VIOLENCE WITHIN THE FAMILY:

RISK FACTORS ASSOCIATED WITH CHILD MALTREATMENT

by

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ABSTRACT

Identification of risk factors associated with child maltreatment is paramount to child protection. An understanding of these factors is an important step that has implications for the design of interventions for vulnerable families. Practitioners and policy-makers working in the child protection field should have an understanding of the interactional nature of risk factors and the impact upon likelihood of maltreatment.

The current thesis aims to explore factors associated with risk of child maltreatment within an ecological framework of family violence, and the implications of this for treatment. An overview of literature and aims of the thesis are detailed in the introductory chapter. Chapter two presents a systematic literature review of child maltreatment and intimate partner violence (IPV); the results of which indicate that there is evidence of co-occurrence. The review recognises associated risk variables, however methodological limitations point to a gap in the literature.

Chapter three is focused on parental intellectual developmental disorder (IDD). Using a sample of parents referred for psychological assessment in childcare proceedings, this chapter takes an ecological perspective, examining empirically the differences in risk factors for child maltreatment between parents with and without IDD. The results highlight some differences between groups, thus indicating that parents with IDD may warrant different clinical attention and support in comparison to parents without IDD.

Chapter four is focused on parental stress. This chapter consists of a critique of the Parenting Stress Index (PSI-3). The critique examines the applicability of the PSI, taking into consideration the reliability and validity of the measure, as well as its limitations. In the final chapter, the implications of the thesis are discussed.

DEDICATION

For my Mum…

For everything you have done for me…

For your support, encouragement and belief in me….

I love you and owe everything to you.

I hope that this will make you proud.

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CHAPTER ONE:

Introduction

INTRODUCTION

Child maltreatment is a longstanding, widespread, cross-cultural phenomenon (Korbin, 1983). According to Kamerman and Kahn (1995), most countries have programs and policies in place to ensure the wellbeing of children, and aim to prevent and/or reduce the risk of child abuse or neglect occurring. Whilst many of these policies and programs aid in ensuring the wellbeing of the child, child maltreatment is still a very serious problem, with detrimental costs to both the victim and society (DePanfilis & Zuravin, 1998). As part of a preventative effort, it is important to identify families who may be at risk of child maltreatment and determine contributory risk factors of child abuse and neglect (CAN). The focus of this thesis will be to investigate risk factors for child abuse and child neglect.

Definitions of Child Maltreatment

Child maltreatment can range from a single incident to severe prolonged abuse. The Department of Health in the UK have divided child maltreatment into two main categories. The first involves "inflicting harm", and pertains to child abuse, which is an act of commission by an adult. However, the second form of child maltreatment is "failing to act to prevent harm", and relates to child neglect, which is an act of omission by an adult towards a child (DH, 2006; Knutson, 1995).

Forms of child abuse can be sub-divided further: physical abuse, sexual abuse and psychological abuse (DH, 2006; WHO, 2006). According to the UK Government guidance *Working Together to Safeguard Children 2010* (1.33-1.36)*, physical child abuse* generally involves the use of physical force to harm a child, and may include hitting, shaking, throwing, poisoning, burning, scalding, drowning or suffocating.

According to Schreier (2002), physical child abuse also involves a parent or caregiver fabricating symptoms of, or deliberately inducing illness in a child.

Sexual child abuse includes forcing or enticing the child to take part in activities of a sexual nature, and can include physical acts (i.e. assault by penetration), non-penetrative acts (i.e. masturbation, touching outside of clothing), or non-contact acts (i.e. exposing the child to sexual body parts, forcing the child to look at sexual imagery) (DH, 2006).

According to UK Government guidance, *psychological child abuse* has been defined as prolonged emotional maltreatment that may severely impair the child's psychological development. This may involve devaluing the child and conveying that they are worthless or unloved, or may include depriving the child of opportunities to express themselves. It may also include placing unrealistic expectations on the child. Other forms of psychological child abuse may include overprotecting the child or isolating the child from others, in so depriving the child from social interaction. It may feature the exposure to abuse of others, such as siblings, or can include exposure to intimate partner violence (IPV) between parents. Additionally, it can include inducing fear in the child by means of intimidation or bullying. Whilst *psychological abuse* can occur as a type of maltreatment on its own, it also often occurs as a consequence of other forms of child abuse, such as physical and sexual child abuse (Glaser, 2002; Smith & Segal, 2013).

UK Government guidance has defined neglect as a persistent failure to meet a child's basic physical and/or psychological needs which is likely to result in an impairment of the child's development. Neglect can include a failure to provide adequate food, clothing or shelter, or a failure to protect the child from potential harm. It may feature inadequate supervision, insufficient medical attention or the lack of

emotional support and attention. Sheerin (1998) highlighted that this act of omission can generally be grouped into one of three domains: love and affection; performing household tasks; and attending to the physical needs of the child.

Gough (1996) argues that definitions of what constitutes child maltreatment differ depending upon cultural differences (Garbarino & Ebata, 1983). Oftentimes, cultural rationalisations for the maltreatment of children are blindly accepted to suggest that the treatment of the child is not abusive in nature (Korbin, 1983). Further, Cicchetti and Lynch (1995) have highlighted that there is some discrepancy in the social sciences regarding whether the definition of child maltreatment should be based on the perpetrators behaviour, the effect of the behaviour on the child, or a combination of both. A further debate regarding the definition of child maltreatment has focused on whether the intention of the maltreatment needs to be included. Knutson (1995) has argued that the perpetrators desire to harm the victim should be taken into consideration. However, assessing intent can be problematic, as it is often unclear whether the parent's intention was to deliberately harm the child, whether it was accidental, or whether the intention was to cause the child pain, but not injury, such as an act of corporal punishment (Durrant, 2005; Parke & Collmer, 1975; Straus, 2001). Although child maltreatment can be perpetrated by strangers (Smith & Segal, 2013), the current thesis will focus on maltreatment perpetrated by a parent or primary caregiver.

Effects of Child Maltreatment

The effects of child maltreatment are often immediate and detectible, such as visible bruises and broken bones (Trocmé, MacMillan, Fallon & De Marco, 2003). Although this physical form of child maltreatment is often the most visible, other

forms of child abuse and child neglect are also of equal concern, with the identification of these forms of abuse early on potentially preventing further, more serious, maltreatment (Haugaard, 2000; Smith & Segal, 2013). Psychological abuse and neglect can also be just as detrimental to the child as physical and sexual abuse, as these forms of abuse are subtle and less detectible, often going unnoticed (Smith & Segal, 2013). However, it is important to highlight that all forms of child maltreatment leave lasting scars, not only physically but also emotionally (Smith & Segal, 2013).

The immediate effects of child maltreatment are not the only consequence, as children may subsequently suffer from long-term psychological and behavioural problems, which can impact upon their development and functioning, as well as increasing their risk for criminal behaviour (Aber, Allen, Carlson & Cicchetti, 1989; Bifulco & Moran, 2002; Oates, Peacock & Forrest, 1984; Smith & Segal, 2013). Other consequences of child maltreatment include a lack of trust and difficulties within relationships, a damaged sense of self with core beliefs about being worthless or damaged, and difficulties with emotion regulation (Smith & Segal, 2013).

The effects of child maltreatment can broadly be divided into two categories: internalised problems and externalised problems. In terms of internalised problems, researchers have indicated an increased likelihood of victims of child maltreatment experiencing psychological or mental health related problems in adulthood (Gilbert et al., 2009b), such as depression (Coates & Messman-Moore, 2014). The relationship between childhood maltreatment and the development of problems in later life is a link that has been established over a number of years (Lindsay, Steptoe & Haut, 2012). Being a victim of child maltreatment has been associated with later victimisation in other interpersonal relationships. For example, researchers have

indicated that victims of child maltreatment are 60% more likely than children who have not been victimised to be a victim of assault by a peer (Finkelhor, Ormrod, Turner & Hamby, 2005), which indicates that child victims may develop a general vulnerability to being victimised. In terms of later relationships, research conducted by Whitfield, Anda, Dube and Felitti (2003) found that children who had been victims of physical or sexual abuse, or were exposed to IPV were more likely to be victims or perpetrators of IPV themselves. Whitfield et al.'s (2003) study also demonstrated gender differences, with female victims of child maltreatment at a greater risk of being victimised within intimate relationships, whilst male victims of child maltreatment were more likely to become perpetrators of IPV during adulthood.

In terms of externalised problems, researchers have shown that individuals who have been physically abused in childhood are more likely to be aggressive towards others and exhibit deviant behaviour in adulthood (Briere & Runtz, 1990; Kelly, Thornberry & Smith, 1997; Wiebush, McNulty & Le, 2000). Additionally, individuals who have been sexually abused in childhood are more likely to have problems related to maladaptive sexual behaviour in adulthood (Briere & Runtz, 1990). Research conducted by Widom (1992) found that victims of child abuse or neglect were more than 50% more likely to be arrested as a juvenile, were almost 40% more likely to be arrested as an adult, and were almost 40% more likely to be arrested for a violent crime.

As well as contributing to the likelihood of deviance, experiencing child maltreatment has also been found to affect a child's educational attainment. Tyler (2002) has highlighted that victims of child maltreatment are likely to have difficulties with academic performance. This may subsequently affect other parts of life, such as contributing to the likelihood of unemployment, which could pose as a

risk factor in itself (Gillham et al., 1998). Researchers have also suggested that child maltreatment is linked to several health related problems later in life. In support of this, the Adverse Childhood Experiences Study, which took place in the USA in 1998, found child maltreatment to be linked to problems such as substance abuse, risky sexual behaviour and suicide attempts (Felitti et al., 1998).

