1), 1 - 27. doi:10.1007/s10567-010-0080-1.

Hafstad, G. S., Gil-Rivas, V., Kilmer, R. P., & Raeder, S. (2010). Parental adjustment, family functioning, and posttraumatic growth among Norwegian children and adolescents following a natural disaster. *American Journal of Orthopsychiatry, 80*(2), 248-257. doi: 10.1111/j.1939-0025.2010.01028.x.

Halligan, S. L., Michael, T., Clark, D. M., & Ehlers, A. (2003). Posttraumatic Stress Disorder Following Assault: The Role of Cognitive Processing, Trauma Memory, and Appraisals. *Journal of Consulting and Clinical Psychology, 71*(3), 419 - 431. doi:10.1037/0022-006X.71.3.419.

Hawker, S., Payne, S., Kerr, C., Hardey, M., & Powell, J. (2002). Appraising the Evidence: Reviewing Disparate Data Systematically. *Qualitative Health Research, 12*(9), 1284 - 1299. doi:10.1177/1049732302238251.

Heckathorn, D. D. (2011). Snowball Versus Respondent-Driven Sampling. *Sociological Methodology, 41*(1), 355-366. doi:10.1111/j.1467-9531.2011.01244.x.

Hershkowitz, M., Dekel, R., Fridkin, S., & Freedman, S. (2017). Posttraumatic Stress Disorder, Parenting, and Marital Adjustment among a Civilian Population. *Frontiers in Psychology, 8*, 1655. doi:10.3389/fpsyg.2017.01655.

Hiller, R. M., Meiser-Stedman, R., Lobo, S., Creswell, C., Fearon, P., Ehlers, A., Murray, L., & Halligan, S. L. (2017a). A longitudinal investigation of the role of parental responses in predicting children's post-traumatic distress. *The Journal of Child Psychology and Psychiarty, 59*(7), 781-789. doi: 10.1111/jcpp.12846.

Hiller, R. M., Creswell, C., Meiser-Stedman, R., Lobo, S., Cowdrey, F., Lyttle, M. D., Ehlers, A., & Halligan, S. (2018). A longitudinal examination of the relationshipbetween trauma-related cognitive factors and internalisingand externalising psychopathology in physically injured children. *Journal of Abnormal Child Psychology, 47*(11), 683-693.

Hiller, R. M., Halligan, S., Tomlinson, M., Stewart, J., Skeen, S., & Christie, H. (2017b). Post-trauma coping in the context of significant adversity: a qualitative study of young people living in an urban township in South Africa. *BMJ Open, 7*(e016560), 1-10. doi:10.1136/.

Hiller, R. M., Halligan, S. L., Ariyanayagam, R., Dalgleish, T., Smith, P., Yule, W., . . . Meiser-Stedman, R. (2016). Predictors of posttraumatic stress symptom trajectories in parents of children exposed to motor vehicle collisions. *Journal of Pediatric Psychology, 41*(1), 108-116. doi:10.1093/jpepsy/jsv068.

Hinshaw, S. P. (2004). Parental mental disorder and children's functioning: silence and communication, stigma and resilience. *Journal of Clinical Child Adolescent Psychology, 33*(2), 400-411. doi:10.1207/s15374424jccp3302_22.

Hollingshead, A. B., & Redlich, F. C. (1958). Social class and mental illness: A community study. New York: Wiley.

Horesh, D., & Brown, A. D. (2018). Editorial: Post-traumatic Stress in the Family. *Frontiers in Psychology, 9*(40). doi:10.3389/fpsyg.2018.00040.

Horowitz, M. J. (1976). *Stress Response Syndromes* New York, NY, United States: Jason Aronson.

Horowitz, M. J. (1986). Stress-response syndromes: a review of posttraumatic and adjustment disorders. *Hospital & Community Psychiatry, 37*(3), 241-249.

Hungerbuehler, I., Vollrath, M. E., & Landolt, M. A. (2011). Posttraumatic growth in mothers and fathers of children with severe illnesses. J Health Psychol, 16(8), 1259-1267. doi:10.1177/1359105311405872.

Ionio, C., & Di Blasio, P. (2014). Post-traumatic stress symptoms after childbirth and early mother–child interactions: An exploratory study. *Journal of Reproductive and Infant Psychology, 32*(2), 163-181. doi:10.1080/02646838.2013.841880.

Jobe-Shields, L., Swiecicki, C. C., Fritz, D. R., Stinnette, J. S., & Hanson, R. F. (2016). Posttraumatic stress and depression in the nonoffending caregivers of sexually abused children: Associations with parenting practices. *Journal of Child Sexual Abuse: Research, Treatment, & Program Innovations for Victims, Survivors, & Offenders, 25*(1), 110-125. doi:10.1080/10538712.2015.1078867.

Jones, T. L., & Prinz, R. J. (2005). Potential roles of parental self-efficacy in parent and child adjustment: A review. *Clinical Psychology Review, 25*(3), 341 - 363. doi:10.1016/j.cpr.2004.12.004.

Jordan, B. K., Marmar, C. R., Fairbank, J. A., Schlenger, W. E., Kulka, R. A., Hough, R. L., & Weiss, D. S. (1992). Problems in families of male Vietnam veterans with posttraumatic stress disorder. *Journal of Consulting and Clinical Psychology, 60*(6), 916-926. doi:10.1037/0022-006X.60.6.916.

Jorm, A. F. (2000). Mental health literacy. Public knowledge and beliefs about mental disorders. *The British Journal of Psychiatry, 177*(5), 396-401.

Jorm, A. F. (2015). Why we need the concept of "mental health literacy". *Health Communication, 30*(12), 1166-1168.

Juth, V., Silver, R. C., Seyle, D. C., Widyatmoko, C. S., & Tan, E. T. (2015). Post-Disaster Mental Health Among Parent-Child Dyads After a Major Earthquake in Indonesia.

Journal of Abnormal Child Psychology, 43(7), 1309-1318. doi:10.1007/s10802-015-0009-8.

Kassam-Adams, N., Bakker, A., Marsac, M. L., Fein, J. A., & Winston, F. K. (2015). Traumatic Stress, Depression, and Recovery: Child and Parent Responses After Emergency Medical Care for Unintentional Injury. *Pediatric Emergency Care, 31*(11), 737-742. doi:10.1097/pec.0000000000000595.

Kassam-Adams, N., Fleisher, C. L., & Winston, F. K. (2009). Acute stress disorder and posttraumatic stress disorder in parents of injured children. *Journal of Traumatic Stress, 22*(4), 294-302. doi:10.1002/jts.20424.

Kawakami, N., Tsuchiya, M., Umeda, M., Koenen, K. C., Kessler, R. C., & World Mental Health Survey, J. (2014). Trauma and posttraumatic stress disorder in Japan: results from the World Mental Health Japan Survey. *Journal Psychiatric Research, 53*, 157-165. doi:10.1016/j.jpsychires.2014.01.015.

Kazak, A. E., Stuber, M. L., Barakat, L. P., Meeske, K., Guthrie, D., & Meadows, A. T. (1998). Predicting posttraumatic stress symptoms in mothers and fathers of survivors of childhood cancers. *Journal of the American Academy of Child & Adolescent Psychiatry, 37*(8), 823-831. doi:10.1097/00004583-199808000-00012.

Keane, T. M., Zimering, R. T., & Caddell, J. M. (1985). A behavioral formulation of Postraumatic Stress Disorder in Vietnam veterans. *The Behaviour Therapist, 8*(1), 9-12.

Kearns, M. C., Ressler, K. J., Zatzick, D., & Rothbaum, B. O. (2012). Early interventions for PTSD: a review. *Depression and Anxiety, 29*(10), 833-842. doi:10.1002/da.21997.

Kellerman, N. P. (2001). Psychopathology in children of Holocaust survivors: A review of the research literature. *The Isreal Journal of Psychiatry and Related Sciences, 38*(1), 36-46.

Kellerman, N. P. F. (2001). Perceived Parental Rearing Behavior in Children of Holocaust Survivors. *Israel Journal of Psychiatry and Related Sciences, 38*(1), 58 - 68.

Kelley, M. L., Self-Brown, S., Le, B., Bosson, J. V., Hernandez, B. C., & Gordon, A. T. (2010). Predicting posttraumatic stress symptoms in children following Hurricane Katrina: A prospective analysis of the effect of parental distress and parenting practices. *Journal of Traumatic Stress, 23*(5), 582-590. doi:10.1002/jts.20573.

Kendziora, K. T., & O'Leary, S. G. (1993). Dysfunctional parenting as a focus for prevention and treatment of child behavior problems. *Advances in Clinical Child Psychology, 15*, 175 - 206.

Kent, L., King, H., & Cochrane, R. (2000). Maternal and child psychological sequelae in paediatric burn injuries. *Burns, 26*(4), 317 - 322. doi:10.1016/S0305-4179(99)00172-2.

Kessler, R. C., Aguilar-Gaxiola, S., Alonso, J., Benjet, C., Bromet, E. J., Cardoso, G., . . . Koenen, K. C. (2017). Trauma and PTSD in the WHO World Mental Health Surveys. *European Journal of Psychotraumatology, 8*(sup5), 1353383. doi:10.1080/20008198.2017.1353383.

Kessler, R. C., Sonnega, A., Bromet, E., Hughes, M., & Nelson, C. B. (1995). Posttraumatic Stress Disorder in the National Comorbidity Survey. *Archives of General Psychiatry, 52*(12), 1048 - 1060. doi:10.1001/archpsyc.1995.03950240066012.

Krysinska, K., & Lester, D. (2010). Post-traumatic stress disorder and suicide risk: a systematic review. *Archives of Suicide Research, 14*(1), 1-23. doi:10.1080/13811110903478997.

Lambert, J. E., Engh, R., Hasbun, A., & Holzer, J. (2012). Impact of posttraumatic stress disorder on the relationship quality and psychological distress of intimate partners: a

meta-analytic review. *Journal of Family Psychology, 26*(5), 729-737. doi:10.1037/a0029341.

Landolt, M. A., Boehler, U., Schwager, C., Schallberger, U., & Nuessli, R. (1998). Post-traumatic stress disorder in paediatric patients and their parents: An exploratory study. *Journal of Paediatrics and Child Health, 34*(6), 539 - 543. doi:10.1046/j.1440-1754.1998.00303.x.

Landolt, M. A., Vollrath, V., Ribi, K., Gnehm, H. E., & Sennhauser, F. H. (2003). Incidence and associations of parental and child posttraumatic stress symptoms in pediatric patients. *Journal of Child Psychology and Psychiatry, 44*(8), 1199-1207. doi:10.1111/1469-7610.00201.

Lauterbach, D., Bak, C., Reiland, S., Mason, S., Lute, M. R., & Earls, L. (2007). Quality of parental relationships among persons with a lifetime history of posttraumatic stress disorder. *Journal of Traumatic Stress, 20*(2), 161-172. doi:10.1002/jts.20194.

Le Brocque, R. M., Hendrikz, J., & Kenardy, J. A. (2010). Parental response to child injury: Examination of parental posttraumatic stress symptom trajectories following child accidental injury. *Journal of Pediatric Psychology, 35*(6), 646-655. doi:10.1093/jpepsy/jsq035.

Leen-Feldner, E. W., Feldner, M. T., Bunaciu, L., & Blumenthal, H. (2011). Associations between parental posttraumatic stress disorder and both offspring internalizing problems and parental aggression within the National Comorbidity Survey-Replication. *Journal of Anxiety Disorders, 25*(2), 169-175. doi:10.1016/j.janxdis.2010.08.017.

Leen-Feldner, E. W., Feldner, M. T., Knapp, A., Bunaciu, L., Blumenthal, H., & Amstadter, A. B. (2013). Offspring psychological and biological correlates of parental

posttraumatic stress: Review of the literature and research agenda. *Clinical Psychology Review, 33*(8), 1106-1133. doi:10.1016/j.cpr.2013.09.001.

Liberzon, I., & Sripada, C. S. (2007). The functional neuroanatomy of PTSD: a critical review. *Progress in Brain Research, 167,* 151-169. doi: 10.1016/S0079-6123(07)67011-3.

Lieberman, L., Liu, H., Huggins, A. A., Katz, A. C., Zvolensky, M. J., & Shankman, S. A. (2016). Comparing the validity of informant and self-reports of personality using laboratory indices of emotional responding as criterion variables. *Psychophysiology, 53*(9), 1386-1397. doi:10.1111/psyp.12680.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Beverly Hills, US: Sage.

Litz, B. T., Gray, M. J., Bryant, R. A., & Adler, A. B. (2002). Early intervention for trauma: Current status and future directions. *Clinical Psychology: Science and Practice, 9*(2), 112-134.

Lovejoy, M. C., Graczyk, P. A., O'Hare, E., & Neuman, G. (2000). Maternal depression and parenting behavior: A meta-analytic review. *Clinical Psychology Review, 20*(5), 561-592. doi:http://dx.doi.org/10.1016/S0272-7358(98)00100-7.

Lovibond, P. F., & Lovibond, S. H. (1995). The Structure Of Negative Emotional States: Comparison Of The Depression Anxiety Stress Scales (Dass) With The Beck Depression And Anxiety Inventories. *Behaviour Research and Therapy, 33*(3), 335 - 343.

Lund, C., Breen, A., Flisher, A. J., Kakuma, R., Corrigall, J., Joska, J. A., . . . Patel, V. (2010). Poverty and common mental disorders in low and middle income countries: A systematic review. Social Science and Medicine, 71(3), 517-528. doi: 10.1016/j.socscimed.2010.04.027

Marsanic, B. V., Margetic, A. B., Jukic, V., Matko, V., & Grgic, V. (2014). Self-reported emotional and behavioral symptoms, parent-adolescent bonding and family functioning in clinically referred adolescent offspring of Croatian PTSD war veterans. *European Child Adolescent Psychiatry, 23*(5), 295-306. doi:10.1007/s00787-013-0462-2.

Maršanić, V. B., Margetić, B. A., Bulić, S. O., Đuretić, I., Kniewald, H., Jukić, T., & Paradžik, L. (2015). Non-suicidal self-injury among psychiatric outpatient adolescent offspring of Croatian posttraumatic stress disorder male war veterans: Prevalence and psychosocial correlates. *International Journal of Social Psychiatry, 61*(3), 265-274. doi:10.1177/0020764014541248.

Martin, L., Fincham, D., & Kagee, A. (2009). Screening for HIV-related PTSD: Sensitivity and specificity of the 17-item Posttraumatic Stress Diagnostic Scale (PDS) in identifying HIV-related PTSD among a South African sample. African Journal of Psychiatry, 12(4). doi:10.4314/ajpsy.v12i4.49041.

Mayou, R., Bryant, B., & Ehlers, A. (2001). Prediction of psychological outcomes one year after a motor vehicle accident. *American Journal of Psychiatry, 158*(8), 1231-1238.

McDonald, S., Slade, P., Spiby, H., & Iles, J. (2011). Post-traumatic stress symptoms, parenting stress and mother-child relationships following childbirth and at 2 years postpartum. *Journal of Psychosomatic Obstetrics & Gynecology, 32*(3), 141-146. doi:10.3109/0167482X.2011.596962.

McFarlane, A. (2004). *Multifamily groups in thetreatment of severe psychiatric disorders*. New York, NY, US: Guilford Press.

McFarlane, W. R., Hornby, H., Dixon, L., & McNary, S. (2002). Psychoeducational multifamily groups: Research and implementation in the United States. In H. P. Lefley & D. L. Johnson (Eds.), *Family interventions in mental illness: International*

perspectives (pp. 43-60). Westport, CT, US: Praeger Publishers/Greenwood Publishing Group.

McGuire, R., Hiller, R. M., Cobham, V., Haag, K., & Halligan, S. (2019). A mixed-methods investigation of parentchild posttrauma discussion and the effects of encouraging engagement. *European Journal of Psychotraumatology, 10*(1), 1-12.

McLeod, B. D., Wood, J. J., & Weisz, J. R. (2007). Examining the association between parenting and childhood anxiety: a meta-analysis. *Clinical Psychology Review, 27*(2), 155-172.

Meiser-Stedman, R., Smith, P., Glucksman, E., Yule, W., & Dalgleish, T. (2008). The posttraumatic stress disorder diagnosis in preschool- and elementary school-age children exposed to motor vehicle accidents. *American Journal of Psychiatry, 165*(10), 1326-1337. doi:10.1176/appi.ajp.2008.07081282.

Metcalfe, A., Coad, J., Plumridge, G. M., Gill, P., & Farndon, P. (2008). Family communication between children and their parents about inherited genetic conditions: a meta-synthesis of the research. *European Journal Of Human Genetics, 16*, 1193. doi:10.1038/ejhg.2008.84.

Miklowitz, D. J., & Goldstein, M. J. (1997). *Bipolar disorder: A family-focused treatment approach*. New York, NY, US: Guilford Press.

Milner, J. S. (1994). Assessing physical child abuse risk: The Child Abuse Potential Inventory. *Clinical Psychology Review, 14*(1), 547-583.

Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., & Group, T. P. (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *PLos Medicine, 6*(7), e1000097. doi:10.1371/journal.pmed.1000097.

Morris, A., Gabert-Quillen, C., & Delahanty, D. (2012). The association between parent PTSD/depression symptoms and child PTSD symptoms: A meta-analysis. *Journal of Pediatric Psychology, 37*(10), 1076-1088. doi:10.1093/jpepsy/jss091.

Morrow, S. L. (2005). Quality and trustworthiness in qualitative research in counseling psychology. *Journal of Counseling Psychology, 52*(2), 250-260. doi:10.1037/0022-0167.52.2.250.

Mowrer, O. H. (1960). *Learning theory and behavior*. Hoboken, NJ, United States: John Wiley & Sons Inc.

Nicholson, J., Biebel, K., Katz-Leavy, J., & Williams, V. F. (2004). The prevalence of parenthood in adults with mental illness: Implications for state and federal policymakers, programs, and providers. In R. W. Manderscheid & M. J. Henderson (Eds.), *Center for Mental Health Services. "Mental Health, United States, 2002"* (pp. 120-137). Rockville, MD, US: Substance Abuse and Mental Health Services Administration.

Nugent, N. R., Ostrowski, S., Christopher, N. C., & Delahanty, D. L. (2007). Parental posttraumatic stress symptoms as a moderator of child's acute biological response and subsequent posttraumatic stress symptoms in pediatric injury patients. *Journal of Pediatric Psychology, 32*(3), 309-318. doi:10.1093/jpepsy/jsl005.

O'Connor, T. G. (2002). Annotation: The'effects'of parenting reconsidered: findings, challenges, and applications. *Journal of Child Psychology and Psychiatry, 43*(2), 555 - 572. doi:10.1111/1469-7610.00046.

Odenwald, M., Lingenfelder, B., Schauer, M., Neuner, F., Rockstroh, B., Hinkel, H., & Elbert, T. (2007). Screening for posttraumatic stress disorder among Somali ex-combatants: a validation study. Confl Health, 1, 10. doi:10.1186/1752-1505-1-10.

Orth, U., & Wieland, E. (2006). Anger, hostility, and posttraumatic stress disorder in trauma-exposed adults: a meta-analysis. *Journal of Consulting and Clinical Psychology, 74*(4), 698-706.

Ozer, E. J., Best, S. R., Lipsey, T. L., & Weiss, D. S. (2008). Predictors of posttraumatic stress disorder and symptoms in adults: A meta-analysis. *Psychological Trauma: Theory, Research, Practice, and Policy, S*(1), 3-36. doi:10.1037/1942-9681.s.1.3.

Padilla-Walker, L. M. (2008). Domain-appropriateness of maternal discipline as a predictor of adolescents' positive and negative outcomes. *Journal of Family Psychology, 22*(3), 456-464.

Parfitt, Y. M., & Ayers, S. (2009). The effect of post-natal symptoms of post-traumatic stress and depression on the couple's relationship and parent-baby bond. *Journal of Reproductive and Infant Psychology, 27*(2), 127-142. doi:10.1080/02646830802350831.

Patel, V., & Prince, M. (2010). Global mental health: a new global health field comes of age. *JAMA, 303*(19), 1976-1977. doi:10.1001/jama.2010.616.

Patton, M. Q. (1990). *Qualitative evaluation and research methods* (2 ed.). Thousand Oaks, CA, US: Sage Publications Inc.

Patton, M. Q. (2002). *Qualitative research and evaluation methods* (3 ed.). Thousand Oaks, CA, US: Sage Publications Inc.

Pereira, A. I., Barros, L., Mendonça, D., & Muris, P. (2013). The Relationships Among Parental Anxiety, Parenting, and Children's Anxiety: The Mediating Effects of Children's Cognitive Vulnerabilities. *Journal of Child and Family Studies, 23*(2), 399-409. doi:10.1007/s10826-013-9767-5.

Pietrzak, R. H., Goldstein, R. B., Southwick, S. M., & Grant, B. F. (2012). Physical health conditions associated with posttraumatic stress disorder in U.S. older adults: results

from wave 2 of the National Epidemiologic Survey on Alcohol and Related Conditions. *Journal of American Geriatrics Society, 60*(2), 296-303. doi:10.1111/j.1532-5415.2011.03788.x.

Picoraro, J. A., Womer, J. W., Kazak, A. E., & Feudtner, C. (2014). Posttraumatic growth in parents and pediatric patients. Journal of Palliative Medicine, 17(2), 209-218. doi:10.1089/jpm.2013.0280.

Pinquhart, M. (2017). Associations of parenting dimensions and styles with externalizing problems of children and adolescents: An updated meta-analysis. *Developmental Psychology, 53*(5), 873-932. doi: 10.1037/dev0000295.

Pope, C., & Mays, N. (2006). *Qualitative Research in Health Care* (3rd ed.). Malden, Massachusetts: Blackwell Publishing.

Purgato, M., & Olff, M. (2015). Global mental health and trauma: the current evidence and the long road ahead. *European Journal of Psychotraumatology, 6*, 30120. doi:10.3402/ejpt.v6.30120.

Richters, J. (1992). Depressed mothers as informants about their children: A critical review of the evidence for distortion. *Psychological Bullietn, 112*(1), 485-499.

Robinson, O. C. (2013). Sampling in Interview-Based Qualitative Research: A Theoretical and Practical Guide. *Qualitative Research in Psychology, 11*(1), 25-41. doi:10.1080/14780887.2013.801543.

Rolfe, G. (2006). Validity, trustworthiness and rigour: quality and the idea of qualitative research. *Journal of Advanced Nursing, 53*(3), 304-310.

Rose, S. C., Bisson, J., Churchill, R., & Wessely, S. (2002). Psychological debriefing for preventing post traumatic stress disorder (PTSD). *Cochrane Database of Systematic Reviews*. doi:10.1002/14651858.Cd000560.

Rosenheck, R., & Nathan, P. (1985). Secondary traumatization in children of Vietnam veterans. *Hospital & Community Psychiatry, 36*(5), 538-539.

Rosenman, R., Tennekoon, V., & Hill, L. G. (2011). Measuring bias in self-reported data. *International Journal Behaviour Healthcare Research, 2*(4), 320-332. doi:10.1504/IJBHR.2011.043414.

Ruane, I. (2010). Obstacles to the utilisation of psychological resources in a South African township community. *South African Journal of Psychology, 40*(2), 214-225.

Ruscio, A. M., Weathers, F. W., King, L. A., & King, D. W. (2002). Male war-zone veterans' perceived relationships with their children: The importance of emotional numbing. *Journal of Traumatic Stress, 15*(5), 351-357. doi:10.1023/A:1020125006371.

Salloum, A., Stover, C. S., Swaidan, V. R., & Storch, E. A. (2015). Parent and child PTSD and parent depression in relation to parenting stress among trauma-exposed children. *Journal of Child and Family Studies, 24*(5), 1203-1212. doi:10.1007/s10826-014-9928-1.

Salmon, K., & Bryant, R. A. (2002). Posttraumatic stress disorder in children: The influence of developmental factors. *Clinical Psychology Review, 22*(2), 163-188.

Samper, R. E., Taft, C. T., King, D. W., & King, L. A. (2004). Posttraumatic Stress Disorder symptoms and parenting satisfaction among a national sample of male Vietnam veterans. *Journal of Traumatic Stress, 17*(4), 311-315.

Santiago, C. D., Kaltman, S., & Miranda, J. (2013). Poverty and mental health: how do low-income adults and children fare in psychotherapy? J Clin Psychol, 69(2), 115-126. doi:10.1002/jclp.21951.

Saraceno, B., & Barbui, C. (1997). Poverty and mental illness. Canadian Journal of Psychiatry, 42, 285e290.

Saraceno, B., Levav, I., & Kohn, R. (2005). The public mental health significance of

research on socio-economic factors in schizophrenia and major depression.
World Psychiatry, 4, 181e185.

Sareen, J. (2014). Posttraumatic stress disorder in adults: impact, comorbidity, risk factors, and treatment. *Canadian Journal of Psychiatry, 59*(9), 460-467.

Sareen, J., Cox, B. J., Stein, M. B., Afifi, T. O., Fleet, C., & Asmundson, G. J. (2007). Physical and mental comorbidity, disability, and suicidal behavior associated with posttraumatic stress disorder in a large community sample. *Psychosomatic Medicine, 69*(3), 242-248. doi:10.1097/PSY.0b013e31803146d8.

Scharf, M. (2007). Long-term effects of trauma: Psychosocial functioning of the second and third generation of Holocaust survivors. *Development and Psychopathology, 19*(2), 603-622.

Schechter, D. S., Moser, D. A., Reliford, A., McCaw, J. E., Coates, S. W., Turner, J. B., . . . Willheim, E. (2015). Negative and distorted attributions towards child, self, and primary attachment figure among posttraumatically stressed mothers: What changes with Clinician Assisted Videofeedback Exposure Sessions (CAVES). *Child Psychiatry and Human Development, 46*(1), 10-20. doi:10.1007/s10578-014-0447-5.

Schechter, D. S., Suardi, F., Manini, A., Cordero, M. I., Rossignol, A. S., Merminod, G., . . . Serpa, S. R. (2015). How do maternal PTSD and alexithymia interact to impact maternal behavior? *Child Psychiatry and Human Development, 46*(3), 406-417. doi:10.1007/s10578-014-0480-4.

Schechter, D. S., Willheim, E., Hinojosa, C., Scholfield-Kleinman, K., Turner, J. B., McCaw, J., . . . Myers, M. M. (2010). Subjective and objective measures of parent-child relationship dysfunction, child separation distress, and joint attention. *Psychiatry, 73*(2), 130-144. doi:10.1521/psyc.2010.73.2.130.

Scheeringa, M. S., & Zeanah, C. H. (2001). A relational perspective on ptsd in early childhood. *Journal of Traumatic Stress, 14*(4), 799-815.

Schutt, R. K. (1996). *Investigating the Social World: The Process and Practice of Research* (Vol. 1st Ed). London: Thousands Oaks, Calif: Pine Forge Press.

Sears, R. R., Maccoby, E. E., & Levin, H. (1957). *Patters of Child Rearing* (First ed.). United States of America: Stanford University Press.

Shalev, A., Liberzon, I., & Marmar, C. (2017). Post-Traumatic Stress Disorder. *New England Journal Medicine, 376*(25), 2459-2469. doi:10.1056/NEJMra1612499.

Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information, 22*(2), 63-75. doi:10.3233/efi-2004-22201.

Sherman, M. D. (2003). The SAFE Program: A family psychoeducational curriculum developed in a Veterans Affairs medical center. *Professional Psychology: Research and Practice, 34*(1), 42-48. doi:10.1037/0735-7028.34.1.42.

Sherman, M. D., Fischer, E. P., Owen, R. R., Jr., Lu, L., & Han, X. (2015). Multi-family Group Treatment for Veterans with Mood Disorders: A Pilot Study. *Couple Family Psychology, 4*(3), 136-149. doi:10.1037/cfp0000040.

Sherman, M. D., Gress Smith, J. L., Straits-Troster, K., Larsen, J. L., & Gewirtz, A. (2016). Veterans' perceptions of the impact of PTSD on their parenting and children. *Psychological Services, 13*(4), 401-410. doi:10.1037/ser0000101.

Sherman, M. D., Larsen, J., Straits-Troster, K., Erbes, C., & Tassey, J. (2015). Veteran-child communication about parental PTSD: A mixed methods pilot study. *Journal of Family Psychology, 29*(4), 595-603. doi:10.1037/fam0000124.

Silverman, W. K., & Albano, A. (1996). *The Anxiety Disorders Interview Schedule for Children–IV (Child and parent versions)*. San Antonio, TX, US: Psychological Corporation.

Sloan, D. M., Bovin, M. J., & Schnurr, P. P. (2012). Review of group treatment for PTSD. *The Journal of Rehabilitation Research and Development, 49*(5). doi:10.1682/jrrd.2011.07.0123.

Solomon, Z., Debby-Aharon, S., Zerach, G., & Horesh, D. (2011). Marital adjustment, parental functioning, and emotional sharing in war veterans. *Journal of Family Issues, 32*(1), 127-147. doi:10.1177/0192513X10379203.

Sorsdahl, K. R., & Stein, D. J. (2010). Knowledge of and stigma associated with mental disorders in a South african community sample. *Journal of Nervous and Mental Disease, 198*(10), 742-747.

Stadler, J. (2003). Rumor, Gossip and Blame: Implications for HIV/AIDS Prevention in The South African Lowveld. *AIDS Education and Prevention, 15*(4), 357-368. doi:10.1521/aeap.15.5.357.23823.

Steinberg, A. M., Brymer, M. J., Decker, K. B., & Pynoos, R. S. (2004). The University of California at Los Angeles Post-traumatic Stress Disorder Reaction Index. *Current Psychiatry Reports, 6*(2), 96-100.

Steyn, R., Vawda, N., Wyatt, G. E., Williams, J. K., & Madu, S. N. (2013). Posttraumatic stress disorder diagnostic criteria and suicidal ideation in a South African Police sample. African Journal of Psychiatry, 16(1). doi:10.4314/ajpsy.v16i1.3.

Stover, C. S., Hahn, H., Im, J. J. Y., & Berkowitz, S. (2010). Agreement of parent and child reports of trauma exposure and symptoms in the early aftermath of a traumatic event. *Psychological Trauma: Theory, Research, Practice, and Policy, 2*(3), 159-168. doi:10.1037/a0019156.

Sturges, J. E., & Hanrahan, K. J. (2004). Comparing telephone and face-to-face qualitative interviewing: A research note. *Qualitative Research, 4*(1), 107-118.

Suh, Y. (2015). The performance of maximum likelihood and weighted least square mean and variance adjusted estimators in testing differential item functioning with nonnormal trait distributions. *Structural Equation Modeling: A Multidisciplinary Journal, 22*(4), 568-580.

Suttora, C., Spinelli, M., & Monzani, D. (2014). From prematurity to parenting stress: The mediating role of perinatal post-traumatic stress disorder. *European Journal of Developmental Psychology, 11*(4), 478-493. doi:10.1080/17405629.2013.859574.

Taft, C. T., Watkins, L. E., Stafford, J., Street, A. E., & Monson, C. M. (2011). Posttraumatic stress disorder and intimate relationship problems: a meta-analysis. *Journal of Consulting and Clinical Psychology, 79*(1), 22-33.

Thompson, E. H., & Doll, W. (1982). The burden of families coping with the mentally iII: An invisible crisis. *Family Relations, 31*(3), 379-388.

Tol, W., Patel, V., Tomlinson, M., Baingana, F., Galappatti, A., Panter-Brick, C., . . . van Ommeren, M. (2011). Research Priorities for Mental Health and Psychosocial Support in Humanitarian Settings. *PLos Medicine, 8*(9), 1-5.

Trickey, D., Siddaway, A. P., Meiser-Stedman, R., Serpell, L., & Field, A. P. (2012). A Meta-Analysis of Risk Factors for Posttraumatic Stress Disorder in Children and Adolescents. *Clinical Psychology Review, 32*(2), 122 - 138. doi:10.1016/j.cpr.2011.12.001.

Tronick, E., Als, H., Adamson, L., Wise, S., & Brazelton, B. (1978). The infant's response to entrapment between contradictory messages in face-to-face interaction. *American Academy of Child Psychiatry, 1*(1), 1-13.

Tsai, J., David, D. H., Edens, E. L., & Crutchfield, A. (2013). Considering child care and parenting needs in Veterans Affairs mental health services. *Evaluation and Program Planning, 39*, 19-22. doi:10.1016/j.evalprogplan.2013.03.003.

van Ee, E., Kleber, R. J., & Jongmans, M. J. (2016). Relational patterns between caregivers with PTSD and their nonexposed children: A review. *Trauma, Violence, & Abuse, 17*(2), 186-203. doi:10.1177/1524838015584355.

van Ee, E., Kleber, R. J., Jongmans, M. J., Mooren, T. T., & Out, D. (2016). Parental PTSD, adverse parenting and child attachment in a refugee sample. *Attachment Human Development, 18*(3), 273-291. doi:10.1080/14616734.2016.1148748.

van Ee, E., Kleber, R. J., & Mooren, T. T. M. (2012). War trauma lingers on: Associations between maternal posttraumatic stress disorder, parent-child interaction, and child development. *Infant Mental Health Journal, 33*(5), 459-468. doi:10.1002/imhj.21324.

Vincent, L. (2008). 'Boys will be boys': traditional Xhosa male circumcision, HIV and sexual socialisation in contemporary South Africa. *Culture Health and Sex, 10*(5), 431-446. doi:10.1080/13691050701861447.

Visser, M. J., Makin, J. D., Vandormael, A., Sikkema, K. J., & Forsyth, B. W. (2009). HIV/AIDS stigma in a South African community. *AIDS Care, 21*(2), 197-206. doi:10.1080/09540120801932157.

Vuković, I. S., Maršanić, V. B., Margetić, B. A., Paradžik, L., Vidović, D., & Flander, G. B. (2015). Self-reported emotional and behavioral problems, family functioning and parental bonding among psychiatric outpatient adolescent offspring of Croatian male veterans with partial PTSD. *Child Youth Care Forum, 44*(5), 655-669. doi:10.1007/s10566-015-9299-9.

Waite, P., Whittington, L., & Creswell, C. (2014). Parent-Child Interactions and Adolescent Anxiety: A Systematic Review. *Psychopathology Review, a1*(1), 51-76. doi:10.5127/pr.033213.

Wallerstein, N., & Duran, B. (2010). Community-Based Participatory Research Contributions to Intervention Research: The Intersection of Science and Practice to Improve Health Equity. American Journal of Public Health, S1, 40 - 46. doi:10.2105/AJPH.2009.

Weems, C. F., & Overstreet, S. (2008). Child and adolescent mental health research in the context of Hurricane Katrina: An ecological needs-based perspective and introduction to the special section. *Journal of Clinical Child and Adolescent Psychology, 37*(3), 487-494.