Rates of Child Maltreatment

Ofsted (2009) have estimated that approximately three children in the UK die as a result of child maltreatment per week, which highlights the seriousness of the issue. According to surveys of the rates of child maltreatment in the Western culture, it has been suggested that approximately 16% of individuals will have experienced some form of child maltreatment (May-Chahal & Cawson, 2005). Gilbert et al. (2009b) have found comparable rates in the USA, Canada and Australia. However, as previously mentioned, due to cross-cultural differences in definitions of child maltreatment, types of child maltreatment, and child age and gender, rates of abuse tend to vary. Nonetheless, recent studies indicated that annual rates of physical child abuse tended to range from 4-16%, whilst annual rates of psychological child abuse were approximately 10%, and rates of lifetime child sexual abuse approximated 10% for female victims and 5% for male victims (Gilbert et al., 2009a, 2009b; WHO, 2006).

Child victims of maltreatment may experience multiple forms of abuse, and research by Finkelhor, Ormrod and Turner (2007) suggested that, of a nationally representative sample, 22% of children had experienced four different types of child maltreatment within a year. The experience of multiple forms of child maltreatment has also been linked to mental health problems later in life (Edwards, Holden, Felitti

& Anda, 2003). According to Finkelhor et al. (2007), poly-victims were at heightened risk of experiencing psychological distress, anger, depression and anxiety. They found that children who had experienced a single form of victimisation were more able to recover from their experience of maltreatment compared to children who were victims of multiple forms of child maltreatment.

In terms of parental gender differences in the perpetration of child maltreatment, a survey conducted by Straus, Gelles and Steinmetz (1980), revealed that violence against a child was more likely to be perpetrated by mothers than fathers. However, contradictory research involving a clinical sample found that children were three times more likely to be physically abused by their fathers than their mothers (Bowker, Arbitell & McFerron, 1988). According to Steele (1994), abusive fathers were likely to be characterised with low self-esteem and a lack of empathy. However, it is important to note that, for the most part, research into child maltreatment has tended to focus on mothers, as they are generally involved with caregiving to a larger extent than fathers (Pleck, 1997). According to Sternberg (1997), mothers are primarily used in research samples as researchers who are interested in studying family violence often retrieve their samples from battered women's shelters where the goal is to provide advocacy for female victims and their children. Subsequently, paternal perpetrators of child maltreatment are generally not well represented in research (Guille, 2004). It is important to consider parental gender, as researchers have indicated that the type of maltreatment perpetrated may differ depending upon the gender of the parent (Romero-Martinez, Figuerdo & Moya-Albiol, 2014). Research in this area may lend support for the use of training programmes focusing on differences in mother's and father's parenting skills (Guille, 2004).

Although prevalence rates appear to be high, researchers have suggested that rates of child maltreatment are likely to be underestimated, as perpetrators of child maltreatment are unlikely to disclose abuse and many perpetrators also make efforts to prevent the child from reporting the abuse (Gilbert et al., 2009a; Sedlak & Broadhurst, 1996). Commonly, identifying abuse is done via retrospective interviews, however issues arising with this relate to the adult having forgotten the abuse, or having blocked out adverse childhood experiences (Becker-Blease & Freyd, 2006; Brown, Cohen, Johnson & Smailes, 1999; Hardt & Rutter, 2004), which are likely to affect the accuracy of rates of child maltreatment. These findings highlight the seriousness of the issue, and whilst exact prevalence rates are unclear, it is unmistakable that child maltreatment is a widespread and lasting cross-cultural problem that requires attention in the research literature.

Brief Overview of Theories

A substantial amount of researchers have attempted to uncover the origins of child maltreatment (Belsky, 1980). Several theories have been developed which endeavour to explain the underlying causes of child maltreatment (Cicchetti & Carlson, 1989). Over the past few decades, theories of child maltreatment have ranged from single factor models to multifactorial models of abuse that encompass a number of interacting risk factors (Azar, Povilaitis, Lauretti & Pouquette, 1998; Thomas, Leicht, Hughes, Madigan & Dowell, 2003).

Firstly, social learning theorists suggest that behaviour is learned (Bandura, 1977). Researchers have suggested that victims of child maltreatment learn to be abusive themselves (Dodge, Bates & Pettit, 1990; Marshall, Huang & Ryan, 2011; Smith & Segal, 2013). This supports the intergenerational pattern of abuse, as parents

who themselves have been victims of child maltreatment are more likely to go on to abuse or neglect their own child (Cicchetti & Rizley, 1981; Dixon, Hamilton-Giachritsis & Browne, 2005). Additionally, children who have been exposed to IPV are likely to normalise this abusive behaviour, which falls in line with social learning theory (Akers & Sellers, 2004; Browne & Herbert, 1997; Felson & Lane, 2009). The perpetrator of violence within the family is viewed as a role model for the child, with patterns of behaviour observed during childhood often being triggered by significant events during adulthood, such as becoming a parent (Akers & Sellers, 2004; Felson & Lane, 2009).

Other researchers have argued that attachment theory can provide some insight into the causes of child maltreatment (Crittenden & Ainsworth, 1989; Marshall et al., 2011). In terms of attachment theory, researchers suggest that the bond between the child and his/her caregiver shapes the child's relationships later in life (Bowlby, 2005). Researchers argue that children with a secure pattern of attachment develop this pattern through having a consistent and nurturing caregiver (Ainsworth, Blehar, Walters & Wall, 1978). However, they argue that inconsistent caregivers who may also be neglectful or abusive tend to create insecure attachment patterns in their children (Ainsworth et al., 1978; Thomas & Zimmer-Gemback, 2011). This theory has been supported in the literature, as researchers have indicated that significantly more victims of child maltreatment have insecure patterns of attachment compared to control subjects (Baer & Martinez, 2006). In line with the intergenerational pattern of abuse, Kwako, Noll, Putnam and Trickett (2010) found that the probability that insecurely attached children exhibited abusive or neglectful parenting behaviour toward their own children was dependent upon whether they were able to resolve their insecure pattern of attachment.

Another theory that has attempted to explain the causes of child maltreatment is the family systems theory (Bowen, 1966). The family systems theory focuses on problems that are related to the dysfunctional relationships within the family. This theory takes into account the contribution of victim and bystander roles and has therefore often come under scrutiny as it almost relieves the perpetrator of responsibility of the abuse (Broderick, 1993). The theory also does not account for other factors such as the impact that society can have, and has therefore also been criticised for this reason (Brown, 1999).

Despite the various schools of thought regarding the causes of child maltreatment, the majority of theories identify that the origin of maltreatment can be divided into one of four general areas; the individual, the family, the community, and the wider culture. This theoretical standpoint is termed the 'ecological model' and it suggests that child maltreatment is caused by an interaction of factors within and between these four domains (Belsky, 1980).

Ecological model. According to Belsky's (1980) ecological model (see Figure 1.1), risk factors for child maltreatment are divided into four levels. The first level consists of individual factors related to the child and the parent. For those factors related to the child, common risk factors include child age and gender (Mraovich & Wilson, 1999), physical or intellectual disabilities (Crosse, Kaye & Ratnofsky, 1993; Jones et al., 2012) and behavioural problems (Dakil, Cox, Lin & Flores, 2012). In reviewing the literature regarding parental factors associated with child maltreatment, there appear to be a number of factors that repeatedly emerge: young parental age (Black, Heyman & Slep, 2001; Brown, Cohen, Johnson & Salzinger, 1998; Kinard & Klerman, 1980; Smith & Adler, 1991); adverse childhood experiences, such as being

the victim of abuse or neglect in childhood (Clarke, Stein, Soboto, Marisi & Hanna, 1999; Cleaver, Unell & Aldgate, 1999; Dakil et al., 2012; Ertem, Leventhal & Dobbs, 2000; Feldman, Varghese, Ramsay & Rajska, 2002; Pears & Capaldi, 2001); parental psychiatric history, including substance abuse (Ammerman, Kolko, Kirisci, Blackson & Dawes, 1999; Chaffin, Kelleher & Hollenberg, 1996; Dakil et al., 2012; Fergusson, Lynskey & Horwood, 1996); and low educational achievements, including cognitive deficits (Brown et al., 1998; Kotch, Browne, Dufort, Winsor & Catellier, 1999) and parental intellectual disability (Booth, Booth & McConnell, 2005). Other factors that appear to be linked to the perpetration of child maltreatment include parental stress (Smith & Segal, 2013; Tucker & Rodriguez, 2014), parental physical or mental health difficulties (Cleaver et al., 1999; Feldman et al., 2002; Smith & Segal, 2013), and a lack of knowledge of child development (Black et al., 2001).

The second level, the *microsystem*, is comprised of factors related to the family. These include the co-occurrence of IPV (Appel & Holden, 1998; Dakil et al., 2012), household dysfunction (Denholm, Power, Thomas & Li, 2013), family structure, and family size (Sedlak & Broadhurst, 1996). Risk factors at the third level, the *exosystem*, are related to societal factors, such as poverty (Black, 2000; Plotnik, 2000) and a lack of social support (Bishop & Leadbeater, 1999; Chan, 1994), whereas risk factors at the fourth level, the *macrosystem*, are related to the wider cultural context, such as the normalisation of violence in culture and the media (Garbarino, 1980). However, the macrosystem appears to be the least researched level of the ecological model as risk factors in this domain are often more difficult to determine (Thomas et al., 2003). This may be due to cultural differences in what constitutes abuse (Gough, 1996).