Wender, P. H., Rosenthal, D., Kety, S. S., Schulsinger, F., & Welner, J. (1973). Social class and psychopathology in adoptees. Archives of General Psychiatry, 28, 318-325.

Wessely, S., Bryant, R. A., Greenberg, N., Earnshaw, M., Sharpley, J., & Hacker Hughes, J. (2008). Does psychoeducation help prevent post traumatic psychological distress? *Psychiatry, 71*(4), 287-302.

Williams, N. (2012). Child welfare and the UNHCR: a case for pre-resettlement refugee parenting education. *Development in Practice, 22*(1), 110-122.

Williamson, V., Butler, I., Tomlinson, M., Skeen, S., Christie, H., Stewart, J., & Halligan, S. (2017a). Caregiver responses to child posttraumatic distress: A qualitative study in a high-risk context in South Africa. *Journal of Traumatic Stress, 30*(5), 482-490.

Williamson, V., Creswell, C., Butler, I., Christie, H., & Halligan, S. (2016). Parental responses to child experiences of trauma following presentation at emergency departments: a qualitative study. *BMJ Open, 6*(11), 6:e012944.

Williamson, V., Creswell, C., Fearon, P., Hiller, R. M., Walker, J., & Halligan, S. L. (2017b). The role of parenting behaviors in childhood post-traumatic stress disorder: A meta-analytic review. *Clin Psychol Rev, 53*, 1-13. doi:10.1016/j.cpr.2017.01.005

Wilson, C. K., Padrón, E., & Samuelson, K. W. (2017). Trauma type and posttraumatic stress disorder as predictors of parenting stress in trauma-exposed mothers. *Violence and Victims, 32*(1), 141-158. doi:10.1891/0886-6708.VV-D-13-00077

Wise, A. E., & Delahanty, D. L. (2017). Parental Factors Associated with Child Post-traumatic Stress Following Injury: A Consideration of Intervention Targets. *Frontiers in Psychology, 8*, 1412. doi:10.3389/fpsyg.2017.01412.

Wood, J. J. (2006). Effect of anxiety reduction on children's school performance and social adjustment. *Developmental Psychology, 42*(2), 345-349. doi:10.1037/0012-1649.42.2.345.

Wood, J. J., McLeod, B. D., Sigman, M., Hwang, W. C., & Chu, B. C. (2003). Parenting and childhood anxiety: theory, empirical findings, and future directions. *Journal of Child Psychology and Psychiatry, 44*(1), 134-151.

Worthman, C. M., Tomlinson, M., & Rotheram-Borus, M. (2016). When can parents most influence their child's development? Expert knowledge and perceived local realities. *Social Science & Medicine, 154*(1), 62-69.

Yehuda, R., Engel, S. M., Brand, S. R., Seckl, J., Marcus, S. M., & Berkowitz, G. S. (2005). Transgenerational effects of posttraumatic stress disorder in babies of mothers exposed to the World Trade Center attacks during pregnancy. *Journal of Clinical Endocrinology Metabolism, 90*(7), 4115-4118. doi:10.1210/jc.2005-0550

Yehuda, R., Hoge, C. W., McFarlane, A. C., Vermetten, E., Lanius, R. A., Nievergelt, C. M., . . . Hyman, S. E. (2015). Post-traumatic stress disorder. *Nature Reviews Disease Primers, 1*, 15057. doi:10.1038/nrdp.2015.57.

Yeomans, P. D., Forman, E. M., Herbert, J. D., & Yuen, E. (2010). A randomized trial of a reconciliation workshop with and without PTSD psychoeducation in Burundian sample. *Journal of Traumatic Stress, 23*(3), 305-312.

Appendices

Appendix 1: Paper 1 PROSPERO application approval

PROSPERO Registration message [40175]

DELETE REPLY REPLY ALL FORWARD ...

CRD-REGISTER <irss505@york.ac.uk>
Wed 6/15/2016 9:25 AM

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To: Hope Christie;

You forwarded this message on 6/15/2016 10:14 AM.

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Dear Miss Christie

Thank you for submitting details of your systematic review *The impact of parental posttraumatic stress disorder on parenting behaviours: a systematic review* to the PROSPERO register. We are pleased to confirm that the record has been published on the database.

Your registration number is: CRD42016040175

You are free to update the record at any time, all submitted changes will be displayed as the latest version with previous versions available to public view. Please also give brief details of the key changes in the Revision notes facility. You can log in to PROSPERO and access your records at http://www.crd.york.ac.uk/PROSPERO

An email reminder will be sent to you on the anticipated completion date, prompting you to update the record.

Comments and feedback on your experience of registering with PROSPERO are welcome at: crd-register@york.ac.uk

Best wishes for the successful completion of your review.

Yours sincerely

Lesley Indge

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e: CRD-register@york.ac.uk

Appendix 2: Paper 1 Paper Scoring Manual

Please assess each paper on the following criteria. For scoring please refer to notes below.

Good=4
Fair=3
Poor=2
Very poor=1
Lower scores =poor quality

Notes for appraising the quality of each paper:

1. Abstract and title:
Did they provide a clear description of the study?
Good Structured abstract with full information and clear title.
Fair Abstract with most of the information.
Poor Inadequate abstract.
Very Poor No abstract.

2. Introduction and aims:
Was there a good background and clear statement of the aims of the research?
Good Full but concise background to discussion/study containing up-to date literature review and highlighting gaps in knowledge. Clear statement of aim AND objectives including research questions.
Fair Some background and literature review. Research questions outlined.
Poor Some background but no aim/objectives/questions, OR Aims/objectives but inadequate background.
Very Poor No mention of aims/objectives. No background or literature review.

3. Method and data:
Is the method appropriate and clearly explained?
Good Method is appropriate and described clearly (e.g., questionnaires included). Clear details of the data collection and recording.
Fair Method appropriate, description could be better. Data described.
Poor Questionable whether method is appropriate. Method described inadequately. Little description of data.
Very Poor No mention of method, AND/OR Method inappropriate, AND/OR No details of data.

4. **Sampling:**
Was the sampling strategy appropriate to address the aims?
Good Details (age/gender/race/context) of who was studied and how they were recruited. Why this group was targeted. The sample size was justified for the study. Response rates shown and explained.
Fair Sample size justified. Most information given, but some missing.
Poor Sampling mentioned but few descriptive details.
Very Poor No details of sample.

5. **Data analysis:**
Was the description of the data analysis sufficiently rigorous?
Good Clear description of how analysis was done. Qualitative studies: Description of how themes derived/ respondent validation or triangulation. Quantitative studies: Reasons for tests selected hypothesis driven/ numbers add up/statistical significance discussed.
Fair Qualitative: Descriptive discussion of analysis. Quantitative.
Poor Minimal details about analysis.
Very Poor No discussion of analysis.

6. **Ethics and bias:**
Have ethical issues been addressed, and what has necessary ethical approval gained? Has the relationship between researchers and participants been adequately considered?

Paper 1 Paper Scoring Manual continued

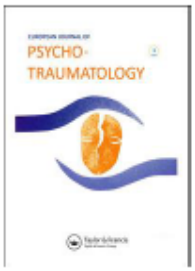
Good Ethics: Where necessary issues of confidentiality, sensitivity, and consent were addressed. Bias: Researcher was reflexive and/or aware of own bias.
Fair Lip service was paid to above (i.e., these issues were acknowledged).
Poor Brief mention of issues.
Very Poor No mention of issues.

7. Results:
Is there a clear statement of the findings?
Good Findings explicit, easy to understand, and in logical progression. Tables, if present, are explained in text. Results relate directly to aims. Sufficient data are presented to support findings.
Fair Findings mentioned but more explanation could be given. Data presented relate directly to results.
Poor Findings presented haphazardly, not explained, and do not progress logically from results.
Very Poor Findings not mentioned or do not relate to aims.

8. **Transferability or generalizability:**
Are the findings of this study transferable (generalizable) to a wider population?
Good Context and setting of the study is described sufficiently to allow comparison with other contexts and settings, plus high score in Question 4 (sampling).
Fair Some context and setting described, but more needed to replicate or compare the study with others, PLUS fair score or higher in Question 4.Poor Minimal description of context/setting.
Very Poor No description of context/setting.

9. **Implications and usefulness: How important are these findings to policy and practice?**
Good Contributes something new and/or different in terms of understanding/insight or perspective. Suggests ideas for further research. Suggests implications for policy and/or practice.
Fair Two of the above (state what is missing in comments).
Poor Only one of the above.
Very Poor None of the above.

Appendix 3: Paper 1 The impact of parental Posttraumatic Stress Disorder on parenting: A systematic review



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The impact of parental posttraumatic stress disorder on parenting: a systematic review

Hope Christie, Catherine Hamilton-Giachritsis, Filipa Alves-Costa, Mark Tomlinson & Sarah L. Halligan

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2019, VOL. 10, 1550345
https://doi.org/10.1080/20008198.2018.1550345

REVIEW ARTICLE

OPEN ACCESS

The impact of parental posttraumatic stress disorder on parenting: a systematic review

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ABSTRACT

Background: Posttraumatic stress disorder (PTSD) is a serious and debilitating disorder that can develop following exposure to a traumatic event. Where parents develop PTSD, it may have an impact on their parenting role.

Objective: The objective was to review the existing evidence base on parental PTSD, examining whether parental PTSD has an impact on key parenting domains.

Method: A comprehensive web-based search identified 27 quantitative studies that examined parental PTSD in relation to parenting domains.

Results: Several parenting domains were investigated including: parenting satisfaction, parenting stress, the parent–child relationship, and specific parenting practices. Sample sizes ranged from 19 to 3931 parents. A range of parental traumas were investigated, including traumatic birth experiences, military trauma, and intimate partner violence. Findings indicated associations between parental PTSD and several domains of parenting, but there were inconsistencies across studies.

Conclusions: Findings suggested that parental PTSD is associated with impaired functioning across a number of parenting domains, including increased levels of parenting stress, lower parenting satisfaction, less optimal parent–child relationships, and more frequent use of negative parenting practices, such as overt hostility and controlling behaviours. However, methodological limitations across the literature as a whole limited the potential to infer causal impacts of PTSD on parenting. Further study is also needed to advance our current understanding around the impact of different trauma types on parenting domains.

El impacto del trastorno de estrés postraumático parental en la crianza de los hijos: una revisión sistemática

Antecedentes: El trastorno de estrés postraumático (TEPT) es un trastorno grave y debilitante que puede desarrollarse después de la exposición a un evento traumático. El hecho que los padres desarrollen TEPT, puede tener un impacto en su rol parental de crianza.

Objetivo: El objetivo de esta revisión fue revisar la base de evidencia existente sobre el TEPT de los padres, y analizar si el TEPT de los padres tiene un impacto en los dominios de crianza de los hijos.

Método: una búsqueda exhaustiva a través de internet identificó 27 estudios cuantitativos que examinaron el TEPT de los padres en relación con los dominios de crianza.

Resultados: se investigaron varios dominios de crianza de los hijos, incluidos: satisfacción parental, estrés parental, la relación padre-hijo y prácticas de crianza específicas. Los tamaños de muestra oscilaron entre 19 y 3931 padres. Se investigó una variedad de traumas parentales, que incluyeron experiencias traumáticas de nacimiento, traumas militares y violencia de pareja. Los hallazgos indicaron asociaciones entre el TEPT de los padres y varios dominios de crianza de los hijos, pero hubo inconsistencias entre los estudios.

Conclusiones: los hallazgos sugirieron que el trastorno de estrés postraumático de los padres se asocia con un funcionamiento deficiente en varios dominios de crianza de los hijos, incluido un mayor nivel de estrés parental, menor satisfacción parental, relaciones menos óptimas entre padres e hijos, y un uso más frecuente de prácticas de crianza negativas, como la hostilidad manifiesta y conductas controladoras. Sin embargo, las limitaciones metodológicas en toda la literatura en su conjunto limitaron el potencial para inferir los impactos causales del TEPT en la crianza de los hijos. Aún se necesita más estudios para avanzar en nuestra comprensión actual sobre el impacto de los diferentes tipos de trauma en los dominios de crianza.

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KEYWORDS
Posttraumatic stress disorder; trauma; parenting; parent–child relationship; family

PALABRAS CLAVES
Trastorno de estrés postraumático; trauma; crianza; relación padre-hijo; familia

关键词
创伤后应激障碍; 创伤; 教养; 亲子关系; 家庭

HIGHLIGHTS

- The review brought together existing evidence in the parental PTSD literature, to further understand how parental PTSD impacts parenting domains.
- A total of 27 articles were reviewed, examining several parenting domains including: parenting satisfaction, parenting stress, the parent–child relationship, and specific parenting practices.
- Parents with PTSD may experience more impaired functioning in these specific domains compared to parents without PTSD.
- Methodological limitations across the literature limit potential inference from the current findings; therefore further study is still needed.

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Supplemental data for this article can be accessed here.

父母创伤后应激障碍对教养的影响：系统综述

背景： 创伤后应激障碍（PTSD）是一种带来严重损耗的疾病，可在创伤事件后发生。如果父母患有创伤后应激障碍，可能会影响他们的教养角色。
目的： 本文的目的是综述现有的父母创伤后应激障碍的证据基础，考察父母创伤后应激障碍是否对关键的教养领域产生影响。
方法： 在网络上进行综合搜索确定了27项定量研究，这些研究考察了父母PTSD与教养的关系。
结果： 调查了几个教养领域，包括：教养满意度，教养压力，亲子关系和特定教养实践。样本量范围从19到3931名父母，考察了一系列父母创伤经历，包括创伤性出生经历、军事创伤和亲密伴侣暴力。研究结果显示，父母PTSD与教养的几个领域之间存在关联，但各研究之间存在不一致。
结论： 研究结果表明，父母创伤后应激障碍与许多教养领域的功能受损相关，包括教养压力水平升高，教养满意度降低，亲子关系不理想，以及更频繁地使用消极教养方式，如明显的敌意和控制行为。然而，整个文献中的方法学局限性限制了推断创伤后应激障碍对教养的因果影响的可能性。以后还需要进一步研究，以推进我们对不同创伤类型对教养领域的影响的理解。

Abbreviation
DSM: Diagnostic Statistical Manual for Mental Disorders

1. Introduction

Posttraumatic stress disorder (PTSD) may develop following a traumatic event, and is estimated to have a lifetime prevalence of 7.8% (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995). A considerable number of adults who develop PTSD are also parents with dependent children (Lauterbach et al., 2007; Leen-Feldner, Feldner, Bunaciu, & Blumenthal, 2011). Psychological difficulties in adults may impair parenting capabilities. PTSD in particular can cause negative alterations to an individual's behaviour, including increased anger and reactivity, as well as social withdrawal (American Psychiatric Association, 2013). Further, as highlighted by a wealth of research, trauma has the potential to impact across generations, which may also cause subsequent psychological, social, and emotional difficulties in children (Berg-Nielsen, Vikan, & Dahl, 2002; van Ee, Kleber, & Jongmans, 2016). As such, it is essential to understand the potential consequences of PTSD for parental functioning. Recent syntheses of relevant aspects of the literature have considered the potential detrimental role of parental PTSD from several standpoints, including in refugee families (van Ee et al., 2016), for military veterans and their families (Creech & Misca, 2017), and in relation to children's outcomes in the context of parental PTSD (Lambert, Holzer, & Hasbun, 2014; Leen-Feldner et al., 2013; Morris, Gabert-Quillen, & Delahanty, 2012). However, there remains a lack of a comprehensive and critical synthesis of the parental PTSD literature relating to possible impacts on parenting domains that cuts across trauma populations. An understanding of whether impacts of parental PTSD are present that generalize across different trauma types is thereby limited.

The aim of the current systematic review was to examine the evidence base in the field of parental PTSD in order to address the research question: what impact does parental PTSD have on parenting domains and the parent–child relationship? Given the relatively preliminary stage of literature in this area, a broad definition of parenting domains was applied (Berg-Nielsen et al., 2002; O'Connor, 2002). Thus, we included studies that indexed: the parent's behaviour towards their child (e.g. warmth/support, hostility, overprotection); the quality of the parent–child relationship (including attachment styles and bonding impairments); and the parent's thoughts and feelings about their own parenting ability (parenting satisfaction versus stress).

2. Method

A protocol for the review was published via PROSPERO (registration number: CRD42016040175).

2.1. Literature search strategy

Searches were conducted using PubMED, PsycInfo, PsycNet, and Published International Literature of Traumatic Stress (PILOTS) for articles published between 1980 (when PTSD was first introduced in the DSM) and December 2017.

The following search terms were used: 'posttraumatic stress disorder*' OR 'post-traumatic stress disorder*' OR 'post traumatic stress disorder' OR 'PTSD', AND 'parent*' OR 'parental*' OR 'mother*' OR 'father*' OR 'maternal*' OR 'paternal*' OR 'caregiver*'. The search terms were broad in order to conduct a comprehensive search of the research field. In addition, reference lists of relevant review papers and book chapters were manually searched for articles that may not have been identified in the literature search. Four key authors were contacted to request any further published or unpublished

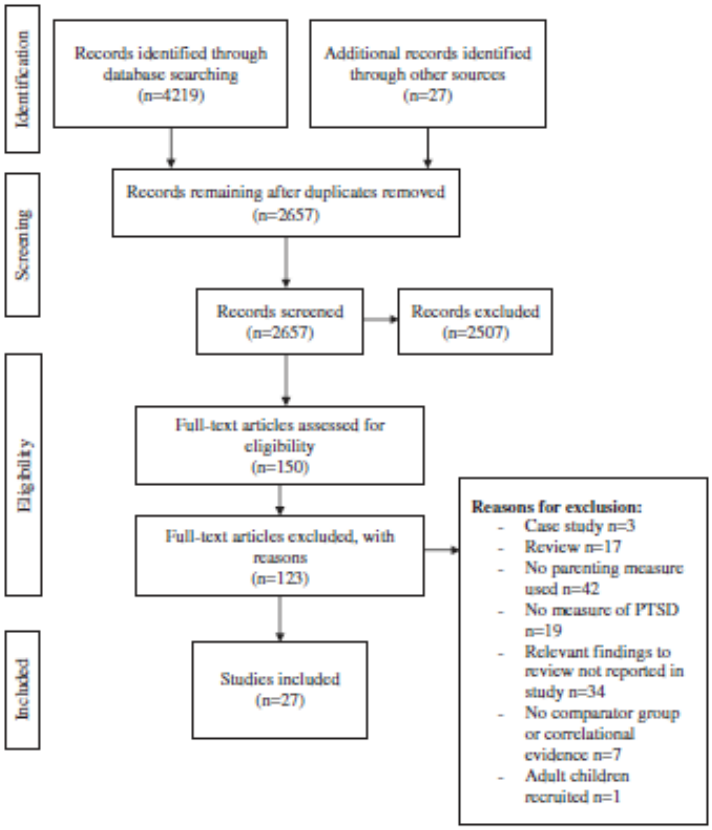

Figure 1. Flow chart of study selection process.

studies that could potentially be included. A Preferred Reporting Items for Systematic Reviews and Meta-Analyses (Moher, Liberati, Tetzlaff, Altman, & Group, 2009) flowchart is provided in Figure 1.

The first author conducted the literature search, screened articles, and extracted data. Two authors (HC and FAC) discussed the inclusion and exclusion of 25 randomly selected papers, from any stage of the screening process, in order to assess reliability, consistency and academic rigour. Cohen's kappa indicated a substantial level of agreement between raters ($k = 0.684$, $p = .001$). Any disagreements were discussed with two additional authors until a consensus was reached. Following a consensus agreement on inclusion or exclusion of articles, the first author then revisited previously excluded articles in order to ensure that no other articles previously excluded should now be included.

2.2. Eligibility criteria

Studies were included if they: (a) had used a measure of parenting; (b) used a validated measure of PTSD; and (c) included parents who had PTSD during their offspring's childhood, with childhood defined as 0–18 years of age. Studies were excluded if they: (a) did not have *either* a comparator group that did not have PTSD *or* correlational evidence of associations between PTSD symptom severity and parenting outcome scores; (b) had recruited parents based on knowledge that they were abusing their children (as selection of sample based on serious parenting concerns would clearly introduce bias); (c) recruited parents on the basis of another disorder being present (i.e. PTSD was only studied when comorbid with another specific problem), as this precludes conclusions about potential for causal impact of PTSD in particular.

All included articles underwent a quality assessment using the Hawker's Checklist (Hawker, Payne, Kerr, Hardey, & Powell, 2002), which is designed to limit bias that may be introduced while synthesizing evidence. The checklist provides a standardized list in order to score and rate the overall quality of papers based on nine categories, on a scale of 0 (poor quality) to 4 (good). We used eight of the nine categories, covering clarity (e.g. 'was there a good background and clear statement of the aims of the research?'),

quality of the results, and the generalizability and transferability of findings (e.g. 'Has the context and setting been described sufficiently to allow comparison with other contexts and settings?'). Ratings relating to title and abstract clarity were excluded, as they were judged not to provide a relevant indication of quality in the current synthesis. Results of these assessments can be found alongside the study characteristics in the results section, presented as a proportion of the total possible score of 32 (see Hawker et al., 2002, for more information).

3. Results

3.1. Overview of reviewed studies

The 27 studies[1] identified investigated parenting domains including: parenting satisfaction and stress, the parent–child relationship (both bonding and attachment), and a range of specific parenting practices (e.g. overprotection and hostility), each of which are discussed in detail below. All studies were quantitative, with sample sizes ranging from 19 to 3931. Parental traumas included birth experiences (k = 6 studies), military trauma (k = 9), intimate partner violence (IPV; k = 3), learning that their child had been maltreated (k = 1), and unspecified mixed traumas (k = 8). A comprehensive summary of each study can be found in Table 1.

3.2. Parenting satisfaction

Parenting satisfaction encompasses perceptions of parenting efficacy, and enjoyment gained from parenting (Cohen, Zerach, & Solomon, 2011). Six studies investigated the impact of PTSD on parenting satisfaction; all but one used military samples (Berz et al., 2008; Cohen et al., 2011; Creech et al., 2016; Hershkowitz et al., 2017; Jordan et al., 1992; Samper et al., 2004). Studies were rated moderate to high in terms of quality (range 20–28 out of 32, corresponding to .63–.88).

Jordan et al. (1992) found that veteran fathers with PTSD (n = 231) reported lower parenting satisfaction on a brief self-report measure compared to veteran fathers without PTSD (n = 736), although the effect size was small (Phi = 0.27). Similarly, Cohen et al. (2011) investigated the impact of paternal PTSD in a sample of 477 veterans. Fathers who suffered from PTSD (n = 124) self-rated their parenting satisfaction significantly lower than those who did not have PTSD (n = 353). Samper et al. (2004) reported similar findings with a sample of male veterans (n = 250) when investigating associations between PTSD symptom clusters and parenting satisfaction, using a five-item measure. Overall PTSD symptom scores (r = −0.27) and avoidance scores (r = −0.30) were significantly negatively associated with parenting satisfaction, with small to medium effect sizes, but there were no equivalent associations for hyperarousal or re-experiencing symptoms. Effects were retained controlling for factors including major depression, alcohol abuse, and intimate partner violence. Berz et al. (2008) studied a sample of female veterans (n = 60) using the same five-item parenting satisfaction measure and found avoidance (r = −0.23) and hyperarousal (r = −0.29), but not re-experiencing, to be inversely associated with satisfaction scores. However, contrary to previous findings, Creech et al. (2016) found no significant associations between military veteran mothers' (n = 64) PTSD symptom scores and their parenting satisfaction scores.

While this body of work has been predominantly military focused, Hershkowitz et al. (2017) found that in a sample of trauma exposed parents from the general population (N = 200), PTSD symptoms showed an inverse association with parenting satisfaction (r = −0.46, indicating a medium effect), but this effect was eliminated once factors including depression, age, and number of children were included in the model. Overall, the small body of work in this area is consistent in suggesting that veteran fathers may experience reduced satisfaction in their parenting role due to the presence of PTSD, although this impact is small in magnitude. More work is needed to establish whether similar effects apply in other populations.

3.3. Parenting stress

Parenting stress can be defined as the 'aversive psychological reaction to being a parent' and is noted to potentially be related to parenting behaviours and child outcomes (Deater-Deckard, 1998, p. 315). We identified four studies that investigated the impact of parental PTSD on parenting stress following birth trauma (Suttora et al., 2014) and mixed traumas (including domestic violence, sexual abuse, physical abuse; Chemtob, Gudino, & Laraque, 2013; Salloum et al., 2015; Wilson et al., 2017). Parenting stress was consistently measured using the short form of the Parenting Stress Index (PSI-SF; Abidin, 1995). The mean quality rating for papers was 24.75 (range .65 to .87). In a small, heterogenous trauma sample of mother–child dyads (N = 43), Salloum et al. (2015) found no significant associations between PTSD symptom scores and the three PSI-SF subdomains of parental distress, parent–child dysfunction, or the parent's perception of difficult behaviour from the child. By contrast, three studies that studied mothers using only the total PSI-SF score each found links with PTSD. Suttora et al. (2014) studied mothers who had given birth to a pre-term infant (n = 87) and mothers of full-term infants (n = 156) and found that

Table 1. Summary of studies included in review.

Reference (study type)	Sample size	Age years (M, range)	Comparator group(s)	Parenting outcome	Measures	Trauma type	Quality score (%)
1. Ayers et al. 2007 (Cross-sectional)	64 couples	32.4	Severe PTSD symptoms $n = 4$ couples	Bonding	Adapted IES, BMIIS	Birth	47
2. Berz et al. 2008 (Cross-sectional)	60 mothers	49.1	Correlational study	Satisfaction	M-PTSD, Parenting Satisfaction Scale	Military	63
3. Bosquet Enlow et al. 2014 (Cross-sectional)	45 dyads (mothers)	27.04	Elevated PTSD symptoms $n = 12$; Non-elevated PTSD symptoms $n = 33$	Attachment	PCL-C, SSP	Various, unspecified	97
4. Chemtob & Carlson, 2004 (Cross-sectional)	25 dyads (mothers)	35.4	PTSD group $n = 11$; No PTSD group = 13	Inconsistent discipline	PTDS, Parenting Scale	IPV	84
5. Chemtob et al., 2013 (Cross-sectional)	97 dyads (mothers)	22–30	Correlational study	Parenting stress	PDS, PSI-SF	Various, unspecified	75
6. Cohen et al. 2011 (Cross-sectional)	477 fathers	46.9 CSR group; 47.59 non-CSR group	PTSD group $n = 124$; No PTSD group $n = 353$	Satisfaction	PTSD Inventory, PFQ	Military	88
7. Creech et al. 2017 (Cross-sectional)	134 mothers	37.11	Correlational study	Satisfaction	PCL, Parenting Sense of Competence Scale	Military	81
8. Cross et al. 2017 (Cross-sectional)	112 dyads (mothers)	Not provided	Correlational study	Child abuse potential	MPSS, CAPI	Various, unspecified	81
9. Davies et al. 2008 (Cross-sectional)	211 mothers	26.13 FS; 30.40 PS; 30.21 NS	Fully symptomatic (FS) $n = 8$; Partially symptomatic (PS) $n = 45$; Non-symptomatic (NS) $n = 158$	Overt hostility	SCID-PTSD, PTSDQ, IES, MORS-SF, MPAS	Birth	87
10. Forcada-Guex et al. 2011 (Cross-sectional)	72 dyads (mothers)	Not provided	Control group $n = 25$; Low PTSS $n = 31$; High PTSS $n = 16$	Attachment	PPQ, WMCI, 10 min Interactive Play Session	Birth	69
11. Gewirtz et al. 2010 (Longitudinal)	468 fathers	36.36	Correlational study	Child abuse potential	PCL-M, APQ-9	Military	75
12. Hershkowitz et al. 2017 (Longitudinal)	200 parents	37.20 (23–59)	Correlational study	Child abuse potential, Satisfaction	PDS, APQ-9, PSQ	Various, unspecified	78
13. Ionio & Di Blasio, 2014 (Cross-sectional)[1]	19 mothers	32.23	Clinical PTSD $n = 4$; No PTSD $n = 15$	Controlling behaviour	PPQ, SFP	Birth	66
14. Jobe-Shields et al. 2016 (Cross-sectional)	96 caregivers	Not provided	No distress $n = 73$; PTSD group $n = 7$; Depression group $n = 10$; PTSD and Depression $n = 6$	Inconsistent discipline	PSS-SR, APQ	Indirect	75
15. Jordan et al. 1992 (Cross-sectional)	1200 fathers	PTSD group = 39.8; Non-PTSD group = 41.81	PTSD group $n = 319$; No PTSD group $n = 871$	Satisfaction	M-PTSD, PPI	Military	66
16. Lauterbach et al. 2007 (Cross-sectional)	Unclear	Unclear	Unclear	Parent–child Relationship	DIS, PCRQ	Various, unspecified	59
17. Leen-Feldner et al. 2011 (Cross-sectional)	2228 mothers; 1703 fathers	50.02	PTSD group $n = 286$; No PTSD group $n = 3645$	Overt hostility	WHOCIDI, Parental Aggression Scale	Various, unspecified	87

(*Continued*)

Table 1. (Continued).

Reference (study type)	Sample size	Age years (*M*, range)	Comparator group(s)	Parenting outcome	Measures	Trauma type	Quality score (%)
18. Marsanic et al. 2014 (Cross-sectional)	244 dyads (fathers)	45.7	PTSD group *n* = 122; No PTSD group *n* = 122	Controlling behaviour	YSR, FAD, PBI	Military	71
19. Parfitt & Ayers, 2009 (Cross-sectional)	126 mothers; 56 fathers	Mothers 30.92; Fathers 32.58	PTSD group *n* = 31; No PTSD group *n* = 121	Parent–child Relationship	PDS, PBQ	Birth	66
20. Salloum et al., 2015 (Cross-sectional)	43 dyads	38.78 (24–73)	Correlational study	Parenting stress	SCID-RV, PSI-SF	Various, unspecified	87
21. Samper et al. 2004 (Cross-sectional)	205 fathers	41.44 (33–62)	Correlational study	Satisfaction	M-PTSD, Parenting Satisfaction Scale	Military	66
22. Schechter et al. 2015 (Cross-sectional)	56 mothers	34	PTSD group *n* = 34; No PTSD group *n* = 22	Controlling behaviour	CAPS, PCL-S, 5 min free play	IPV	72
23. Schechter et al. 2010 (Cross-sectional)	74 mothers	29.39	PTSD group *n* = 17; Subthreshold PTSD symptoms *n* = 30; No PTSD *n* = 27	Limited emotional availability	CAPS, PCL-S, AMBI, CJAS	IPV	69
24. Solomon et al. 2011 (Cross-sectional)	473 parents	46.9 CSR group; 47.59 non-CSR group	PTSD group *n* = 123; No PTSD group *n* = 350	Overall poor parenting	PTSD-I, Parental Functioning	Military	56
25. Suttora et al., 2014 (Cross-sectional)	243 mothers	34.2 Preterm group; 34.4 full-term group		Parenting stress	PPQ, PSI-SF	Birth	65
26. Vukovic et al. 2015 (Cross-sectional)	324 dyads (fathers)	Not provided	PTSD group *n* = 108; Partial PTSD group *n* = 108; No PTSD group *n* = 108	Controlling behaviour	YSR, PBI	Military	75
27. Wilson et al., 2017 (Cross-sectional)	52 mothers	34.77	Correlational study	Parenting stress	PCL-C, PSI-SF	Various unspecified	81

Note. [1] Although the overall study design was longitudinal, analyses relevant to this review were wholly cross-sectional. AMBI = The Atypical Maternal Behaviour Instrument; APQ = Alabama Parenting Questionnaire; APQ-9; Alabama Parenting Questionnaire (short form); BMIIS = Bethlehem Mother–Infant Interaction Scale; CAPI = Child Abuse Potential Index; CAPS = Clinician Administered PTSD Scale; CJAS = Coordinated Joint Attention Scales; DIS = Diagnostic Interview Schedule; IES = Impact of Events Scale; MORS-SF = Mothers' Object Relations Scale-Short Form; MPAS = Maternal Postnatal Attachment Scale; M-PTSD = Mississippi Combat Scale; PBI = Parental Bonding Instrument; PBQ = Postpartum Bonding Questionnaire; PCFS = Perceived Child Functioning Scale; PCL-C = Posttraumatic Stress Disorder Checklist – Civilian; PCL-M = Posttraumatic Stress Disorder Checklist – Military; PCL-S = Post-traumatic Symptom Checklist – Short Version; PCRQ = Parent–Child Relationship Quality; PDS = Posttraumatic Diagnostic Scale; PFQ = Parental Functioning Questionnaire; PPI = Parental Problems Index; PPQ = Perinatal Posttraumatic Stress Disorder Questionnaire; PSI-SF = Parenting Stress Index-Short Form; PSQ = Parenting Satisfaction Questionnaire; PSS-SR = Posttraumatic Stress Disorder Symptom Scale–Self Report; PTSD-I = Posttraumatic Stress Disorder Inventory; PTSDQ = Posttraumatic Stress Disorder Questionnaire; SCID-PTSD = Structured Clinical Interview for DSM-IV Axis I Disorders; SFP = Still Face Paradigm; SSP = Strange Situation Procedure; WHOCIDI = World Health Organization World Mental Health Composite International Diagnostic Interview; WMCI = Working Model of the Child Interview; YSR = Youth Self Report

PTSD symptoms mediated an association between birth status and total parenting stress. Wilson et al. (2017), in a mixed trauma sample of mother–child dyads (N = 52), found that PTSD symptoms were significantly associated with parenting stress score, with medium effect (r = 0.30). Lastly, in a community sample of mothers, a proportion of which reported trauma exposure, Chemtob et al. (2013) compared groups with no diagnosis (n = 70), PTSD-only (n = 6), depression only (n = 11), and co-morbid depression and PTSD (n = 10), based on questionnaire scores. All diagnostic groups reported elevated parenting stress, with no differences between them. Findings are limited by the small sample and the lack of a trauma control group. Further research is needed to tease apart the constructs measured by the PSI, which include child as well as parent and relationship characteristics, in order to provide more clarity in this area.

3.4. Parent–child bonding and relationships

Six studies focused on the impact of parental PTSD on the parent–child relationship, including measures of relationship quality and the mutual parent–child emotional bond, the attachment that the child develops for the parent, and the representation of the attachment held by the parent in relation to the child. Four studies utilized birth trauma samples (Ayers, Wright, & Wells, 2007; Davies, Slade, Wright, & Stewart, 2008; Forcada-Guex, Borghini, Pierrehumbert, Ansermet, & Muller-Nix, 2011; Parfitt & Ayers, 2009), and two used samples from cohort studies that had experienced various, unspecified traumas (Bosquet Enlow, Egeland, Carlson, Blood, & Wright, 2014; Lauterbach et al., 2007). Quality ratings for studies ranged from poor (.27) to excellent (.97).