In explaining this model, Bronfenbrenner (1977, 1979) and Sidebotham and Heron (2006) suggested that each of the levels of the model were interrelated, with factors from one level of the model influencing and shaping the next level. According to this model, the more factors present within a family are likely to increase the risk of maltreatment. It is important to note that some of the risk factors may fit into more than one level of the ecological model. For example, parental unemployment may be related to the parents' individual difficulties with maintaining employment, but may also be related to factors within the exosystem, such as a high level of unemployment in society.

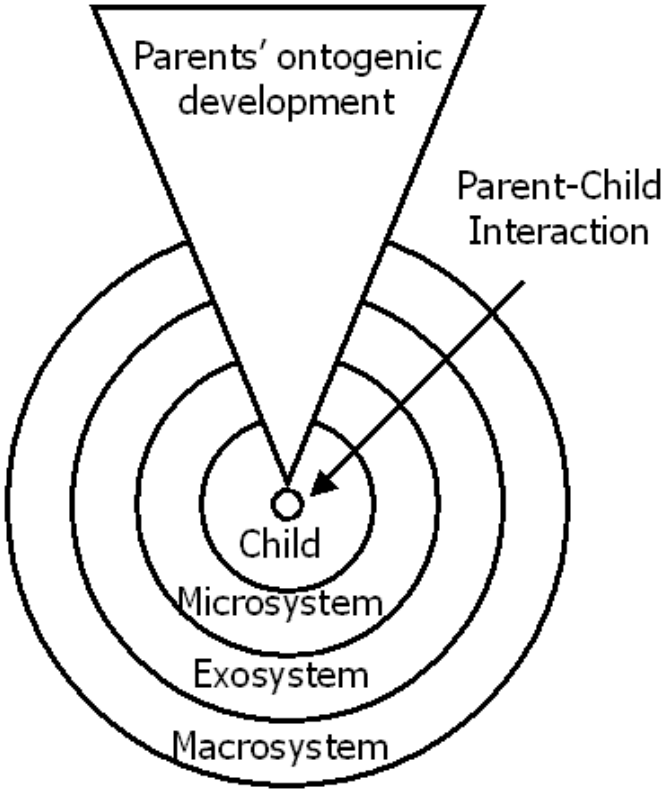

Figure 1.1: The Ecological Model (Sidebotham & Heron, 2006)

The most common risk factors for child maltreatment are provided in Table 1.1, and are generally divided according to the ecological levels that have been

described above. As cultural factors are likely to vary (Douglas, 2006), factors related to the macrosystem level of the ecological model have not been included.

Table 1.1
Common Risk Factors for Child Abuse and Neglect

Ecological level	Risk factors
Individual: Child factors	• Low birth weight • Disability (physical/cognitive/emotional) • Serious physical or mental illness • Temperament • Aggressive behaviour • Attention deficits
Individual: Parental factors	• Parental substance abuse • Involvement in criminal behaviour • Mental health problems • Physical health problems • History of child abuse and neglect • Parental disability (physical/intellectual/cognitive/emotional) • High parental stress • Low self-esteem • Teenage/young parent/s • Low level of parental education
Microsystem: Family factors	• Family conflict or violence • Large family size • Poor parent-child interaction • Low warmth/harsh parenting style • Single parent • Separation/divorce • Non-biological parent/s in the home • Use of corporal punishment
Exosystem: Social/environment factors	• Socio-economic disadvantage • Parental unemployment • Social isolation • Inadequate housing • Homelessness • Lack of access to adequately resourced schools • Lack of access to social support, including child care and social services • Exposure to racism and/or discrimination • Stressful life events

Note: Adapted from table published by *The Australian Institute of Family Studies*, by A. Lamont, March 2013. (Originally sourced from Brown et al., 1998; Stith et al., 2009; US Department of Health and Human Services, 2011).

Belsky's (1980) ecological model will form the conceptual framework of this thesis. Although some do not consider the ecological framework to be an explanatory theory of child maltreatment, it can be considered a meta-theory, as the principles underlying it are drawn from individual, interactional and social theories. This thesis recognises that the factors within the levels of Belsky's (1980) ecological model are not concrete and that there is interaction within and between them.

Risk factors, such as those mentioned above, are likely to be cumulative, such that there is likely to be interplay of factors (Moran, 2009; Smith-Stover, Easton & McMahon, 2013). For example, a young mother with mental health difficulties may lack responsivity toward her child and may also have low self-esteem, financial difficulties and a lack of social support. These factors are all contributory factors for understanding the context of child maltreatment (Moran, 2009). Although they cannot be described as predictive factors for child maltreatment, they are factors that increase the likelihood of such behaviour (Moran, 2009). This concept has been described by Crittenden (1999), who suggested that, although poverty is often associated with the occurrence of child maltreatment, children living in poverty, for the most part, are not victims of child abuse or neglect. This emphasises the importance of differentiating between indicators of risk and risk mechanisms (Rutter et al., 1998).

It is also important to note that, whilst there are numerous factors that have been suggested to increase a child's risk of being abused or neglected, there are also a number of protective factors that have been identified as reducing a child's vulnerability to maltreatment (Goldman, Salus, Wolcott & Kennedy, 2003). This includes a good level of social support (Folger & O'Dougherty-Wright, 2013; Kotch et al., 1995; Moncher, 1995), positive intimate relationships (Egeland, Jacobvita &

Sroufe, 1988), and knowledge of child development, parenting skills and marital education (Stanley, Marman & Jenkins, 2002).

Whilst the ecological model has highlighted a variety of factors that are commonly associated with child maltreatment, some of the strongest risk factors for child maltreatment appear to be related to factors involving the parent, such as deficits in cognitive ability (Sidebotham & Heron, 2006), the experience of violence within the intimate relationship (Appel & Holden, 1998) and parental stress (Smith & Segal, 2013; Tucker & Rodriguez, 2014). However, researchers have suggested that no single factor causes child maltreatment, and it is the presence of a combination of several risk factors that increases a child's vulnerability (Loeber, 1990; Masten & Wright, 1998; Rutter, 1979, 1985, 2000).

The current thesis will focus on the contribution of three of the most common risk factors for child maltreatment: IPV, parental intellectual disability and stress.

Stress as a Risk Factor for Child Maltreatment

Considering violence within the family, researchers have suggested that stress is an overarching factor that plays a role in the way in which a family functions (Belsky, 1980). However, the exact link between stress and child maltreatment has not been explicitly established (National Research Council, 1993). Parenting stress is believed to be problematic as it can affect the level of warmth and responsiveness of the parent towards the child (Feldman et al., 2002) and has been found to relate to hostile parenting styles (Aunos, Feldman & Goupil, 2008). However, environmental stress resulting from poor living conditions and poverty has also been found to influence the likelihood of child maltreatment (Gaines, Sandgrund, Green & Power, 1978).

Whipple and Webster-Stratton (1991) along with other researchers have discussed the relationship between physical child abuse and stressful life events, as well as parenting stress, and have found there to be an association (Coohey & Braun, 1997; Rosenberg & Reppucci, 1983; Tucker & Rodriguez, 2014). Additionally, the link between stress and child neglect has also been found (Gaines et al., 1978). However, the nature of parental stress is largely unclear, as it has been difficult to establish whether parents who maltreat their children experience more stress, or whether they perceive more life events and experiences to be stressful. Whilst stress is a single risk factor for child maltreatment, it is also a cumulative factor that, combined with IPV or parental intellectual disability, can exacerbate the likelihood of a parent abusing or neglecting their child. Therefore, in the following sections on IPV and parental intellectual disability as risk factors for child maltreatment, the attentive reader may note some overlap and discussion of stress as a contributory factor.

IPV as a Risk Factor for Child Maltreatment

One of the most established risk factors for child maltreatment is IPV (Smith & Segal, 2013). However, there is a discrepancy in the literature regarding rates of co-occurrence (Bowker et al., 1988; Cawson, 2002; Davies & Ward, 2012; Lodge, Moloney & Robinson, 2011; McCloskey, Figueredo & Koss, 1995; McKay, 1994; O'Keefe, 1995; Rosenbaum & O'Leary, 1981). Retrospective studies have found rates of co-occurrence to be 86.5% (Dong et al., 2004), whilst other studies using samples of maltreated children have found rates of co-occurrence to range from 30-59% (Wright, Wright & Isaac, 1997). Research by Lodge et al. (2011) found that many children were abused in cases of IPV, with children most at risk of physical child

abuse. However, Cawson (2002) and Nicklas and Mackenzie (2013) found that child neglect was also significantly related to IPV.

When investigating the influence of the marital relationship on the perpetration of child maltreatment, research has commonly focused on a patriarchal model, where the paternal figure is viewed as abusing his female partner and child (Edleson, 1999). The literature has tended to place emphasis on victims of IPV and their children, leaving out the perspective of the perpetrator (Straus & Gelles, 1990; Walker, 1979) which can present as a limitation as the samples used have generally been sourced from mothers' self-reports (Guille, 2004). This is likely to result in biased findings. As previous researchers have tended to focus on male perpetrators of IPV and child maltreatment, there is a lack of research investigating the relationship between father and child in families characterised by IPV (Guille, 2004).