Several studies focused on parental perceptions of their relationship with their child. An internet-based study of parents focused on negative birth experiences (N = 152; 126 women) found symptoms of PTSD to be correlated with more self-rated difficulties in the bond with their baby (r = .36; Parfitt & Ayers, 2009). When symptoms of depression were adjusted for in a structural equation model, a small independent effect of PTSD was retained (d = .20). Symptoms of PTSD were also associated with more problematic birth characteristics, but these were not accounted for in analyses. Similarly, mothers and fathers deriving from a cohort study who met the diagnostic criteria for PTSD related to mixed traumas (n = 323) were found to rate their relationship with their child as being significantly poorer than parents without PSTD (n = 5884) but the effect was very small (n^2 = 0.005; Lauterbach et al., 2007). The validity of these findings is limited by the use of a single item measure of the parent–child relationship. Importantly, the study also lacked a trauma exposed control group. By contrast, Ayers et al. (2007) studied 64 couples post-birth and found no associations between PTSD symptoms in either mother or father and a poorer bond with their baby. However, overall symptoms were low in this study, which did not focus specifically on traumatic birth experiences. Further, the quality score for Ayers et al. (2007) was low due to this and other factors, including the measurement of only two of the four symptom clusters of PTSD.

Several studies in this area examined parental attachment to the child. In a study of maternal self-reported attachment perceptions, Davies et al. (2008) found that post-birth symptoms of PTSD in mothers (N = 211) were moderately associated with a perceived poorer quality of attachment to their infant at six-weeks postpartum. However, controlling for the effect of postnatal depression eliminated these effects in this sample, the majority of whom had experienced normal deliveries (Davies et al., 2008). Forcada-Guex et al. (2011) compared mothers of pre-term infants with low (n = 31) or high levels (n = 16) of PTSS to mothers of full-term infants (n = 25; i.e. a no trauma group). Overall, fewer mothers with pre-term versus full-term infants were classed as having balanced attachment representations, as measured by the Working Model of the Child Interview. Underpinning this, there was tentative evidence that relative to full-term mothers, mothers in the low PTSS group were more likely to have disengaged attachment representations, whereas those in the high PTSS group were more likely to have distorted attachment representations. However, no comparisons revealed significant differences between low and high PTSS groups, meaning that PTSS effects were not clearly demonstrated.

One study examined the attachment the infant formed to the parent (Bosquet Enlow et al., 2014). Mothers from low-income backgrounds, 80% of whom reported lifetime exposure to potentially traumatic events, were categorized as PTSD (n = 12) or no PTSD (n = 33) based on questionnaire scores at six-months postpartum. Compared to the no PTSD group, infants of mothers in the PTSD group were significantly less likely to have a secure attachment at six months (OR = 11.31, indicating a large effect size), and the likelihood of a disorganized attachment classification was particularly elevated (OR = 13.17). Presence of depressive symptoms and extent of trauma history did not appear to account for these effects. The use of the Strange Situation Paradigm (Ainsworth, 1969) to measure attachment was a major strength of this research, but larger scale studies of this type are needed to confirm the findings. Overall, these findings are mixed, suggesting that in some situations parents with PTSD's

relationship with their child may be perceived as poorer than those without PTSD. However, the majority of studies have examined this through self-report measures. While insightful, these measures may be influenced by the parent's mental health. As such, more replication of observational studies is required.

3.5. Parenting practices

Fifteen studies examined parental PTSD in relation to parenting styles (such as warmth, sensitivity, over-protection, hostility), parenting practices (e.g. reactive or inconsistent discipline), or parents' potential to maltreat their child. Trauma types included intimate partner violence (Chemtob & Carlson, 2004; Schechter et al., 2010; Schechter et al., 2015), birth trauma (Davies et al., 2008; Forcada-Guex et al., 2011; Ionio & Di Blasio, 2014), military trauma (Gewirtz et al., 2010; Maršanić et al., 2015; Solomon, Debby-Aharon, Zerach, & Horesh, 2011; Vuković et al., 2015), learning of your child's maltreatment (Jobe-Shields, Swiecicki, Fritz, Stinnette, & Hanson, 2016), and mixed traumas (Chemtob et al., 2013; Cross et al., 2017; Hershkowitz et al., 2017; Leen-Feldner et al., 2011). Overall, the quality ratings of papers were moderate to high (range .56–.87).[2]

3.5.1. Studies using parental self-report

Nine studies examined self-reported discipline practices, measured via interview or questionnaire. The most consistently used measure was the Alabama Parenting Questionnaire (APQ), which includes domains of positive parenting, inconsistent discipline, and poor supervision (Elgar, Waschbusch, Dadds, & Sigvaldason, 2007; Frick, 1991). In the aforementioned population study of parents who had experienced varied traumas (N = 200), Hershkowitz et al. (2017) found overall PTSD scores to be correlated with poorer parenting behaviour scores, based on a combined score from the APQ (r = –0.24, indicating a small effect size). Effects were maintained when depressive symptoms were included in the same model. In a second study using the APQ, caregivers who developed PTSD secondary to their child being sexually abused showed higher levels of inconsistent discipline practices than those without PTSD. Effects were independent of caregiver depression status, and were present both based on caregivers' own report and on reports of their child (r^2 = 0.11; medium effect; Jobe-Shields et al., 2016). However, for other parenting practices (positive involvement, supervision/monitoring, positive discipline, corporal punishment) no significant PTSD effects were observed. In a key longitudinal study of 468 national guard fathers, Gewirtz et al. (2010) demonstrated that an increase in PTSD symptoms from initial assessment to one-year follow up was a predictor of less optimal parenting behaviours on the APQ at one-year (SEM standardized beta = –.36). Basic correlations were also presented, and these suggested that effects were present for each PTSD symptom cluster and mainly related to negative (inconsistent discipline/poor supervision) versus positive parenting practices. In mapping symptom change onto parenting outcomes, this important study moves a step closer to demonstrating causal effects, but the authors note that baseline measurement of parenting would be have been ideal in this respect.

Three studies examined a range of parenting practices using measures other than the APQ. In a study examining dysfunctional discipline practices in mothers who had experienced IPV, findings indicated mothers with PTSD (n = 11) reported significantly greater use of overall dysfunctional discipline strategies (d = 0.95), and reactive discipline in particular (d = 1.15), compared to exposed mothers with no PTSD (n = 14) (Chemtob & Carlson, 2004). Estimated effect sizes were large (calculated by this first author based on data reported in the publication). However, no significant differences were found between mothers with and without PTSD on laxness (e.g. neglect of the child) and verbosity (e.g. use of verbal controls). In one of the larger studies identified, Solomon et al. (2011) measured a range of parenting practices in veteran fathers using a five-item self-report measure, with items indexing: use of physical or verbal violence; extent of father's involvement; cooperation from both parents in raising the child; and ability to meet the physical and emotional needs of the child. A single, total score was calculated. Veteran fathers with PTSD (n = 123) rated their own parenting behaviour as significantly lower on this scale compared to those without PTSD (n = 350). The effect size reported was large (d = 0.86; calculated by the first author). Although the scale used in this study showed good internal consistency, the fact that it combined divergent domains limits interpretability.

Three studies focused on overtly negative parenting practices in the context of parental PTSD. In a large study of parents exposed to varied traumas (Leen-Feldner et al., 2011), those with PTSD (n = 286) were significantly more likely to endorse aggressive parenting practices than parents without PTSD (n = 3644). Specifically, 72.5% of parents with PTSD reported using moderately aggressive parenting practices (e.g. spanking, slapping, grabbing, or pushing), compared to 62.5% of parents without PTSD (Cramer's φ = 0.07; indicating a small effect size); use of severely aggressive parenting practices (e.g. kicking, or hitting with fist) was reported by 4.4% of parents with PTSD versus 2.4% of parents without (φ = 0.22; small effect). The large sample was a particular strength of this study, but no potential confounds were considered in analyses

and a trauma-exposed control group was not specified. Cross et al. (2017) examined the impact of PTSD from lifetime trauma exposure on child abuse potential in low-income mothers ($n = 112$), 97% of whom reported trauma exposure. Findings indicated a significant correlation between mother's PTSD scores and scores from the Child Abuse Potential Index (CAPI; Milner, 1994), with a large effect size ($r = 0.57$). Effects were maintained controlling for extent of maternal trauma exposure ($\beta = .48$). Lastly, in the previously described community sample of mothers ($N = 97$), a proportion of whom had experienced traumas, Chemtob et al. (2013) found that mothers with comorbid depression and PTSD reported elevated levels of physically ($\eta^2 = 0.17$) and psychologically abusive ($\eta^2 = 0.19$) behaviours[3] towards their children, indicating large effect sizes, compared to mothers with no psychopathology diagnosis, depression-only, and PTSD-only. No differences between groups were found regarding child neglect.

3.5.2. Studies using child report of parenting

Only two studies asked children themselves to report on their parenting experiences, which has the advantage of limiting the potential for informant bias. In a sample of adolescents who had a veteran father, those whose father was diagnosed with PTSD ($n = 122$) perceived them as providing significantly less care (Phi = 0.37), and using significantly more affectionless control (Phi = 0.24), compared to those without a paternal PTSD diagnosis ($n = 122$; Marsanic et al., 2014). No significant differences were found between groups regarding affectionate constraint or neglectful rearing practices. In a second study by the same research group, Vukovic et al. (2015) also studied adolescents of veteran fathers. Adolescents of fathers with full PTSD ($n = 108$) rated their fathers as significantly more controlling compared to adolescents of fathers with partial PTSD ($n = 108$) and no PTSD ($n = 108$). Furthermore, paternal care was scored significantly lower in the full and partial PTSD group compared to the non-PTSD group. Effect sizes reported ranged from moderate to large ($n^2 = 0.068–0.195$). Although these studies provide a consistent picture of less caring and more controlling paternal behaviour in association with PTSD, it should be noted that adolescents were recruited from a psychiatric clinic in each case and findings may not generalize to other samples. Importantly, adolescents also reported on maternal parenting, and their perceptions of maternal warmth and care were similarly related to paternal PTSD. This suggests that paternal PTSD associations with parenting may have an underlying cause other than direct symptom effects.

3.5.3. Studies utilizing direct observations of parenting behaviour

Four studies also examined parenting via direct observation. Although observational assessments are considered the gold standard in the parenting field, studies using this approach tended to have modest sample sizes. The focus has been on infancy and childhood, with infancy studies exclusively examining birth-related distress. In their small longitudinal study ($N = 19$), Ionio et al. (2014) found that higher scores of maternal PTSD two-months post-birth were cross-sectionally correlated with parenting during the still face paradigm (two-minute blocks of normal play, followed by still face, then a 'reunion' episode; see Tronick et al., 1978). Although some associations were identified between PTSD and parenting during both play and reunion phases, only one of these was consistent across both (making more mouth sounds; play Adj$R^2 = 0.31$; reunion Adj$R^2 = 0.24$), which was coded as negative behaviour suggesting intrusiveness. Moreover, only nine significant associations were found in total, from an estimated 72 correlations carried out. Given the small sample, evidence, and lack of consistent effects, this study provides little evidence of parental PTSS influences on parenting.

A second study compared mothers who had given birth to pre-term infants, who were classified as PTSD ($n = 16$) versus no PTSD ($n = 31$) based on a self-report questionnaire, and mothers of full-term infants ($n = 25$) (Forcada-Guex et al., 2011). During a 10-minute dyadic interaction at infant age six months, pre-term mother–infant dyads in the maternal PTSD group were more likely to be classed as controlling mother–compliant infant than no PTSD or full-term groups. In addition, pre-term dyads were less likely to be classed as sensitive mother–cooperative infant than full-term dyads, regardless of PTSD status, whereas groups did not differ on the frequency of 'heterogeneous' interaction patterns (Forcada-Guex et al., 2011). Although suggestive, findings are difficult to interpret as parenting style was combined post-hoc with infant responding in all analyses. A further limitation was reliance on retrospective parental reporting of perinatal symptoms at 18-months postpartum.

Two observational studies examined IPV samples. In one of the larger observational studies, mothers exposed to IPV ($n = 17$ meeting diagnostic criteria for PTSD; $n = 30$ with sub-threshold symptoms; $n = 27$ with no PTSD symptoms) were observed during an interaction with their child aged 12 to 48 months (Schechter et al., 2010). Coding of 'atypical' maternal behaviours (e.g. withdrawal, lack of affective communication, and hostility) found no significant differences between groups. Nonetheless, exploratory post-hoc analyses found that maternal PTSD severity predicted the amount of time

the child attempted unsuccessfully to engage the mother in joint attention after (but not before) a separation episode ($\beta = 0.38$, $p < .001$). This finding must be considered in the context of the wider set of null results from this study. In a more recent study by the same group, utilizing a similar method/sample, Schechter et al. (2015) found during a five-minute free play session with their child, mothers with IPV-PTSD or subthreshold IPV ($n = 34$) were significantly less sensitive, and significantly more controlling, compared to mothers who were IPV exposed but did not have PTSD ($n = 22$). Effect sizes were moderate to large (controlling $r = 0.42$; sensitivity $r = -0.51$, respectively). This study used a well-validated parenting index, which was a strength. However, there were some limitations, including the inclusion of subthreshold cases in the PTSD group and associated lack of information about the origin of cut-offs applied to define this group, and the identification of differences in extent of trauma exposure in PTSD versus no PTSD groups that were not controlled for in analyses.

Overall, it is apparent that there is a mix of methodological approaches to investigating the impact of parental PTSD on specific parenting practices. While results generally suggest that parental PTSD is associated with use of more negative parenting practices, studies still have a heavy reliance on parental self-report, which may not provide an accurate representation. However, as the most investigated area, results in relation to parenting practices provide evidence across multiple trauma types, which is positive when generalizing to other trauma exposed populations.

4. Discussion

The available evidence suggests that parental PTSD is associated with elevated levels of parenting stress, as well as being associated with detrimental effects to parenting satisfaction, the parent–child relationship, and the endorsement of negative parenting practices. Such effects are reported relatively consistently, albeit with substantial variability in terms of what is indexed under each of these constructs. At the same time, there are some limitations to the field, which mean that it would be premature to draw firm conclusions.

Studies reviewed provided relatively consistent evidence that parental PTSD is associated with reduced parenting satisfaction, albeit with some contradictory findings. Effect sizes, as well as sample sizes, were generally small, and positive findings derived predominantly from studies of male military veterans – further evidence is needed to establish their generalizability. While there is clearly potential for reduced parenting satisfaction to result in actual impairments in the parent–child relationship, one study to address this failed to identify a pathway from satisfaction to parenting behaviour (Hershkowitz et al., 2017), and this question was generally underexplored. Even if direct implications for parental behaviour and/or child outcomes are not established, poor parental satisfaction seems likely to compound parental distress, which is important in clinical terms (Sherman, Larsen, Starits-Troster, Erbes, & Tassey, 2015). The consequences of reduced parenting satisfaction in the context of PTSD warrant further examination.

While only a small number of studies included investigated the impact of parental PTSD on parenting stress, the results were generally consistent in suggesting parental PTSD is associated with increased parenting stress. The use of the same measure across all four studies is a strength, as is the inclusion of heterogenous trauma samples. However, three of the four studies only reported a total score of the PSI-SF. In order to further unpack and understand the influence each of the measured sub-scales (e.g. perceived difficulty of the child parental distress or parent–child dysfunction) has on parenting stress, future studies should seek to include each of the sub-scale totals in their analysis, as well as the total composite score.

Parental perceptions have also been studied in relation to the parent–child relationship, with studies in this area particularly focusing on PTSD associated with birth experiences. Findings have been mixed: of three studies measuring parents' self-reported bond to their infant, only one provided reliable evidence of an association with PTSD symptoms per se (versus, for example, trauma exposure). Two studies that examined parents' attachment to their infant found little robust evidence of an association with parental PTSD. Finally, one study examined infant attachment to their mother using direct observation in the strange situation and found lower rates of secure attachments, and particularly elevated levels of disorganized infant attachments, in association with maternal PTSD. Effects in this study were substantial, and the study was notable in having an independent (versus parent-reported) indicator of parent–infant relationship quality. Nonetheless, conclusions were based on only 45 participants, 12 with PTSD. As such, although evidence of attachment insecurity in association with parental PTSD is of real concern, given potential links with problematic parenting behaviours and long-term adverse child outcomes across a range of domains, replication of these observations is critically needed.

A substantial proportion of studies in the current review focused on aspects of parenting behaviour, using samples that encompassed a range of trauma types and child ages. Studies based on parental self-report provided relatively consistent evidence that parental PTSD is associated with more negative parenting, including inconsistent/reactive discipline, controlling

behaviours, and displays of overt hostility and aggression. By contrast, positive parenting strategies were not linked to parental PTSD in the subset of studies that examined those, suggesting that associations do not simply reflect more negative parental self-perceptions overall. A recent review of parenting following child maltreatment highlighted that some first-time parents report positive associations between their trauma and their parenting (Christie et al., 2018; Fava et al., 2016). Further, in a recent qualitative study with parents in a South African township, parents were still able to find positive aspects in their relationship with their child despite experiences of trauma (Christie et al., in prep). This may suggest that positive elements of parenting may be conserved even in the context of parental PTSD, which warrants further investigation.

The majority of studies focused on deviations in more normative parenting practices (e.g. inconsistent/reactive discipline or intrusive/controlling behaviours), which nonetheless may increase children's risk for developing both internalizing and externalizing disorders (Padillia-Walker, 2008). However, there were also observations that parental PTSD may result in hostile or more severely aggressive parenting practices, which are of particular concern, albeit with small effect. Importantly, one longitudinal study also provided evidence that *change* in parental PTSD symptoms predicted subsequent parenting behaviours, consistent with a possible causal role of posttraumatic distress. However, parenting was not measured at baseline in this study and other explanations (e.g. the presence of underlying and persistent parenting or family environment problems that exacerbate parental PTSD) could not be ruled out.

By contrast to the evidence based on parents' own reports, studies that used direct observations or child reports of parenting behaviours provided less reliable evidence. Of four studies that used observational assessments with mother–infant dyads, only one found clear evidence of less optimal parenting in association with maternal PTSD (Schechter et al., 2015). Two studies using child/adolescent informants to measure parenting both provided evidence of less optimal parenting in association with parental PTSD. However, these studies found that adolescents who had a veteran father with PTSD reported more negative parenting for both their fathers and their mothers than a comparison group without paternal PTSD. Of course, there could be many reasons why paternal PTSD has a knock-on impact on maternal parenting, but such observations call into question the assumed direct causal impact of PTSD symptoms on parental behaviour. Moreover, studies using child informants had samples of young people selected based on specific characteristics, namely the presence of maltreatment or mental health problems, so findings may not generalize.

Overall, whilst it seems clear that parents with PTSD perceive themselves to be worse parents and obtain less satisfaction from their parenting role, the extent to which this reflects actual parenting impairments is less clear. The reliance on cross-sectional studies in the field is striking, and causal evidence to demonstrate that parental PTSD is having a direct impact on parenting domains is particularly lacking. The possibility that pre-existing or co-occurring risk factors (e.g. poor family environment, substance use) explain associations often cannot be ruled out. The use of rigorous longitudinal methodology to examine temporal influences between parental PTSD and parenting domains over time would provide better evidence of causal influence. Similarly, measurement of parenting in the context of intervention studies could provide powerful evidence of direct causal influences of posttraumatic distress. Both of these approaches will require larger samples than many of those reported in the current review.

Within cross-sectional designs, taking a more rigorous approach to measuring and controlling for key potential confounds is also critical to strengthen the evidence base. First, with some notable exceptions (Bosquet Enlow et al., 2014; Davies et al., 2008), there was limited attention to trauma type and/or symptom severity in the studies reviewed. For example, studies may not have explicitly recruited a Criterion A trauma exposed sample. In cases where a Criterion A trauma sample had been recruited, it was noted that some participants no longer experienced any distress or traumatic symptoms from their trauma exposure, yet this was not taken into account during the analysis. Further, variations in the nature of the trauma may directly impact parental domains (e.g. studies of premature births). The fact that some studies found evidence that trauma per se may be associated with altered parental functioning suggests that the literature as a whole should attempt to take account of key trauma characteristics.

Second, some studies looked at co-occurring mental health problems in parents, particularly parental depression, with mixed conclusions as to whether PTSD effects may be secondary to other forms of psychological disorders (e.g. Davies et al., 2008; Samper et al., 2004). Although disentangling impacts of co-occurring disorders is likely to be challenging, more consistent measurement and analysis in key areas (especially depression and alcohol and substance abuse) is necessary to provide a reliable picture of potential PTSD related impacts.

Third, not all studies reported on or controlled for key demographic characteristics linked to mental health and parenting behaviour (e.g. level of education). More rigorous consideration of potential confounds will considerably strengthen the case for a direct causal influence of parental PTSD on parenting. Finally, making use of multiple informants and/

or independent observations of parenting is crucial to rule out inflation of effects by informant bias. This is especially relevant when measuring the parent–child relationship, as PTSD has been associated with subjective sense of relationship dysfunction which could influence self-report (Schechter et al., 2015).

Although the aim of the current review was to consider *whether* parental PTSD has an impact on parenting, it will also be important to learn more about *why* such impacts are present. In this respect, some of the reviewed studies examined specific PTSD symptom clusters, and there was some evidence that avoidance or hyperarousal may be more strongly related to parenting than intrusive symptoms (Berz et al., 2008; Samper et al., 2004). This is consistent with qualitative evidence in which feelings of irritability/anger and a need to avoid trauma reminders were viewed as particularly problematic by trauma exposed parents (Christie et al., in prep; Sherman et al., 2015), but requires more examination. Such work may ultimately provide better information about whether and how interventions for PTSD are simultaneously likely to deliver improvements in parenting domains.

Some further considerations should be taken into account in interpreting the current findings. Due to the fundamental complexity of parenting as a construct, there was significant variation across studies with regards to focal domains, and there were associated inconsistencies in terms of the precise nature and magnitude of effects reported. Many studies had modest sample sizes, which also limits potential to obtain precise estimates of effect sizes. The quality ratings of some of the included studies were classed as low to moderate due to issues with the conduct and reporting of the research. Certain types of trauma (particularly birth and military trauma) are disproportionately represented in the literature, which limits generalizability, and fathers are under-represented in parental PTSD research. Future research should seek to address these issues.

5. Conclusion

Parental PTSD may have a negative impact on parenting domains, but it is not clear whether effects are equally likely to apply across all trauma populations, and causal evidence is extremely limited. In addition, some methodological limitations in the extant literature need to be addressed. Nonetheless, clinicians should be conscious of the potential for PTSD to have an impact on parents and their parenting domains. An awareness of these negative impacts could give rise to more tailored support being provided for families following a parent's trauma exposure.

Notes

1. A full reference list of all studies included in the review can be found in Supplemental data.
2. A subset of findings from studies have been reported in previous sections (Chemtob et al., 2013; Forcada-Guex et al., 2011; Hershkowitz et al., 2017).
3. As measured by the parent-to-child version of the Conflict Tactics Scale (CTS-PC).

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Author contributions

HC carried out the literature research and paper screening. FAC assisted HC in the inclusion and exclusion process, as well as in quality checking a proportion of final included articles. HC drafted the initial manuscript. All authors contributed towards the editing process. All authors read and approved the final manuscript.

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References

Abidin, R. R. (1995). *Parenting Stress Index*. Odessa: Psychological Assessment Resources.

Ainsworth, M. D. S. (1969). Object relations, dependency, and attachment: A theoretical review of the infant-mother relationship. *Society for Research in Child Development, 40*(4), 969–1025.

American Psychiatric Association. (2013). *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.). Washington, DC: Author.

Berg-Nielsen, T. S., Vikan, A., & Dahl, A. A. (2002). Parenting related to child and parental psychopathology: A descriptive review of the literature. *Clinical Child Psychology and Psychiatry, 7*(4), 529–552.

Christie, H., Hamilton-Giachritsis, C., Alves-Costa, F., Tomlinson, M., Stewart, J., Skeen, S., … Halligan, S. (in prep). "I have a child that benefits nothing from me" - exploring parents' experiences following trauma: A qualitative study in a South African township. Manuscript in preparation.

Christie, H., Talmon, A., Schäfer, S. K., de Haan, A., Vang, M. L., Haag, K., … Brown, E. (2018). The transition to parenthood following a history of childhood maltreatment: A review of the literature on prospective and new parents' experiences. *European Journal of Psychotraumatology*, *8*(Supplement 7), 1492834.

Creech, S. K., & Misca, G. (2017). Parenting with PTSD: A review of research on the influence of ptsd on parent–child functioning in military and veteran families. *Frontiers in Psychology*, *8(1001)*, 1–8.

Deater-Deckard, K. (1998). Parenting stress and child adjustment: Some old hypotheses and new questions. *Clinical Psychology: Science and Practice*, *5*, 314–332. doi: 10.1111/j.1468-2850.1998.tb00152.x

Elgar, F. J., Waschbusch, D. A., Dadds, M. R., & Sigvaldason, N. (2007). Development and validation of a short form of the alabama parenting questionnaire. *Journal of Child and Family Studies*, *16*(2), 243–259.

Fava, N. M., Simon, V. A., Smith, E., Khan, M., Kovacevic, M., Rosenblum, K. L., … Muzik, M. (2016). Perceptions of general and parenting-specific posttraumatic change among postpartum mothers with histories of childhood maltreatment. *Child Abuse & Neglect*, *56*, 20–29.

Frick, P. J. (1991). The Alabama Parenting Questionnaire. Unpublished rating scale, University of Alabama

Hawker, S., Payne, S., Kerr, C., Hardey, M., & Powell, J. (2002). Appraising the evidence: Reviewing disparate data systematically. *Qualitative Health Research*, *12*(9), 1284–1299.

Kessler, R. C., Sonnega, A., Bromet, E., Hughes, M., & Nelson, C. B. (1995). Posttraumatic Stress Disorder in the National Comorbidity Survey. *Archives of General Psychiatry*, *52*(12), 1048–1060.

Lambert, J. E., Holzer, J., & Hasbun, A. (2014). Association between parents' PTSD severity and children's psychological distress: A meta-analysis. *Journal of Traumatic Stress*, *27*(1), 9–17.

Leen-Feldner, E. W., Feldner, M. T., Knapp, A., Bunaciu, L., Blumenthal, H., & Amstadter, A. B. (2013). Offspring psychological and biological correlates of parental posttraumatic stress: Review of the literature and research agenda. *Clinical Psychology Review*, *33*(8), 1106–1133.

Milner, J. S. (1994). Assessing physical child abuse risk: The child abuse potential inventory. *Clinical Psychology Review*, *14*(6), 547–583.

Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., & Group, T. P. (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *PLoS Medicine*, *6*(7), e1000097.

Morris, A., Gabert-Quillen, C., & Delahanty, D. (2012). The association between parent PTSD/Depression symptoms and child PTSD symptoms: A Meta-Analysis. *Journal of Pediatric Psychology*, *31* (10), 1076–1088.

O'Connor, T. G. (2002). Annotation: The'effects'of parenting reconsidered: Findings, challenges, and applications. *Journal of Child Psychology and Psychiatry*, *43*(2), 555–572.

Padilla-Walker, L. M. (2008). Domain-appropriateness of maternal discipline as a predictor of adolescents' positive and negative outcomes. *Journal of Family Psychology*, *22*(3), 456–464. doi: 10.1037/0893-3200.22.3.456

Sherman, M. D., Larsen, J., Starits-Troster, K., Erbes, C., & Tassey, J. (2015). Veteran–Child communication about parental PTSD: A mixed methods pilot study. *Journal of Family Psychology*, *29*(4), 595–603.

Tronick, E., Als, H., Adamson, L., Wise, S., & Brazelton, T. B. (1978). The infant's response to entrapment between contradictory messages in face-to-face interaction. *Journal of the American Academy of Child Psychiatry*, *17*, 1–13 .

van Ee, E., Kleber, R. J., & Jongmans, M. J. (2016). Relational patterns between caregivers with ptsd and their nonexposed children: A review. *Trauma, Violence & Abuse*, *17*(2), 186–203.

Appendix 4: Paper 2 and 3 Ethical approvals

-------- Original Message --------
Subject: Ethics 14-035
Date: Wed, 05 Mar 2014 15:07:08 +0000
From: Psychology Ethics Committee <psychology-ethics@bath.ac.uk>
To: Sarah Halligan <S.L.Halligan@bath.ac.uk>

Dear Sarah Halligan

Reference Number 14-035

The ethics committee have considered your application for the study entitled 'Parental responses to child experiences of trauma: PROTECT study' and have given it full ethical approval.

Best wishes with your research.

Yours sincerely

Dr Helen Lucey
Chair Psychology Ethics Committee
University of Bath

Information about making an ethics application can be found at http://moodle.bath.ac.uk/course/view.php?id=52192

NHS
Health Research Authority

NRES Committee South Central - Oxford A
Bristol Research Ethics Committee Centre
Whitefriars
Level 3 Block B
Lewins Mead
Bristol
BS1 2NT

Telephone: 0117 342 1331

12 February 2014

Dr Sarah Halligan
Reader in Developmental Psychopathology
University of Bath
Department of Psychology
University of Bath
Bath
BA2 7AY

Dear Dr Halligan

Study title: **Parental Responses to Child Experiences of Trauma: the Role of Trauma Specific Behaviours and Parenting Style in Facilitating Child Psychological Adjustment**
REC reference: **13/SC/0599**
IRAS project ID: **137454**

Thank you for your letter of 11 February 2014. I can confirm the REC has received the documents listed below and that these comply with the approval conditions detailed in our letter dated 22 January 2014

Documents received

The documents received were as follows:

Document	*Version*	*Date*
Covering Letter		11 February 2014
Participant Information Sheet: Parent	3	10 February 2014
Participant Information Sheet: Children (6-10 years)	3	10 February 2014

Approved documents

The final list of approved documentation for the study is therefore as follows:

Document	*Version*	*Date*

Advertisement	Leaflet for Emergency Department 1	06 November 2013
Advertisement	Poster for Emergency Department v.2	08 January 2014
Covering Letter		11 February 2014
Investigator CV	Sarah Halligan	
Letter from Sponsor		18 October 2013
Letter of invitation to participant	Emergency Department v.2	08 January 2014
Letter of invitation to participant	Postal v.2	08 January 2014
Other: Letter from Funder		22 July 2013
Other: ESRC grant reviews		
Other: Background Interview Schedule	1	06 November 2013
Other: DSM		
Other: Child Trauma Narrative	1	06 November 2013
Other: Parent Child Joint Recall	1	06 November 2013
Other: Puzzle Task	1	06 November 2013
Other: University of Bath Policy: 4.2.24 Off-Campus working, Field trips and Work Placements	(February 2012)	
Participant Consent Form: Parent	2	08 January 2014
Participant Consent Form: Child Assent Form	1	08 January 2014
Participant Information Sheet: Child age 11-13 years	2	08 January 2014
Participant Information Sheet: Parent	3	10 February 2014
Participant Information Sheet: Children (6-10 years)	3	10 February 2014
Protocol	1	06 November 2013
Questionnaire: Parental Overprotection scale		
Questionnaire: Posttraumatic Diagnostic Scale		
Questionnaire: Depression Anxiety Stress Scales		
Questionnaire: UCLA PTSD Reaction Index		
Questionnaire: Revised Children's anxiety and Depressions Scales		
Questionnaire: Child Postraumatic Cognitions Inventory		
Questionnaire: Parental Trauma Responses Questionnaire	1	06 November 2013
Questionnaire: Modified Child Trauma Memory Questionnaire	1	06 November 2013
Questionnaire: Child Posttraumatic Coping Scales	1	06 November 2013
REC application		
Response to Request for Further Information		15 January 2014

You should ensure that the sponsor has a copy of the final documentation for the study. It is the sponsor's responsibility to ensure that the documentation is made available to R&D offices at all participating sites.

13/SC/0599	Please quote this number on all correspondence

Yours sincerely

Miss Gemma Oakes
REC Assistant

E-mail: nrescommittee.southcentral-oxforda@nhs.net

Copy to: *Prof Jane Millar, j.i.millar@bath.ac.uk*
Ms Susan George, susan.george@uhbristol.nhs.UK

Appendix 5: Paper 2 and 3 Information sheets

University Hospitals Bristol NHS
NHS Foundation Trust

UNIVERSITY OF BATH

PROTECT STUDY

Parental Responses to Child Experiences of Trauma

We would like to invite you to take part in our research study. Before you decide we would like you to understand why the research is being done and what it would involve for you. Talk to others about the study if you wish.

***Part 1** tells you the purpose of this study and what will happen if you take part.*

***Part 2** gives you more detailed information about the conduct of the study.*

Ask us if there is anything that is not clear.

Purpose of the study

We are conducting a research study looking at how young people cope shortly after being involved in any kind of frightening experience. Many children experience distress following such experiences, and for some this is severe and prolonged. Parents are usually the main source of support for children following traumatic events, and we want to learn more about the ways in which they provide that support. If we can identify things that parents do that are particularly helpful for children, then in the future we will be able to provide better information for families and professionals regarding ways of helping children to cope with traumatic events.

Why have I been invited?

You have been invited to take part because your child was recently taken to the hospital Emergency Department following a potentially frightening experience. Even if you/your child didn't see the experience as being particularly frightening you may still be able to join in our study.

Do we have to take part?

No, it is up to you and your child to decide. If you do want to join in then you'll be asked to sign a consent form, a copy of which you can keep with this information sheet. Even if you do consent to join the study, both you and your child will be free to withdraw at any point *without giving us a reason*. You will not be treated any differently by any NHS service if you choose not to participate in this study or if you decide to withdraw.

What the study will involve?

We would like you and your child to meet with the study researchers about 2-weeks after going to the Emergency Department, and again 6 months later. Researchers will come to you in your home, or you can come to us if you prefer. In addition, 3-months after the first assessment, you and your child will be sent some questionnaires to fill in.

During the research visits, you and your child will be asked about the event that caused your child to be taken to the Emergency Department, and any reactions since the experience. You and your child will also be invited to together talk about what happened. You and your child will also be asked to work on some puzzles together and to fill in some questionnaires. Questionnaires particularly ask about any feelings of anxiety and distress experienced by you and/or your child since the event, how you think and feel about the event, and how you and your child have coped. With your agreement, we will audio and/or video record some sections of the visit, so that we can carry out a detailed examination of responses to our interviews. If you and your child are willing, we may also ask your child to wear a small, comfortable monitor called a BioRadio for part of the visit. This will give us information about heart rate which can help us to understand your child's emotional responses. [Note that heart rate assessments are only suitable for research purposes, and study investigators are not qualified to detect abnormalities in heart rate or provide a 'clean bill of health'. Nonetheless, in the unlikely event of something abnormal being noticed, we will contact you to recommend follow up by your child's GP.] The 3-month questionnaires also ask you and your child about how you have been getting on since going to the hospital. They can be sent to you by post or filled in online.