In terms of research conducted on characteristics of male perpetrators, Rosenbaum and O'Leary (1981) found that male perpetrators of IPV were more likely to have been abused as children and were more likely to have witnessed IPV between their own parents than martially dissatisfied nonviolent men. Caesar (1988) found that, in a study of men who had witnessed abuse between their parents during childhood, control subjects were less likely to have been the subject of child abuse, which suggests that control subjects may have been at a reduced level of risk of becoming violent adults. This suggests that children who witness abuse between their parents, and are also abused themselves, are at heightened risk of becoming abusive adults, which highlights the importance of assessing co-occurrence of IPV and child maltreatment, as the occurrence of this abuse can have profound effects and adverse developmental consequences for the child.

Giving consideration to victims of IPV, Holden and Ritchie (1991) found that battered mothers in a high marital aggression group reported higher levels of stress. This could consequently affect parenting, as high levels of stress have been linked to child maltreatment (Smith & Segal, 2013). Female victims of IPV were twice as likely to abuse their children, compared to mothers who were not the subject of IPV (Casanueva, Martin & Runyan, 2009) and were also suggested to be more likely to neglect their child as the standard of care they provide is likely to be compromised by the abuse they suffer (U.S. Department of Health & Human Services, 2013).

Turning the focus to female aggressors, the limited research available suggests that, whilst it is not as common for a mother to be the primary aggressor within the family dynamic (Appel & Holden, 1998), over 40% of mothers engaged in reciprocal IPV, as well as engaging in child maltreatment (Dixon, Browne, Hamilton-Giachritsis & Ostapuik, 2010). According to research conducted by Slep and O'Leary (2005), women were more likely than men to engage in partner and parent aggression. Similar results were also found in a study by Dixon, Hamilton-Giachritsis, Browne and Ostapuik (2007), which suggests that violence within the family needs to be considered from a family systems perspective.

In terms of the effect that the quality of the marital relationship has on the child, research conducted by Cummings and O'Reily (1997) has indicated that there are three pathways in which children are influenced: the quality of the marital relationship has an effect on the quality of the parent-child relationship; direct exposure of the marital relationship affects the child; and martial quality effects the parental psychological functioning, which has an effect on child adjustment.

The co-occurrence of IPV and child maltreatment is an important area of study due to the adverse effects that such abuse has on the child. For example, children who

witness violence are likely to suffer psychological abuse and are more likely to view the world as an unsafe place (Augustyn, Parker, Groves & Zuckerman, 1995). Further, children who witness violence have been found to have posttraumatic stress disorder, with this stemming from one incident of violence to the experience of enduring violence within the family home (Armsworth & Holaday, 1993; Fitzpatrick & Boldizar, 1993; Jaffe, Sudermann & Reitzel, 1992; Margolin & Gordis, 2000; Pynoos, 1990).

A well-established effect of witnessing IPV are the emotional problems that children go on to exhibit, such as anger, depression, anxiety and fear (Hughes, 1988), which may be a result of psychological child abuse. Preschool children who had witnessed their father abusing their mother were also found to have a lack of empathy compared to preschool children from nonviolent homes (Hinchey & Gavelek, 1982). Witnessing IPV has also been associated with behavioural and psychological problems in children, such as aggression, delinquency and substance abuse (Edleson, 1999; Jaffe, Wolfe & Wilson, 1990; Jouriles, Norwood, McDonald, Vincent & Mahoney, 1996). Researchers have also identified witnessing partner violence as a risk factor for conduct disorders and personality disorders (Jouriles, Murphy & O'Leary, 1989), and correlations have also been found between witnessing partner violence and behavioural problems in children (Wolfe, Jaffe, Wilson & Zak, 1985).

Witnessing IPV has also been found to have profound effects on children, with marked gender differences in symptomology. For example, girls have shown to have higher rates of internalising behaviours, such as depression and anxiety, whereas boys have been found to exhibit higher rates of externalising behaviours, such as hostility and aggression (Binder, McFarlane, Nava, Gilroy & Maddoux, 2013; Davis & Carlson, 1987; Jaffe, Wolfe, Wilson & Zak, 1985). As mentioned previously, these

findings have clear implications for the intergenerational transmission of violence, with girls being at risk of becoming victims of IPV and boys at risk of perpetrating violence (Berman, 1993; Guille, 2004).

The effects of exposure to IPV for children is substantial and therefore exploring the co-occurrence of IPV and child maltreatment warrants attention to help identify ways to prevent and intervene in such cases. Factors such as marital aggression are not always taken into account in studies of child maltreatment, which could skew results (Lamb, 1981) as researchers have indicated that problems within the intimate relationship are greater predictors of child maltreatment than family structure, poverty, education and employment (Cawson, 2002). In order to advance understanding of the co-occurrence of IPV and child maltreatment, it is important to view this as part of the familial and social context.

Despite the vast amount of literature on IPV and child maltreatment as separate areas of the literature, there is limited research that specifically assesses these types of abuse in combination. Researchers have indicated that families with co-occurring child maltreatment and IPV often have cumulative risk (Kohl, Edleson, English & Barth, 2005). A point of complexity is that researchers often tend to focus on one type of family violence, however there is a need to combine research on parenting, child development and research on IPV. The available research clearly supports a link between IPV and child maltreatment, one that should not be overlooked in the treatment of child maltreatment or IPV.

Parental Intellectual Disability as a Risk Factor for Child Maltreatment

Craig, Lindsay and Browne (2010) have highlighted the discrepancy in terminology related to research of individuals with intellectual disabilities. They

highlight that interchangeable terms such as ‘learning disability’, ‘learning difficulty’, ‘learning impairment’, ‘learning disorders’, ‘intellectual disability’ and ‘developmental disorder’ are often used, and emphasise the problems related to this, such as different samples being used due to different terminology, and the effect that this has on the generalizability of the findings of the research. For the purpose of this thesis, the term ‘intellectual developmental disorder’ (IDD, DSM-V) will be used.

As pointed out by Riding, Swann and Swann (2005), in order to commit an offence, the individual must acknowledge that their behaviour is classed as unlawful and must deliberately engage in this behaviour with intent. It may be presumed that a parent with IDD lacks the skills and is too vulnerable to intentionally maltreat their child. On the other hand, parents with IDD may be considered to be lacking insight and development of social customs, which may contribute to child maltreatment. Both of these hypotheses may be suggestive of child neglect (child maltreatment by omission) as they propose that there is a lack of intent to harm the child. Tomison (1996) indicated that parents who maltreat their children may do so because they fail to recognise the consequences of their actions due to thought disorders or a lack of control.

Relatively little is known about the perpetration of child abuse and neglect by parents with IDD. This does not mean that rates of abuse perpetrated by individuals with IDD is rare, however, it does suggest that the treatment needs of these individuals is often not recognised or met. Quite often, researchers have suggested that parents with IDD are more at risk of perpetrating abuse against their children or are less able to provide an appropriate level of care for their child (Booth et al., 2005). According to Lamont and Bromfield (2009), certain factors appear to amplify the risk of child maltreatment by parents with IDD. These factors typically include social

isolation, parental stress, childhood victimisation, unemployment, substance abuse and IPV (Cleaver et al., 1999; Feldman et al., 2002). However, there has been little empirical evidence to support these viewpoints, and researchers have indicated that parents with IDD, with an appropriate level of support, are capable of parenting their children (Booth et al., 2005).

Of the available research, James (1995) proposed that neglectful parents were more likely to be 'childlike' and English (1998) suggested that they were also likely to have low self-esteem. Runyan, Wattam, Ikeda, Hassan and Ramiro (2013) also proposed that neglectful parents tended to have difficulty with planning important life events. Nelson, Saunders and Landsman (1993) also found that low cognitive functioning was associated with parents who were neglectful, suggesting that they had mild IDD or psychiatric problems. It is important for future research to explore characteristics of parents with IDD who maltreat their children as this will be of benefit to both researchers and practitioners, and will guide intervention and treatment.

Overview of Thesis

As mentioned, numerous theorists have attempted to develop a better understanding of risk factors associated with child maltreatment in order to facilitate both assessment and treatment. Considering the multiple risk factors discussed above, it is clear that a holistic approach to understanding risk is necessary, and models that take an ecological perspective appear to be most important as they take into consideration all variables that relate to the individual and his/her environment.

Aims of the thesis. The current thesis aims to explore factors associated with risk of child maltreatment, within an ecological framework of family violence, and the implications of this for treatment. In doing so, child maltreatment will be considered, taking account of risk factors on different levels of an ecological model, including parental, child, familial and societal factors.

Therefore, the aims of the thesis are as follows:

1. Firstly, to explore what the literature has already identified in terms of IPV as a risk factor for child maltreatment.

Chapter two: Systematic literature review. Chapter Two is an attempt to systematically review the existing literature base exploring the link between child maltreatment and one of the major risk factors; IPV. The systematic review highlights a direct association between child maltreatment and IPV, with IPV having been identified as a strong predictor of child maltreatment. However, when considering the role of IPV in combination with other risk factors, it appears to have a less significant contribution in relation to perpetration of child maltreatment. The systematic review also highlights an association between the co-occurrence of child maltreatment and IPV with a number of other risk factors, including parental mental illness, substance misuse, and stress. Parental education is also recognised as a potential risk factor, however it is important to note that these findings are somewhat unclear and need exploring further as many of the studies included in the review did not give details regarding the parents level of education or their level of intellectual functioning. Therefore, the review indicates the need for assessment of risk for violence within the

family to encompass a range of risk factors, including parental intellectual functioning.

2. Secondly, the thesis aims to explore whether there are differences in factors that place parents with IDD and those without IDD at risk of perpetrating child abuse and/or neglect.

Whilst the systematic literature review (chapter two) focused specifically on IPV as a risk factor for child maltreatment, the results highlighted that IPV should be considered alongside other risk factors. Due to limited available research, the question remains to what degree parents with IDD are affected by a range of different risk factors in comparison to parents without IDD.

Chapter three: Empirical research paper. An empirical research study is presented, comparing differences in risk factors associated with child maltreatment for parents with and without IDD, who were referred for an assessment as part of childcare proceedings. It is hypothesised that risk factors for child maltreatment will differentiate parents with IDD from those without IDD in terms of parental risk factors, child factors, family factors and societal factors.

Previous studies have shown that a number of risk factors are associated with child maltreatment, and that parents with IDD are likely to experience and/or be affected by these risk factors to a greater extent. However, an element that has been missing from previous research is the direct comparison of risk factors associated with child abuse and neglect between these groups. Thus, the intention of the current study was to compare parents with and without IDD on several risk factors related to different levels of the ecological model.

Examining differences in risk factors for child maltreatment between these two groups of parents is intended to bring awareness to potential differences in what may place a child at risk of maltreatment.

3. Finally, the thesis reviews an existing measure of parenting stress. The measure is critically appraised to determine the extent to which it can be usefully employed in assessments of parental stress.

Chapter four: Critique of a psychometric measure. Chapter four discusses the psychometric properties of the Parenting Stress Index (PSI) in measuring levels and types of stress that have been demonstrated in the literature to be strongly associated with both child abuse and neglect. The critique gives a summary of the psychometric measure and its properties, including validity, reliability and also an outline of its limitations.

The PSI was chosen on the basis of its frequency of use in child custody evaluations, as well as its usefulness in identifying stress related to the parent, the child and general life stress.

Chapter five: General discussion. Chapter five draws together the main findings from the systematic literature review, the empirical study and the critique of the PSI, and considers implications for future research and applied practice.

CHAPTER TWO:

The Relationship between Child Maltreatment and Intimate Partner Violence: A Literature Review Following a Systematic Approach

ABSTRACT

This systematic review aims to explore the co-occurrence of child maltreatment and intimate partner violence (IPV). Scoping methods were employed to assess the need for the current review. A literature review was carried out following a systematic search for cohort and case-control studies using PsycINFO, MEDLINE, EMBASE, Web of Science, ASSIA, Science Direct, and contact was also made with an expert in the field. Inclusion and exclusion criteria were applied to the studies and quality assessment was then employed. Data was extracted and synthesised from included studies using a qualitative approach. A total of 97 relevant studies were found, with 42 of these being removed following application of inclusion and exclusion criteria. A further 28 were removed following quality assessment, and 12 studies were unobtainable, leaving 15 studies that were included in the review. All of the studies included in the review found a co-occurrence of child maltreatment and IPV, such that the rate of co-occurrence ranged from 4% to 64.2%; however one study found that neglect was more likely to be perpetrated in a family where no IPV was present, compared to a family characterised by IPV. Two studies also found that IPV preceded child maltreatment. Findings suggest that IPV should be assessed as a risk factor when assessing risk of child maltreatment. The complexity of research in this area is discussed, with reference to methodological flaws, including conceptualisation of definitions, the sample used and the source of data. Future research and practical implications are discussed, particularly in relation to interventions and prevention strategies.

BACKGROUND

A considerable amount of research has been dedicated to investigating child maltreatment, including that of physical, sexual, and psychological abuse, child neglect and exposure to intimate partner violence (IPV) (Clemmons, DiLillo, Martinez, DeGue & Jeffcott, 2003). Much of this literature has focused on identifying the incidence and prevalence of child maltreatment, the characteristics of such abuse and the potential consequences involved; however researchers have historically often focused on one type of maltreatment without taking into account the potential for co-occurrence of different types of abuse (Appel & Holden, 1998).

In recent years, the link between child maltreatment and IPV has become more recognised, both in policy and in research (Edleson, 1999). Researchers have begun to study the overlap of different forms of child maltreatment and family violence and have generally found that the risk of being a victim of one type of family violence is increased if another type of violence is also being perpetrated within the family (Clemmons et al., 2003; Hughes, 2013; Moeller, Bachman & Moeller, 1993; Renner & Slack, 2006; Scher, Forde, McQuaid & Stein, 2004). For example, Dong, Anda, Dube, Giles and Felitti (2003) found that if a respondent had experienced sexual abuse as a child, they were significantly more likely to have experienced physical and psychological abuse as a child and were also significantly likely to have witnessed IPV. Family violence is such a complex problem, and due to researchers and social services usually concentrating on either the victims of child maltreatment, or the victims of IPV, a broad understanding of these forms of abuse co-existing is largely absent (Edleson, 1999). This highlights the need for different types of child

maltreatment and IPV to be investigated further, in co-existence with each other (Renner & Slack, 2006).

Child Maltreatment

Child maltreatment, which encompasses child abuse and child neglect, is a worldwide problem (Finkelhor & Korbin, 1988; Heise & Garcia-Moreno, 2002; Krug, Dahlberg, Mercy, Zwi & Lozano, 2002). According to the World Health Organisation (WHO; Krug et al., 2002), "child abuse or maltreatment constitutes all forms of physical and/or emotional ill-treatment, sexual abuse, neglect or negligent treatment or commercial or other exploitation, resulting in actual or potential harm to the child's health, survival, development or dignity in the context of a relationship of responsibility, trust or power" (p. 15). Whilst this definition incorporates all forms of maltreatment, including actual and potential harm, definitions of abuse used by practitioners and researchers often differ, perhaps due to cultural differences and values regarding physical discipline and the perception of what constitutes abuse (Appel & Holden, 1998; Korbin, 2002; O'Keefe, 1994). Definitions of child maltreatment have been applied inconsistently amongst research studies (Edleson, 1999), which may lead to an underreporting of abuse, and make actual incidence or prevalence rates difficult to establish.

Some have argued that child abuse receives more public and professional attention than child neglect, despite neglect being the most reported type of maltreatment (Gershater-Molko, Lutzker & Sherman, 2002). However, according to the National Society for the Prevention of Cruelty to Children (NSPCC, 2011), child neglect is the most common reason for a child to be referred to child protection services in the United Kingdom (Cawson, Wattam, Brooker & Kelly, 2000; Radford,

et al., 2011). Nonetheless, child abuse has received a lot of media attention, possibly due to the overt signs of abuse, in comparison to neglect, which is often only detected when at extremity, such as when a child is visibly malnourished (Bhattacharyya, 1981). Child abuse and child neglect may warrant separate attention, as both forms of maltreatment differ conceptually and practically. However, in the same way that victims of child abuse are likely to suffer long-term and profound consequences, neglect often results in similar consequences for the child (Erickson & Egeland, 2002; Hildyard & Wolfe, 2002). Due to malnutrition, physical or medical neglect, victims of child neglect are also at risk of death (Erikson & Egeland, 2002). Similarly to abused children, victims of neglect often present with maladaptive behaviours, struggle to develop appropriate social relationships, and their emotional, physical and cognitive development is often hindered due to this maltreatment (Erickson & Egeland, 2002). Researchers have also found that being maltreated as a child is linked to violent behaviour and IPV later in life (Huefner, Ringle, Chmelka & Ingram, 2007).

When considering the World Health Organisation's (WHO) definitions, witnessing an act of IPV may also be viewed as a form of child maltreatment in the form of emotional abuse. Research has shown that exposure to IPV may increase a child's risk of emotional and behavioural problems (Holt, Buckley & Whelan, 2008). Additionally, regardless of the type of abuse being witnessed, children who are exposed to IPV are placed at an increased risk of physical, emotional and behavioural harm (Haj-Yahia, 2001), which can have lifelong effects (Bair-Merrit, Blackstone & Feudtner, 2006). However, it is important to note that not all research studies or crime surveys have acknowledged exposure to IPV as a form of child maltreatment, which may mean that a lot of child maltreatment is undetected (Edleson, 2004).

Additionally, the inconsistency regarding the inclusion of IPV exposure as a form of child maltreatment may contribute to differing rates of abuse being recorded.

Intimate Partner Violence

According to the WHO (Krug et al., 2002), IPV refers to "…any behaviour within an intimate relationship that causes physical, psychological or sexual harm to those in the relationship. Such behaviour includes acts of physical aggression, psychological abuse, forced intercourse and other forms of sexual coercion [and] various controlling behaviours" (p. 89). It is argued that a lot of family violence is often unreported (Gracia, 1995) so it is difficult to assess just how prevalent IPV is in the United Kingdom. It is estimated that IPV has consistently accounted for between 16-25% of all recorded crime in England and Wales (BCS, 1998; Dobash & Dobash, 1980; Dodd et al., 2004; Home Office, 2002). However, when looking at gender differences, Walby and Allen (2004) have found that being female is the greatest risk factor associated with being a victim of IPV. Nonetheless, reports from the British Crime Survey (2001; Walby & Allen, 2004) found that men were also victims of IPV, with approximately 27% of women and 17% of men having experienced at least one form of abuse from their intimate partner in their adult life, and approximately 6% of women and 4% of men having experienced IPV over the preceding two months (Chaplin, Flately & Smith, 2011). Despite survey data and research studies showing that both men and women can be victims of IPV, some argue that men are more likely to perpetrate severe and injurious acts of IPV, in comparison to women who are more likely to engage in frequent minor assaults (Morse, 1995). According to Tjaden and Thoennes (2000), women are more likely to be victims of abuse when the perpetrator is their husband or an intimate male partner, in contrast to males, who are usually the

victims of an attack by a stranger or acquaintance rather than an intimate partner (Krug et al., 2002). However, it is important to note that male victims of IPV are often underreported (Cook, 2009), which is likely to be a result of societal perceptions of IPV as well as limited support available for male victims of IPV (Hines, Brown & Dunning, 2007; Ridley & Feldman, 2003).