The first visit will last about 2 hours and the second visit will be shorter, lasting about 1 hour. The 3-month questionnaires will take about 20-minutes to fill in for each of you.

Expenses and payments

As a thank you for taking part, we are able to give families in our study £20 for each study visit and £5 for filling in study questionnaires at 3-months. In addition, if taking part in our study results in costs for you (e.g., if you decide to travel to us for assessments) then we can also cover these, including compensation for loss of earnings if you are forced to take time off work for study visits.

Optional extra questionnaires for parents of children who have sustained a mild head injury

We are collecting some optional extra information from the parents of children who have sustained a mild head injury, involving questions particularly relevant to this group. This optional component will involve parents completing one additional questionnaire at the time of the first assessment and two brief questionnaires at the 3-month follow-up. It is completely up to you whether you complete this additional part of the study. Your child will not need to do anything extra.

If you choose to complete the additional questionnaires specific to head injury at the first assessment and at 3-months, we are able to offer you an additional £5 retail voucher.

Might anything about the research upset me or my child?

Although talking about frightening events can be upsetting, we do not think that it is likely that the adults or young people taking part in our study will become very distressed as a result. If the study visits or questionnaires do prove very distressing for you or your child, study researchers will be available to help. You and your child can always decide to take a break, stop taking part, or talk to study researchers about your feelings. If we have concerns following an assessment, we will contact you within a few days to check how you and your child are getting along. If necessary, we can put you

in touch with health professionals who are experienced in working with young people and their parents.

What are the possible benefits of taking part?

There is no intended direct benefit to taking part, although some people find it helpful to have the chance to talk about distressing events. The information we get from this study will help to improve the support that is available to other children and their families following trauma.

What if we are experiencing emotional difficulties after the frightening experience?

If, at the end of the study, we think that you or your child might be suffering from any serious problems relating to the frightening event, we will talk to you about the possibility of receiving help through your GP and your local NHS services. Similarly, if you or your child needs psychological support during the course of the study we can assist you in obtaining help.

What if there is a problem?

Any complaint about the way you have been dealt with during the study or any possible harm you might suffer will be addressed. The detailed information on this is given in Part 2.

Will my taking part in the study be kept confidential?

Yes. We will follow ethical and legal practice and all information about you will be handled in confidence. The details are included in Part 2.

Thank you! This completes part 1.

If the information in Part 1 has interested you and you are considering participation, please read the additional information in Part 2 before making any decision.

If you have questions or want to know more you can ask study researchers at any time.

Rachel Hiller, phone: 01225 383794, email: protect-study@bath.ac.uk

Information Sheet Part 2: Study Conduct

Who is running this study?

The study is being run by the University of Bath, and the Economic and Social Research Council (ESRC), who is funding the study. The information collected will also, in part, fulfil an educational requirement.

Confidentiality

All information collected during the research will be kept strictly confidential. The assessments that you complete will be stored under an anonymous ID number, not by name, and will be kept securely in locked cabinets or on secure servers at the University of Bath. Assessments will only be accessed by study researchers. The only time that we would share your information without your agreement is if we believe that you or someone else is at serious risk of harm. In this case, we would talk to you first.

Your assessments will be kept for 10-years following completion of the study and then will be destroyed. The consent form includes a request for your permission to keep personal contact details in our records so that we can contact you again after the study has finished if needed. Personal contact details will be stored separately from study assessments. Whether or not you agree to your details being kept for this purpose is up to you.

The results of the study may be published in order to help other families who have been in frightening events, but we would not publish any details that might identify you or your child. We will also make some anonymous study data available to other scientists (in line with ESRC policy); it is up to you whether the information that you provide to us is shared in this way (see consent form). We would not share your personal details or other information that is likely to identify you or your child.

What happens to our information if we withdraw from the study?

If you withdraw from the study it is up to you whether we use any information we have already collected. If you want your information to be removed from the study then you just need to let us know and your assessments will be destroyed.

Has this research study been approved by an ethics committee?

Yes, this study has received a favourable ethics opinion from the South Central – Oxford A Research Ethics Committee and the University of Bath Psychology Research Ethics Committee.

I have some questions about this study, who do I contact?

You can contact Dr Sarah Halligan at the University of Bath, who is in charge of this project. Her address and contact details are:

Address: Department of Psychology, University of Bath, Bath BA2 7AY

Direct line: 01225 386636

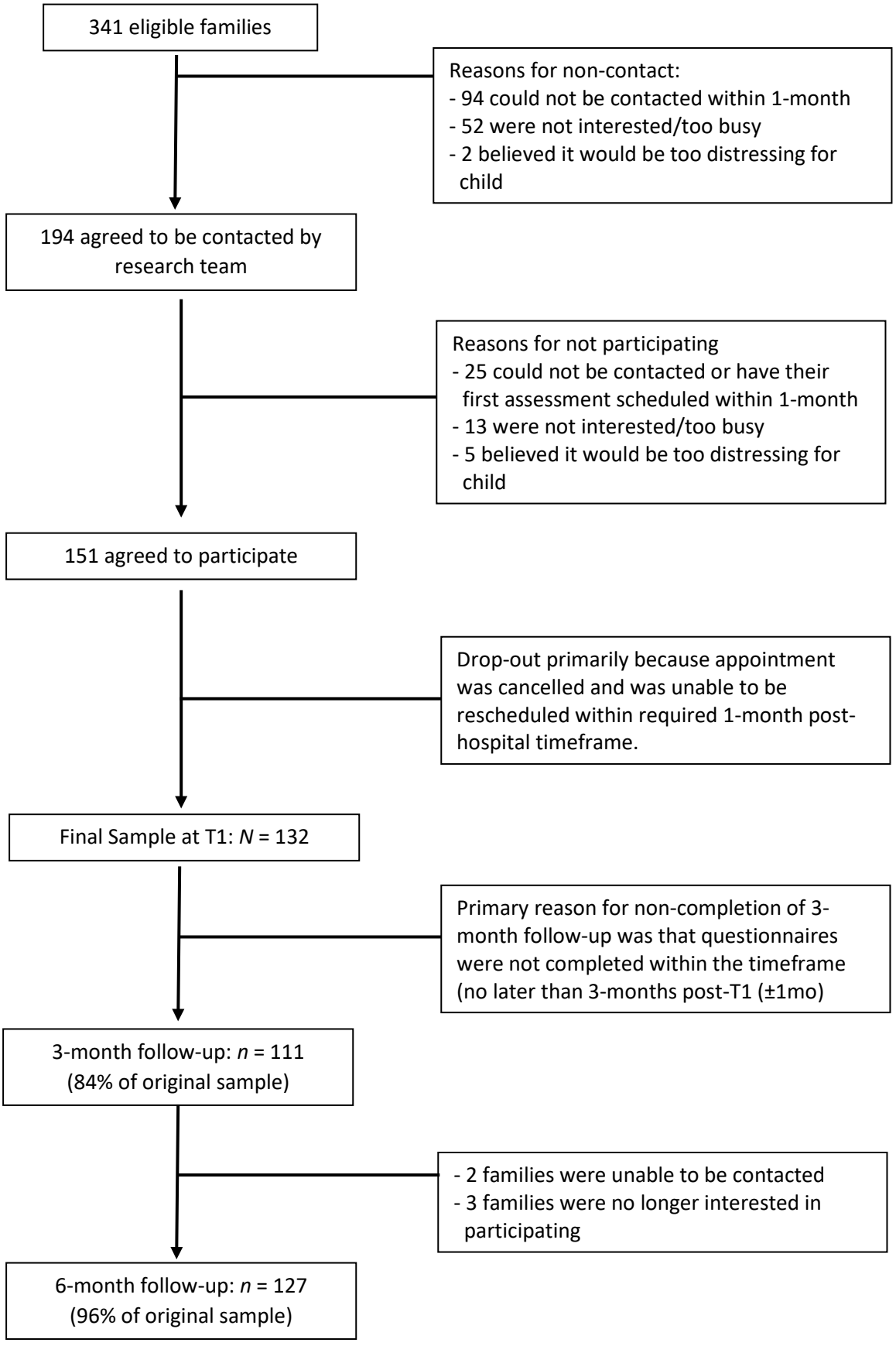
Email: s.l.halligan@bath.ac.uk

What if I am not happy about the research study?

If you have a concern about any aspect of this study, you should speak to Sarah Halligan (contact details above) who will do her best to answer your questions. If you remain unhappy and wish to complain formally, you can do this by contacting Professor Bas Verplanken, Head of the Department of Psychology at the University of Bath (PA 01225 383843; b.verplanken@bath.ac.uk), or the University Hospitals Bristol NHS Patient Support and Complaints Team (0117 342 3604; pals@uhbristol.nhs.uk).

Thank you very much for reading this information sheet about the PROTECT study.

Appendix 6: Paper 2 and 3 Recruitment flow chart (Supplementary material)

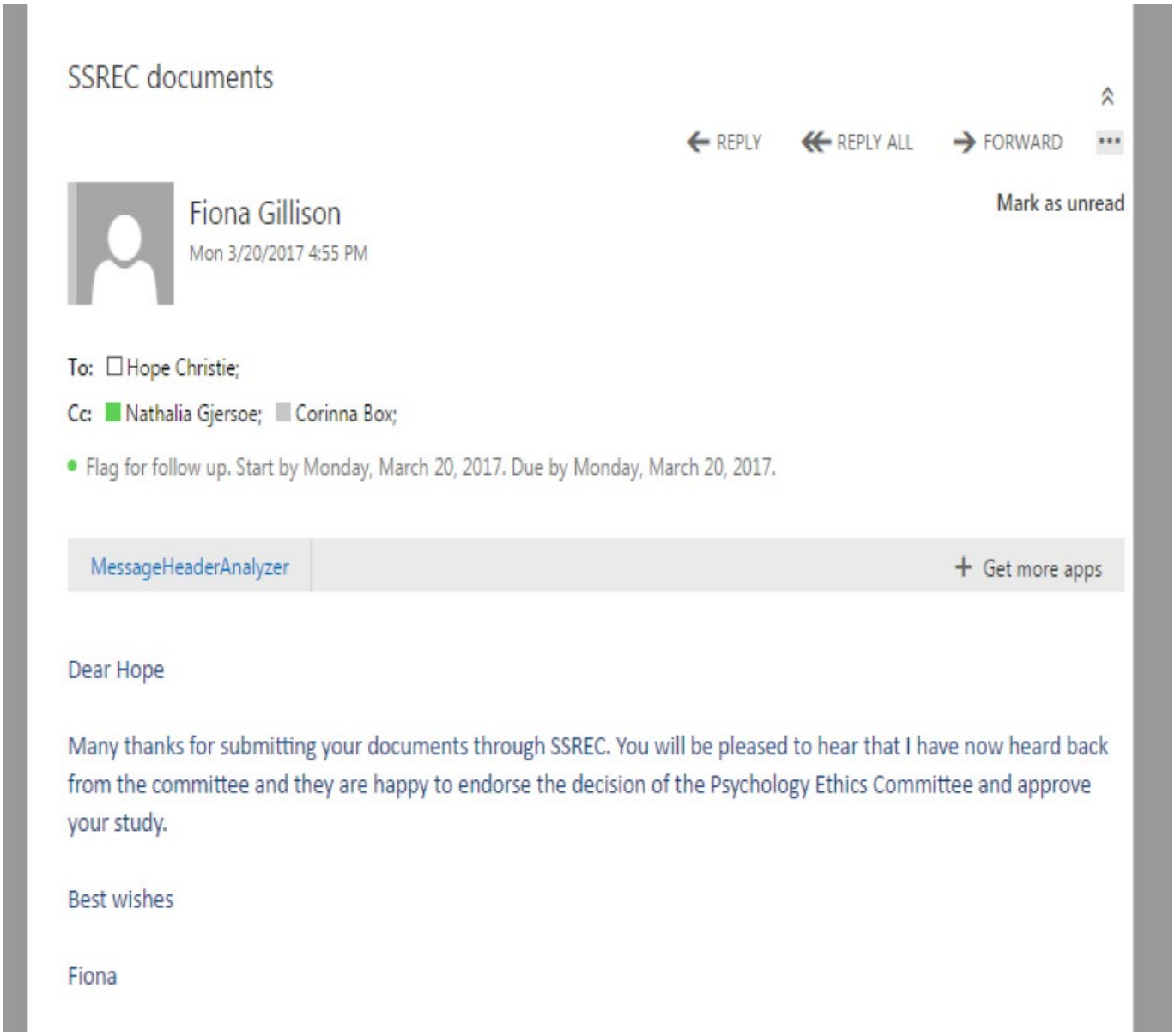


Appendix 7: Paper 3 Overview of observed parent behaviour scoring manual

PROTECT Parenting behaviour coding instructions

1. Coding commences as soon as the instructor leaves the laboratory and all parent and child behaviours are coded at one-minute intervals. Coders have to pause the tape after each minute and code only the interactions within that minute. Each one-minute interval is rated independently.
2. The parent-child interactions are coded until 10 seconds after the task ends, however long the task might be, unless recording is stopped before the task is finished.
3. For the last minute interval of the task, one should code it as a minute segment if the duration is equal to or over 30 seconds. Alternatively, if the last minute interval of the task is below 30 seconds, the behaviours will be incorporated into the last minute.
4. Most of the codes are rated on a 5-point Likert scale: it is important not to over-code 3 as some demonstration of particular code/ scale or meaningful differences will be lost.
5. When coding, it is important to take into account both the qualitative and the quantitative aspects of a specific construct (i.e. the number of instances [if behaviour is countable], the length and intensity of behaviour). The tone of voice also has to be taken into account for coding as the exact same phrase conveys different meanings in different tones.
6. When coding parental behaviour, it is important to take into account the context and the child behaviour. If parental behaviour occurs in response to the child's behaviour, the parent's rating may be adjusted on particular scales (see actual coding descriptions for further information).
7. If the coder is uncertain about the rating/ scoring of a particular minute interval, he should watch the minute segment again before deciding on the rating. If it is still undecided e.g. between a 3 or a 4, then the coder could give 1 minute interval a 3 and another minute interval a 4 so that the rating will be averaged out.
8. Sensitive responsiveness and quality of relationship should be coded last because these are more reliably/ accurately rated after all aspects of parental and child behaviours are reviewed.

Appendix 8: Paper 4 Ethical approvals



SSREC documents

REPLY REPLY ALL FORWARD

Fiona Gillison

Mon 3/20/2017 4:55 PM

Mark as unread

To: Hope Christie;

Cc: Nathalia Gjersoe; Corinna Box;

Flag for follow up. Start by Monday, March 20, 2017. Due by Monday, March 20, 2017.

MessageHeaderAnalyzer + Get more apps

Dear Hope

Many thanks for submitting your documents through SSREC. You will be pleased to hear that I have now heard back from the committee and they are happy to endorse the decision of the Psychology Ethics Committee and approve your study.

Best wishes

Fiona

Part of the research infrastructure for Wales funded by the National Institute for Social Care and Health Research, Welsh Government.
Yn rhan o seilwaith ymchwil Cymru a ariannir gan y Sefydliad Cenedlaethol ar gyfer Ymchwil Gofal Cymdeithasol ac Iechyd, Llywodraeth Cymru

NISCHR RES
Gwasanaeth Moeseg Ymchwil | Research Ethics Service

South East Wales Research Ethics Committee, Panel C
Sixth Floor, Churchill House
17 Churchill Way
Cardiff CF10 2TW
Telephone : 029 2037 6823

E-mail : carl.phillips@wales.nhs.uk

Website : www.nres.nhs.uk

23 March 2012

Professor Jonathan I Bisson
Director of Research and Development
Cardiff University School of Medicine
& Cardiff & Vale University Health Board
2nd Floor TB2
University Hospital of Wales
Heath Park, Cardiff
CF14 4XW

Dear Professor Bisson

Study title:	**Establishment of an all-Wales cohort of patients with Post-traumatic stress disorder (PTSD) for future mental health research.**
REC reference:	**12/WA/0037**
Protocol number:	**SPON 1075-12**

Thank you for your letter of the 21 March 2012, responding to the Committee's request for further information on the above research and for submitting revised documentation.

The further information has been considered on behalf of the Committee by the Chair.

Confirmation of ethical opinion

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation [as revised], subject to the conditions specified below.

Ethical review of research sites

NHS sites

The favourable opinion applies to all NHS sites taking part in the study, subject to management permission being obtained from the NHS/HSC R&D office prior to the start of the study (see "Conditions of the favourable opinion" below).

Conditions of the favourable opinion

The favourable opinion is subject to the following conditions being met prior to the start of the study.

- Management permission or approval must be obtained from each host organisation prior to the start of the study at the site concerned.
- Management permission ("R&D approval") should be sought from all NHS organisations involved in the study in accordance with NHS research governance arrangements.
- Guidance on applying for NHS permission for research is available in the Integrated Research Application System or at http://www.rdforum.nhs.uk.
- Where a NHS organisation's role in the study is limited to identifying and referring potential participants to research sites ("participant identification centre"), guidance should be sought from the R&D office on the information it requires to give permission for this activity.
- For non-NHS sites, site management permission should be obtained in accordance with the procedures of the relevant host organisation.
- Sponsors are not required to notify the Committee of approvals from host organisations
- It is the responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).