Rates of child maltreatment and IPV differ in terms of where the data has been gathered, and also in terms of whether the abuse is substantiated or not, as some abuse is not detected or reported (Gilbert et al., 2009b). For example, Povey et al. (2008) examined data from the British Crime Survey (2007/08) and found that, of the incidents of IPV that were reported, approximately 50% of individuals experiencing this abuse had children. However, it is unclear whether the children were direct or indirect victims of the abuse, or whether they had been victimised at all. In contrast, according to NSPCC (2011), approximately a quarter of individuals aged between 18 and 24 reported to have witnessed IPV between their parents or caregivers during their childhood. The study also noted that children who had been physically abused were almost five times more likely to have been exposed to IPV. Reliance on this type of data can be problematic as it only includes recorded incidents of crime, with many offences going undetected. Consequently, the rates of abuse are likely to be unrepresentative of the true population of victims and perpetrators of child maltreatment and IPV.

In terms of samples sourced from women's shelters, women often seek support and resort to shelters with their children after having been victims of IPV (Attala, Weaver, Duckett & Draper, 2000). The children in these samples are often overlooked, as they are not overtly the 'direct' victims of the abuse; however these children are often witnesses to the abuse between their parents or caregivers,

consequently becoming indirect victims (Margolin, 1998). However, this emotional form of child maltreatment is often not detected or recorded, which is problematic when attempting to establish rates of co-occurrence. Additionally, these samples are likely to only be representative of the most extreme cases of IPV, in which the women lack alternative support and consequently resort to shelters. Obtaining data from women's shelters does not take into account the male victims of IPV, and therefore rates of co-occurring abuse are likely to be misrepresented when data has been sourced solely from women's shelters. A methodological problem when attempting to establish rates of family violence is that many research studies have based their co-occurrence rates on data that has been gathered for other purposes, such as identifying psychological and behavioural effects associated with a child's witnessing IPV, rather than focusing on co-occurrence of IPV and child maltreatment (Edleson, 1999).

Co-occurrence of Child Maltreatment and Intimate Partner Violence

Viewed separately, child maltreatment and IPV are both serious issues that can have profound effects on all those involved (Levendosky & Graham-Bermann, 2001). However, when these forms of family violence co-occur, the effects can be even more detrimental (Humphreys & Stanley, 2006). IPV has been found to significantly co-occur with severe forms of child maltreatment (Brandon et al., 2008). Both adult perpetrators and victims of IPV have been identified as one of the populations that may be at a higher risk of abusing their children (Appel & Holden, 1998). It is important to consider that studies encompassing both child maltreatment and IPV are often only published in journals specific to one form of family abuse, so consequently may get unnoticed in other relevant fields (Edleson, 1999).

Whilst it is important to gain awareness of the degree of co-occurrence of child maltreatment and IPV, researchers have also begun to explore the ways in which such co-occurring patterns of violence arise. Children who are present during incidents of IPV are at an increased risk of harm of being abused themselves (Hamby, Finkelhor, Turner & Ormrod, 2010). For example, parents perpetrating IPV may also inflict the same harm on their children, whether that is physical, sexual or emotional abuse (Appel & Holden, 1998; Edleson, 1999). On the other hand, a perpetrator of IPV may also use harsh physical discipline with the child (Coohey, 2004; Murray, Blair-Merritt, Roche & Cheng, 2012; Renner & Slack, 2006). The same can be said for victims of IPV as they may abuse their children as a form of coping with their own abuse, or may maltreat their child due to a lack of tolerance or inability to manage the stress that they experience as a parent (Coohey, 2004; Renner & Slack, 2006). According to Coohey and Zhang (2006) and Hartley (2004), IPV may also precede child neglect as a victimised parent may become unable to care for the child due to possible mental health and parenting problems associated with IPV, such as depression and substance abuse. The perpetrator may themselves, due to the nature of their abusive behaviour, have a neglectful or dismissive style of parenting (Coohey & Zhang, 2006; Hartley, 2004).

Some children who are present during an episode of IPV may find themselves directly involved when attempting to intervene resulting in injuries to themselves (Appel & Holden, 1998). A child's overall wellbeing, including their health and development may be affected if their home environment is centred on abuse and conflict, rather than protection and support (Christian, Scribano, Seidl & Pinto-Martin, 1997; Evans, Davies & DiLillo, 2008).

Researchers have begun to identify the risk factors associated with child maltreatment and IPV, which, when identified, may help to reduce or even prevent these forms of violence from occurring and protect children who are at risk of being maltreated (Appel & Holden, 1998). Risk factors that have been found to be associated with the perpetration and victimisation of IPV include parental intellectual disability (Hughes et al., 2012), parental mental health difficulties (Hughes, 2013), low level of education, poor income, being married for over 10 years, husbands alcoholism and having had an arranged marriage (Babu & Kar, 2010), some of which highlight cultural differences. Additionally, some researchers have found that IPV is more prevalent in minority populations, whilst other researchers have found no cultural, ethnic or racial differences (O'Keefe, 1994). Other risk factors for child maltreatment include low educational level, poor income, being a young parent, having a history of psychiatric illness, or having been a victim of child abuse (Sidebotham & Heron, 2006). Although some risk factors for IPV and child abuse have been recognised in the literature, what is also of importance is what places an individual at risk of perpetrating both forms of abuse concurrently.

As already discussed, rates of co-occurrence may differ depending upon where the sample was geographically sourced as different cultures vary in terms of their perception of what constitutes abuse. However, as many studies do not report the racial or ethnic composition of their samples, or socioeconomic status, it is difficult to draw any firm conclusions (Hampton, 1987; Korbin, 2002; Lauderdale, Valiunas & Anderson, 1980). It is important to recognise that generalisations are likely to be unreliable and unrepresentative due to the lack of this demographic information.

Identifying whether IPV is associated with child maltreatment would help to inform professionals in identifying the risk factors that correlate with such abuse. This

would allow measures to be put in place to help reduce the risk of potential child maltreatment through the development of intervention programmes attending to issues related to IPV as well as child maltreatment.

Existing Systematic Literature Reviews

An initial search for existing systematic reviews was conducted on 16th December 2013 in the Centre for Reviews and Disseminations (DARE), Cochrane Library, PsycINFO and Medline, however none were found. A 'Google Scholar' search was then employed. Two existing systematic reviews were found and are discussed below.

Appel and Holden (1998). Appel and Holden (1998) completed a review involving 31 studies selected on the basis of containing sufficient information about the co-occurrence of spouse abuse and physical child abuse. The review concluded that marital abuse and child abuse were likely to co-occur. They found that the base rate of co-occurrence in representative community samples was approximately 6%, however, in clinical samples of battered women and maltreated children they found co-occurrence to range from 20% to 100%. The authors noted that the median rate of co-occurrence was 40% when a conservative definition of abuse was used. The review focused solely on physical child abuse and spousal abuse, not accounting for sexual abuse, emotional abuse or child neglect, making the link between child maltreatment and IPV difficult to establish. Additionally, no information was given to illustrate the process of quality assessment so the quality of the thirty-one studies included in their review is unknown. All but one of the studies they used was from the United States of America, which raises questions of generalizability of the results to

other countries. The current systematic review differs in that it only includes studies of a high quality, it is not restricted to certain forms of abuse, such that it focuses on all forms of IPV co-occurring with all types of child maltreatment, it provides a more up to date analysis of studies and is not geographically restricted.

Edleson (1999). Edleson (1999) reviewed 35 studies selected on the basis of having mentioned an overlap between child maltreatment and adult domestic violence. According to the review, in 30% to 60% of families where either child maltreatment or adult domestic violence were occurring, the other form of violence was also being perpetrated. However, the author did point out that the rate of co-occurrence ranged from 6.5% to 97%. The majority of studies in Edleson's review identified the mother as the victim of IPV and reported physical child abuse; however the type of child maltreatment varied from study to study. The drawback with this literature review is that the study did not specify where the studies used were obtained from and on what basis they were assessed for quality. The review also only included studies where there was either known or suspected child maltreatment, known spouse abuse or studies in which the children had suffered fatalities or critical injuries. Limiting the review to only cases of substantiated abuse is likely to lead to a misrepresentation of actual rates of abuse. The current review differs in that only studies of a high quality are used, including representative samples.

The risks related to children and parents who suffer abuse are likely to vary depending upon the type of abuse experienced, whether that is physical, psychological, sexual or negligent. Therefore, it is important for a review of the relationship between child maltreatment and IPV to be broad, including a wide definition of abuse. Taking the abovementioned studies into consideration, alongside

the scoping searches conducted prior to commencing this review, it was apparent that, despite the co-occurrence of child maltreatment and IPV having been considered in a systematic approach, existing literature reviews were out-dated and had generally been restrictive in the types of child maltreatment and IPV that were included. Additionally, although previous reviews provided an estimate of the rates of co-occurring child maltreatment and IPV, little was provided in terms of how these forms of family violence were interconnected.

The Current Review

This literature review attempts to offer some insight into the co-occurrence of child maltreatment and IPV. Awareness of this relationship is important as it not only helps to improve intervention strategies but may also go some way to identify families at risk.

Aim. This systematic review aims to assess the co-occurrence of child maltreatment and IPV.