Approved documents

The final list of documents reviewed and approved by the Committee is as follows:

Document	Version	Date
Evidence of insurance or indemnity	Cardiff University	06 July 2011
GP/Consultant Information Sheets	2	05 January 2012
Investigator CV	Professor J Bisson	27 January 2012
Letter from Sponsor	Cardiff University	18 January 2012
Other: Structured Clinical Interview	4	13 December 2011
Participant Consent Form	3	21 March 2012
Participant Information Sheet	5	21 March 2012
Protocol	4.1	10 January 2012
Questionnaire: Self Complete Questionnaire Booklet	3	13 January 2011
REC application	3.4	20 January 2012
Response to Request for Further Information	J I Bisson	21 March 2012

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

After ethical review

Reporting requirements

The attached document *"After ethical review – guidance for researchers"* gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

- Notifying substantial amendments
- Adding new sites and investigators
- Notification of serious breaches of the protocol
- Progress and safety reports
- Notifying the end of the study

The NRES website also provides guidance on these topics, which is updated in the light of changes in reporting requirements or procedures.

Feedback

You are invited to give your view of the service that you have received from the National Research Ethics Service and the application procedure. If you wish to make your views known please use the feedback form available on the website.

Further information is available at National Research Ethics Service website > After Review

12/WA/0037	**Please quote this number on all correspondence**

With the Committee's best wishes for the success of this project

Yours sincerely

Mrs J Jenkins
Chair, Panel C
South East Wales Research Ethics Committees
Email: Carl.phillips@wales.nhs.uk

Enclosures: "After ethical review – guidance for researchers" [SL-AR2]

Copy to: R&D office for Cardiff University (resgov@cardiff.ac.uk)

R&D office for Cardiff & Vale University Health Board
(cav_research.development@wales.nhs.uk)

BissonJI@cardiff.ac.uk

Appendix 9: Paper 4 Participant information sheet

Parent's Experiences of Trauma

We would like to invite you to take part in our research study. Before you decide we would like you to understand why the research is being done and what it would involve for you. Talk to others about the study if you wish.

Thank you for taking the time to read this information sheet. Below you will find information on the purpose of this study, what will happen if you take part and who you need to contact if you have any questions.

Please feel free to ask if anything is not clear

Purpose of the study

Many adults who experience trauma are also parents with dependent children. We are conducting a research study looking at parents' experiences of trauma, how cope following a traumatic event and what support they use. By gaining a better understanding of parents' experiences and ways of coping following a traumatic event, we may be able to provide better information for parents and their families regarding ways to cope with traumatic events.

Who is in the research team?

The lead researcher is Hope Christie, who is a PhD student at the University of Bath. This work will form part of her PhD thesis. Hope is being supervised by Dr Sarah Halligan and Dr Catherine Hamilton-Giachritsis, who both work at the University of Bath.

Why have I been invited to participate?

You have been approached as you have experienced a traumatic event and you are a parent to a child or children (aged 0 – 18 years).

What will the study involve?

Should you chose to take part you will be asked to fill in a small number of short questionnaires about yourself and your family. Questionnaires will be sent to you at home, either by post or electronically, and will take 20 to 30 minutes to complete.

In addition you will be invited to take part in a telephone or skype interview. The study researcher will spend about 40 minutes asking you some questions. These questions will be about possible ways in which your experience of trauma has changed you and / or your family life, and how you have tried to cope or get support after the event. With your agreement, we will audio-record the interview so that we can carry out a detailed

examination of responses to our interviews (your name and anything that would identify you will be removed). You will be asked to take part in this interview alone with the researcher so you have a chance to talk openly about how you have been feeling.

If you would prefer that a researcher came to your home and goes through questionnaires and interview questions with you, this may be possible to arrange and you should discuss this with the study researcher.

Will I benefit from taking part in this research?

There is no intended direct benefit to taking part in this study, although some people find it helpful to have the chance to talk about their experiences. However, it is hoped that the information we get from this study will help improve the support that is available to parents and their families following the parent's experience of a traumatic event.

Are there any risks involved for me taking part in this research?

Although talking about how you have been managing since the event(s) could raise a number of different emotions, we do not think that it is very likely that taking part in our study will cause you to become distressed. However, if the interview or any of the questionnaires do prove very distressing for you, then you can stop completing assessments or withdraw from the study at any time. You will be able to contact or speak to the study researcher about this. The study researcher may discuss with you the option of seeking help from your GP. Alternatively, if you are currently seeing a mental health professional then you may wish to contact them, or discuss how you are feeling with them during your next session together.

What happens to my information if I withdraw from the study?

If you withdraw from the study, it is up to you whether we use any information we have already collected. If you want your information to be removed from the study then you just need to let us know and the information you gave us will be destroyed.

What about confidentiality?

All information collected during the research will be kept strictly confidential. The assessments that you complete will be stored under an anonymous ID number, not by name, and will be kept securely in locked cabinets or on secure servers at the University of Bath. Assessments will only be accessed by the research team. Your assessments will be kept for at least 10 years following completion of the study (as required by the British Psychological Society code of conduct).

The only situation in which your information may be shared is if you told us anything that made us worry for your own or someone else's safety. In that case we would talk to you about this, and discuss whether it is necessary to contact your doctor or other services.

The results of the study may be published in order to help other parents who have experienced traumatic events, but we would not publish any details that might identify

you. We would not share your personal details or other information that is likely to identify you. However, we may use anonymous quotes.

Will I be paid to take part in this study and are there any costs involved?

You will be given a voucher as a thank you for your time

Sources of support

If you feel like questions from the interview, or from the questionnaires that you have completed have caused you some distress then we would advise that you speak with your GP. Or, if you are currently in the process of seeing a mental health professional, then you could perhaps raise your feelings with them during your next session.

If you are interested in informal help or support then please see the back of the information sheet.

Is there anything else that you should know or do?

You can contact Dr Sarah Halligan at 01225 386636 (s.l.halligan@bath.ac.uk) if you have any further questions.

You can also contact the Head of the University of Bath Research Ethics Committee, Dr N Gjerose, at n.gjersoe@bath.ac.uk or the Head of the Psychology Department, Professor Greg Maio, at G.R.Maio@bath.ac.uk if you have any concerns or complaints about the study.

You will receive a copy of this information and consent form for your own records.

Thank you very much for reading this information sheet!

If you have questions or want to know more you can ask study researchers at any time.

Hope Christie, phone: 01225 384014, email: h.christie@bath.ac.uk

Dr Sarah Halligan: email: s.l.halligan@bath.ac.uk

Dr Catherine Hamilton-Giachritsis: email: c.hamilton-giachritsis@bath.ac.uk

Phone a help line – your call is confidential and you don't have to tell them who you are.

Samaritans: 08457 90 90 90
Samaritans Wales: 116 123 (this number is FREE to call)
Welsh Language Line: 0808 164 0123 - this number is free to call (from 7pm - 11pm 7 days a week)

Mind info line: 0300 123 3393

A list of online mental health support services can be found here:

http://www.mind.org.uk/information-support/guides-to-support-and-services/

If you want to talk to someone face-to-face:

Samaritans have an offices in:

Bristol at 37 St Nicholas Street, Bristol, BS1 1TP (telephone: 0117 983 1000). The office is open 7-days a week between 7.30am and 9.00pm.

Cardiff at 75 Cowbridge Road, East Canton, Cardiff, CF11 9AF (telephone: 029 2034 4022 (local call charges apply)). They can also be contacted via email (jo@samaritans.org). The office is open during the following times: Usual hours open to receive callers at the door:

Monday: 3pm - 9pm	Thursday: 9am - 9pm
Tuesday: 9am - 9pm	Friday: 12pm - 9pm
Wednesday: 9am - 9pm	Saturday: 12pm - 3pm
Thursday: 9am - 9pm	Sunday: 9am - 9pm

Mind have an offices in:

Bath - 13 Abbey Church Yard Bath, North Somerset , BA1 1LY (Phone: 01225 316199). They can also be contacted via email (admin@bathmind.org.uk; Contact: Christopher Hailstone). The office is open Monday – Friday 9am – 4pm.

Bristol - 35 Old Market Street, Old Market, Bristol, BS2 0EZ (Phone: 0117 9800370). They can also be contacted via email (officecoordinator@bristolmind.org.uk). The office is open Monday, Wednesday and Thursday: 9.30am - 4.45pm.

Newport - 100-101, Commercial Street, Newport, NP20 1LU (Phone: 01633 258741). They can also be contacted via email (admin@newportmind.org). The office is open Monday to Friday: 9am-5pm

Appendix 10: Paper 5 Ethical approvals

psychology-ethics

Fri 11/18/2016 9:53 AM
South Africa
To:
Hope Christie;

Flag for follow up. Start by Friday, November 18, 2016. Due by Friday, November 18, 2016.
You replied on 11/18/2016 9:57 AM.

MessageHeaderAnalyzer

Dear Hope,

Sorry, I thought when you said 'Prior to approval, the ethics committee had asked me to make some amendments to my information sheet' you were referring to the Bath University ethics committee.

I am happy to grant the proposal full ethical approval via Chair's Action. Your internal ethics code is 16-302.

Best of luck with your data collection,
Dr. Nathalia Gjersoe
Chair, Psychology Ethics Committee

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Approval Notice

Response to Modifications- (New Application)

14-Nov-2016
Tomlinson, Mark MR

Ethics Reference #: N16/09/105

Title: **Parents' Experiences Following Trauma: How does trauma impact on parenting and the family dynamic?**

Dear Prof Mark Tomlinson,

The **Response to Modifications** - *(New Application)* received on **02-Nov-2016**, was reviewed by members of **Health Research Ethics Committee 1** via Expedited review procedures on **14-Nov-2016** and was approved.
Please note the following information about your approved research protocol:

Protocol Approval Period: **14-Nov-2016 -13-Nov-2017**

Please remember to use your **protocol number** (**N16/09/105**) on any documents or correspondence with the HREC concerning your research protocol.

Please note that the HREC has the prerogative and authority to ask further questions, seek additional information, require further modifications, or monitor the conduct of your research and the consent process.

After Ethical Review:
Please note a template of the progress report is obtainable on www.sun.ac.za/rds and should be submitted to the Committee before the year has expired. The Committee will then consider the continuation of the project for a further year (if necessary). Annually a number of projects may be selected randomly for an external audit.
Translation of the consent document to the language applicable to the study participants should be submitted.

Federal Wide Assurance Number: 00001372
Institutional Review Board (IRB) Number: IRB0005239

The Health Research Ethics Committee complies with the SA National Health Act No.61 2003 as it pertains to health research and the United States Code of Federal Regulations Title 45 Part 46. This committee abides by the ethical norms and principles for research, established by the Declaration of Helsinki, the South African Medical Research Council Guidelines as well as the Guidelines for Ethical Research: Principles Structures and Processes 2004 (Department of Health).

Provincial and City of Cape Town Approval

Please note that for research at a primary or secondary healthcare facility permission must still be obtained from the relevant authorities (Western Cape Department of Health and/or City Health) to conduct the research as stated in the protocol. Contact persons are Ms Claudette Abrahams at Western Cape Department of Health (healthres@pgwc.gov.za Tel: +27 21 483 9907) and Dr Helene Visser at City Health (Helene.Visser@capetown.gov.za Tel: +27 21 400 3981). Research that will be conducted at any tertiary academic institution requires approval from the relevant hospital manager. Ethics

approval is required BEFORE approval can be obtained from these health authorities.

We wish you the best as you conduct your research.
For standard HREC forms and documents please visit: www.sun.ac.za/rds

If you have any questions or need further assistance, please contact the HREC office at .

Included Documents:
CV M Tomlinson.pdf
Declaration M Tomlinson.pdf
Appendix 3 - PDS.pdf
Payment Instruction Form.pdf
CV S Halligan.pdf
Appendix 4 - Background Information Interview.pdf
Application Form.pdf
20161103 MOD Stellenbosch ethics - full protocol - Amendments 26.10.16.docx
20161103 MOD Amended - Appendix 1 and 2 - Parent info sheet and consent form.docx
Protocol.pdf
Protocol Synopsis.pdf
20161103 MOD Response to HREC 31 Oct 2016 N16-09-105_signed.pdf
20161103 MOD HREC Modifications Required.pdf
Checklist.pdf
CV H Christie.pdf
Appendix 1 and 2 - Parent info sheet and consent form.pdf
Appendix 5 - Parent SS Interview.pdf
Declaration S Halligan.pdf
Declaration H Christie.pdf

Sincerely,

Ashleen Fortuin
HREC Coordinator
Health Research Ethics Committee 1

Appendix 11: Paper 5 Participant information sheet

PARENTS' EXPERIENCES FOLLOWING TRAUMA: HOW DOES TRAUMA IMPACT ON PARENTING AND THE FAMILY DYNAMIC?

REFERENCE NUMBER:

PRINCIPAL INVESTIGATOR: Professor Mark Tomlinson

ADDRESS: Department of Psychology, Wilcocks Building, Ryneveld Street, Stellenbosch, 7600

CONTACT NUMBER: 0833014868

PARENT INFORMATION SHEET

We would like to invite you to take part in our research study. Before you decide whether you would like to take part, we would like you to understand why the research is being done and what it would involve for you. Please ask the study staff any questions about any part of this project that you do not fully understand. It is very important that you are fully satisfied that you clearly understand what this research involves and how you could be involved. Your participation is entirely voluntary and you are free to decline to participate. If you decide you do not want to take part, this will not affect you negatively in any way whatsoever. You are also free to withdraw from this study at any point, even if you agree to take part initially, without needing to provide a reason. There will be no negative consequences should you choose to withdraw and your routine health care will not be affected.

This study has been approved by the Health Research Ethics Committee at Stellenbosch University and will be conducted according to the ethical guidelines and principles of the International Declaration of Helsinki, South African Guidelines for Good Clinical Practice and the Medical Research Council (MRC) Ethical Guidelines for Research. It should be noted that sponsors of the study, study monitors or auditors or REC members may need to inspect research records.

What is this research study about?

We are conducting a research study looking at parent's experiences of trauma, and how they feel this may have impacted their parenting, or impacted their family. We hope that 25 parents will take part. Many adults who experience trauma are also parents that have dependent children living in their household. We are interested in hoe parents feel their traumatic experience has impacted on their parenting, and on their family. We would like to know how parents cope following a traumatic event, and what support they use. By gaining a better understanding of the parent's experience, and how they cope following a traumatic event, we can hopefully identify different strategies that parents use to help themselves cope. Then in the future we may be able to provide better information for parents and their families regarding ways of helping parents to cope with traumatic events, while still parenting their child.

Why have you been invited to participate?
You have been approached as you have experienced a traumatic event, and you have a biological child or children (aged 0 – 18 years) living in your household.

What will the study involve?
Researchers would spend about 40-minutes asking you some questions. These questions will be about your relationship with your child before after the accident, and how you have tried to cope or get help or support after the accident. With your agreement we will audio-record the interview so that we can carry out a detailed examination of responses to our interviews. The assessment can be completed in your home or at the research centre, depending on where you prefer. You will be asked to take part in this interview alone with the researcher so you have a chance to talk openly about how you have been feeling.

Will I benefit from taking part in this research?
There is no intended direct benefit to taking part in this study, although some people find it helpful to have the chance to talk about how they have felt since the frightening events. It is hoped that the information we get from this study will help improve the support that is available to parents and their families following the parent's experience of a traumatic event.

Who is running this research?
This study is a joint project between Stellenbosch University and the University of Bath (UK). This research is being funded by a University of Bath Research Grant Fund.

Are there in risks involved for me taking part in this research?
Although talking about how you have been managing since the frightening events can be upsetting, we do not think that it is likely that taking part in our study will cause you to become distressed as a result. If the interview or questionnaire does prove very distressing for you, study researchers will be available to help. If necessary, they can put you in touch with health professionals who are experienced in working with distressed adults.

What happens to my information if I withdraw from the study?
If you withdraw from the study it is up to you whether we use any information we have already collected. If you want your information to be removed from the study then you just need to let us know and your assessments will be destroyed.

What about confidentiality?
All information collected during the research will be kept strictly confidential. The assessments that you complete will be stored under an anonymous ID number, not by name, and will be kept securely in locked cabinets or on secure servers at the University. Assessments will only be accessed by the research team. Your assessments will be kept for 10-years following completion of the study and then will be destroyed. If you told us anything that made us worry for your own or someone else's safety we would talk to you and perhaps your doctor.

The results of the study may be published in order to help other parents who have experienced traumatic events, but we would <u>not</u> publish any details that might identify you. We would not share your personal details or other information that is likely to identify you.

Will I be paid to take part in this study and are there any costs involved?
You will receive a R120 voucher as a thank you for taking part in the study. If you wish to complete the interview at the research centre any transport costs will be reimbursed. There will be no costs involved for you if you do take part.

Is there anything else that you should know or do?

You can contact Professor Mark Tomlinson at tel. 0833014868 if you have any further queries or encounter any problems.

You can contact the Health Research Ethics Committee at 021-938 9207 if you have any concerns or complaints that have not been adequately addressed by your study doctor.

You will receive a copy of this information and consent form for your own records.

Thank you very much for taking the time to read this information sheet. If you have any further questions about the research please feel free to ask a member of the research team.