Objective. The objective of this systematic review is as follows:

1. To determine the co-occurrence rates of child maltreatment and IPV

METHOD

Sources of Literature

A search for potential articles was conducted on electronic databases including PsycINFO (1806 to December Week 2 2013, completed on 17th December 2013), MEDLINE (1946 to November Week 3 2013, completed on 17th December 2013), EMBASE (1974 to current, completed on 17th December 2013), Web of Science (1898 to current, completed on 17th December 2013), ASSIA (1986 to current, completed on 17th December 2013) and Science Direct (1822 to current, completed on 17th December 2013). An initial scoping exercise assessed the relevance of potential studies.

Relevant journals such as *Child Abuse and Neglect, and Journal of Family Violence* were also hand searched for relevant studies, as these journals were likely to have a high volume of studies on this topic. However, due to time constraints, it was only possible to hand search through *Child Abuse and Neglect* from 1977 to January 2014, and only possible to hand search through *Journal of Family Violence* from 1997 to January 2014. The search employed also restricted articles that were written in the English language due to time constraints of translating studies. Editorials, comment papers and unpublished work was excluded from the search in the databases. Despite this possibly leading to publication bias, it was deemed appropriate due to the lack of peer review.

Search Strategy

Although mapping to subject headings is a more efficient way to search for studies, this resulted in a large number of hits. Therefore, keywords were used in

order to reduce the number of potential studies that may have been lost due to incorrect coding. Although this may have increased the number of duplicates, it allowed for consistency across electronic databases, in particular those that did not have the option of mapping to subject headings. These search terms were then combined to ensure that only the most relevant studies were listed. Child maltreatment terms were checked for their inclusion of physical abuse, sexual abuse, emotional abuse and neglect. Similarly, IPV terms were checked for inclusion of physical, sexual and emotional abuse.

The following terms in Box 1.1 were entered into the search:

Box 1.1

Search Terms

Domestic Violence OR Domestic Abuse OR Partner Violence OR Partner Abuse
AND
Child Abuse OR Child Neglect OR Child Maltreatment
AND
Link OR Co-occur OR Overlap OR Prevalence OR Associat*

A copy of the syntax is included in Appendix 1.

Study Selection

Studies were screened using inclusion and exclusion criteria formulated using the initial scoping searches and a review of previous systematic reviews.

The inclusion/exclusion criteria is listed below in Box 1.2:

Box 1.2

Inclusion and Exclusion Criteria

Population: Perpetrators and/or victims of IPV, maltreated children under the age of 18
Exposure: IPV, CAN or both
Comparator: None, or no IPV
Outcome: Rates of IPV, CAN or both
Study Design: Cohort
Exclusions: Opinion papers, commentaries, editorials, non-English papers, unpublished papers, case series designs, treatment interventions

A copy of the inclusion/exclusion criteria utilised to assess the relevance of all studies following the search has been included in Appendix 2. This criterion was applied to each of the studies using the abstracts where possible. For those studies in which the abstract did not provide enough information about the nature of the study, the full article was accessed electronically for further information. All of the studies that matched the inclusion/exclusion criteria were downloaded and were then assessed for quality. Therefore, studies were excluded on the basis of: a) not meeting the inclusion criteria; or b) having met the inclusion criteria but attaining a quality assessment score below the 70% cut-off.

The study selection process resulted in 55 studies that met the inclusion criteria, however 12 of these studies were unobtainable. Therefore, the remaining 43 studies were quality assessed. Quality assessment led to the removal of a further 28 studies (see Appendix 3), resulting in 15 studies being included in the review. Hand searching through relevant journals yielded articles that had already been obtained

using the various databases. Figure 1.1 shows the process of study selection in a flowchart and details the number of studies obtained from each database, along with the number of studies excluded at each stage.

Quality Assessment

After studies had been identified as relevant, the quality of the study was assessed (see Appendix 4). To assist with development of the quality assessment checklist items, the University of York: Centre for Reviews and Dissemination (CRD, 2007) website was accessed, which provided guidance on core components of a quality assessment checklist. The key variables assessed were: aims of the study; definitions of child maltreatment and IPV; sample selection; substantiated data; valid/reliable measures; statistical analysis; and appraisal of limitations. Each of the items on the checklist were assessed on a three-point scale [yes (2), partly (1), and no (0)]. An option for 'unknown' was also provided on the checklist, and despite not being included in the scoring, it was provided for further information to be recorded. The total quality score was obtained by adding the scores of each item, providing a total score ranging from 0 to 36.

Only those studies assessed to be of a good quality (70% or above) were included in the review. Despite this possibly producing bias, it ensured that the conclusions and recommendations made from this review were on the basis of the highest quality studies found.

Data Extraction

Data was extracted from the studies using a structured proforma. This extraction form re-verified the study eligibility, detailed the methodological quality of

the study, provided information on the type of child maltreatment and IPV assessed, the measurement of the exposure and any limitations. The data extraction form is provided in Appendix 5.

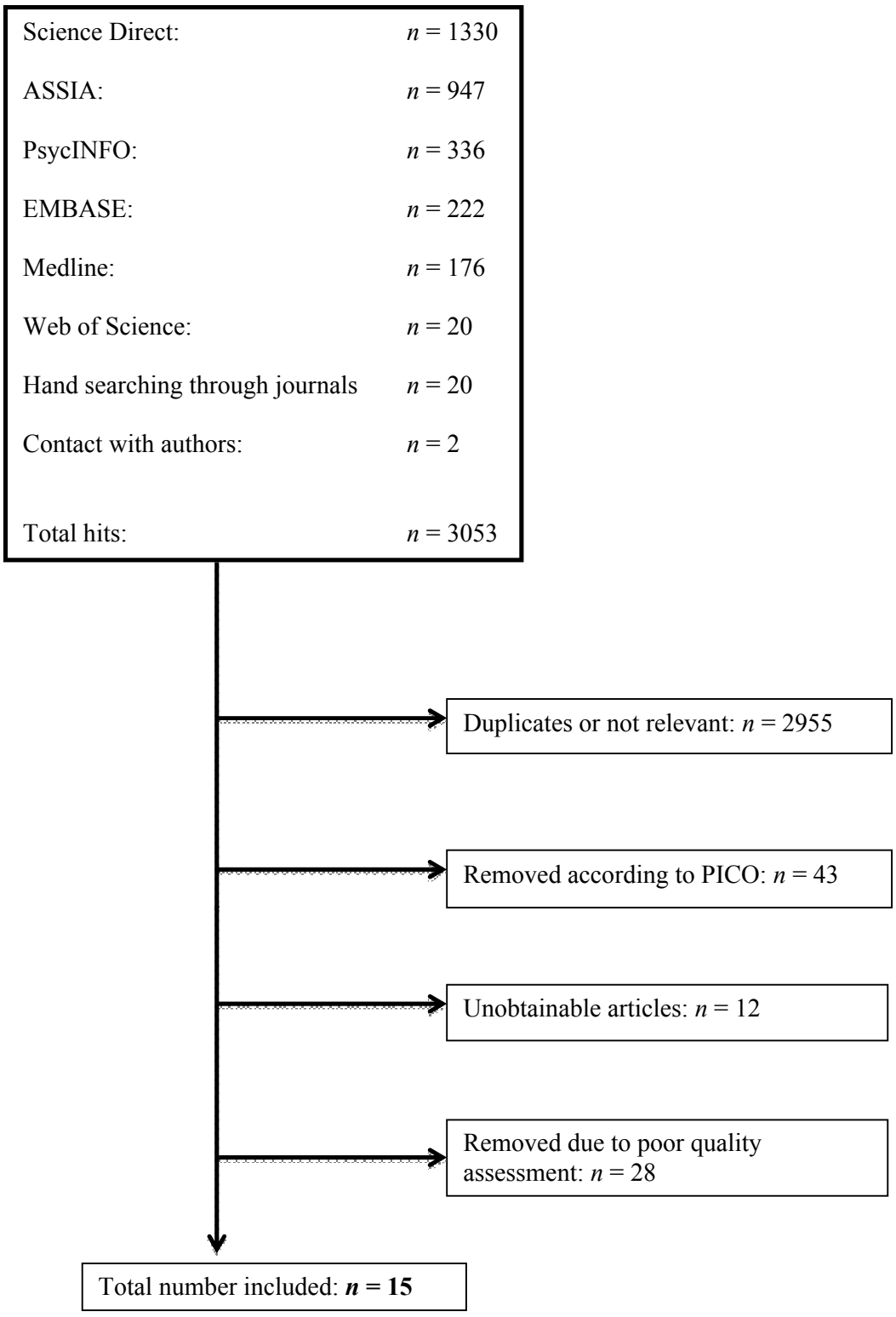

Figure 2.1: Flow chart: Description of search

RESULTS

Descriptive Data Synthesis

Due to the variety of settings that participants were recruited from, the variety of samples used, the differences in definitions of abuse used and the various types of maltreatment found, the results of the studies included in this review could not be statistically combined for quantitative data synthesis. Therefore, in reaching conclusions, studies were individually examined with reliance upon descriptive and inferential statistics. A summary of each study included in the review is provided in Table 2.1.

Table 2.1

Characteristic of Included Cohort Studies (n = 15)

Author/Year/ Title	Aim/Hypotheses	Sample Size (*n*) & Methods	Child Maltreatment Measure	Intimate Partner Violence Measure	Statistical Analysis	Results	Quality Score
Casanueva, Martin & Runyan (2009) Repeated reports for child maltreatment among intimate partner violence victims: Findings from the National Survey of Child and Adolescent Well-Being	To determine the prevalence of IPV among mothers who maltreat their children and to examine whether mothers' experiences of IPV are associated with repeated reports of children to Child Protective Services during the following 18 months	- Data was taken from the National Survey of Child and Adolescent Well-Being (NSCAW) which is a national probability study of children investigated for child maltreatment - The sample of 5,501 children (ages 0-14) was randomly selected from the families who entered the US child welfare system between October 1999 and December 2000 - The analysis sample was restricted to 1,236 families who were the alleged perpetrators of child maltreatment and the biological, adoptive or stepmothers of children not placed in out-of-home care - Baseline interviews with families and	- Assessed by asking caseworkers "of the types of abuse or neglect that were reported, tell me the type you felt was the most serious" - Caseworkers could select from 10 types of maltreatment including sexual abuse, physical abuse, physical neglect, lack of supervision, moral/legal maltreatment and educational maltreatment - Additional questions asked about the alleged perpetrator - Items were combined such that 3 categories of child maltreatment were used (physical abuse, physical neglect: failure to provide and lack of supervision)	- Mother's baseline interviews assessed IPV using the physical violence scale of the Conflict Tactics Scale (CTS) - Caregivers asked how many times in the past 12 months or previously had they experienced the following 9 violent acts from a partner: throwing something; pushing, grabbing or shoving; slapping; kicking, biting or hitting with a fist; hitting or trying to hit with something; beat up; choked; threatened with a knife or gun; use of a knife or gun	- Bivariate analysis - Logistic regression - Multivariate logistic model - Survival analyses	- Almost half (44%) of the mothers reported for alleged child maltreatment at baseline had experienced physical IPV - The children of these mothers were twice as likely as children of mothers who had not experienced such violence to be re-reported to CPS (29% vs. 14%, Odds Ratio = 2.0, 95% Confidence Interval = 1.1-3.0) - 20.7% of mothers who experienced IPV physically maltreated their child, 31% physically neglected their child and 47.3% were referred due to lack of supervision	86.11% 31/36

		caseworkers - Follow up interviews 12 and 18 months after baseline					
Chan (2011a) Co-occurrence of intimate partner violence and child abuse in Hong Kong Chinese Families	To investigate the rate of co-occurrence of IPV and CAN (child abuse and neglect) and examine whether IPV is a risk factor for CAN	- A subsample of 2,363 parents (1128 fathers, 1235 mothers) taken from a representative population study in Hong Kong. - Interviewed face to face by research assistants	- Parent-Child Conflict Tactics Scale (CTSPC) used. - Asked to respond to items that measured child maltreatment. Items concerning non-violent discipline, psychological aggression, corporal punishment, physical maltreatment, neglect and weekly discipline - Assessed rates of child maltreatment in lifetime and preceding year	- Revised Conflict Tactics Scale (CTS2). - Partner violence was defined as acts of physical assault, psychological aggression, physical injury and sexual coercion perpetrated by a current married or cohabiting partner. - Assessed rates of domestic violence for lifetime and preceding year.	- Descriptive statistics - Multiple logistic regression	- 4% lifetime co-occurrence rate - 1.5% preceding year co-occurrence rate - IPV perpetrators who also physically maltreated child (22.8% lifetime; 15.6% preceding year) - IPV victims who physically maltreated their child (23.7% lifetime; 17.5% preceding year) - Child maltreatment perpetrators also abused partner (37.1% lifetime; 24% preceding year) - Child maltreatment perpetrators also victims of IPV (36.4% lifetime; 25% preceding year) - Mothers more likely to be abusers than fathers	77.78% 28/36
Chan (2011b) Children exposed	To assess the co-occurrence of child maltreatment and IPV	- Population based sample of 1,094 children aged 12-17	- Parent-Child Conflict Tactics Scale (CTSPC)	- Defined as acts of physical assault, psychological aggression	- Univariate and multiple logistic	- 18.1% experienced dual violence in lifetime	77.78% 28/36

to child maltreatment and intimate partner violence: A study of co-occurrence among Hong Kong Chinese families	and examine the association between them	years - Face-to-face interviews with children - Parents interviewed to provide demographic information about themselves and children	- Asked to respond to 5 subscales of CTSPC (physical maltreatment and severe physical maltreatment, psychological aggression, corporal punishment, non-violent discipline and neglect) - Lifetime and preceding-year prevalence	or injury perpetrated by a current marital or cohabiting partner, as measured by the revised Conflict Tactics Scale (CTS2) - Lifetime and preceding year	regression - Chi-square	- 7.3% experienced dual violence in preceding year - Among families characterised by IPV, 54.4% and 46.5% were involved in child physical maltreatment over the child's lifetime and in the preceding year, respectively - IPV consistently a factor associated with all forms of child maltreatment	
Chang, Theodore, Martin & Runyan (2008) Psychological abuse between parents: Associations with child maltreatment from a population-based sample	To examine the association between partner psychological abuse and child maltreatment perpetration	- Population-based sample of mothers with children aged 0-17 (n = 1,149) - Derived from the Carolina Safe Study - Only included mothers who reported living with a husband/partner at time of interview - Cross-sectional anonymous telephone survey	- Abbreviated form of Parent-Child Conflict Tactics Scale (PC-CTS) to measure parental disciplinary practices including those that would qualify as child maltreatment - Measured physical maltreatment, verbal maltreatment and neglect	- Questions adapted from the Conflict Tactics Scale (CTS) - Measured partner psychological abuse	- Descriptive and bivariate analyses, - Chi-square - Multivariate multinomial logistic regression	- Psychological aggression between parents was statistically significantly associated with perpetrating aggression towards the child - Children were at greatest risk of maltreatment when parents psychologically abused each other (28%)	77.78% 28/36
Cox, Kotch & Everson (2003) A longitudinal	Investigates the roles of risk and protective factors in the relationship between	- Based on purposive sample of low SES, high-risk families who are participants	- Binary-coded indicator based on maltreatment reports received by the State	- Indicators of verbal and physical domestic violence were developed from items on several	- Descriptive statistics - Repeated measures	- Significant overlap between domestic violence and child maltreatment	80.56% 29/36

study of modifying influences in the relationship between domestic violence and child maltreatment	domestic violence and being reported to the Department of Social Services for child maltreatment	in the Southern LONGSCAN site study - 219 families who completed the Age 6 interview with a mother figure as the caregiver respondent. - Of these 219 families, 184 were re-interviewed 7-30 months later. - One third of the sample were reported to the State Central Registry of Child Abuse and Neglect before recruitment into the study - Mostly composed of single mother households - Maternal caregivers participated in a 2 hour face-to-face interview - Children were administered measures of cognitive development, psychological functioning, witnessed violence and support received from significant adults	Central Registry of Child Abuse and Neglect - Coded on basis of reports during a 2 year period (1 year before and 1 year after each interview)	instruments, using reports from both the caregiver and the child - The Couple form of the Conflict Tactics Scale (CTS) was administered to caregivers only if they were living with a spouse or partner at the time of interview (time frame of 3 months) - Assessed physical and verbal aggression - A LONGSCAN-developed instrument called Child Life Events which was administered to caregivers - 'Thing's I've seen and heard' administered to the child	logistic regression	- Maltreatment reports occur with more than twice the frequency when domestic violence is present as when it is not, and the difference is statistically significant at $p < .01$ at Age 6 and $p < .05$ at Age 8 - 27.7% maltreatment among domestic violence (age 6) - 27.6% maltreatment among domestic violence (age 8)	
Dixon, Hamilton-	Considers the	- 105 child	- Based on the	- Characterised by	- Bivariate	- Within their family	91.67%

Giachritsis, Browne and Ostapuik (2007) The co-occurrence of child and intimate partner maltreatment in the family: Characteristics of the violent perpetrators	characteristics associated with mothers and fathers who maltreat their child and each other in comparison to parents who only maltreat their child	maltreatment cases were examined, providing psychological report information of 164 parents (75 men, 89 women) who were individually assessed by a forensic psychology consulting service on their suitability to parent, following allegations of child maltreatment - Parents were aged between 17 and 52 - Children were aged between 1 month and 15 years - Psychological report was constructed from interviews with the client and cross-verification of client self-report with additional sources (e.g. medical records, social services, school and police reports and reports of witnesses and family members) - Psychometric tests (MCMI-III and PSI) also used	psychological report of each client - In cases where a child suffered multiple forms of abuse or neglect, the most active form of abuse was designated to define abuse type	physical abuse, with the exception of two cases, in which the mother experienced psychological abuse only - In cases where a partner suffered multiple forms of abuse, the most active form of abuse was designated to define abuse type	analysis - Chi-square tests	unit, 40.7% of parents perpetrated both intimate partner and child maltreatment - 64.2% of parents experienced partner and child maltreatment in their home, either as a result of them or their partner conducting both types of maltreatment concurrently within the family or because both parents conducted one type of maltreatment each - Fathers significantly more likely to maltreat both partner and child - Mothers significantly more likely to be victims of IPV - PF (perpetrator of child maltreatment and IPV) fathers conducted highest amount of physical and/or sexual child maltreatment - MC (perpetrator of child maltreatment	33/36

						only) and MV (victim of IPV and perpetrator of child maltreatment) mothers perpetrated highest amount of child neglect	
Dong, Anda, Feliti, Dube, Williamson, Thompson, Loo & Giles (2004) The interrelatedness of multiple forms of childhood abuse, neglect, and household dysfunction	To examine the degree to which ACEs (adverse childhood experiences) co-occur as well as the nature of their co-occurrence	- 8,629 adult members of a health plan - Completed a survey about 10 ACEs (emotional abuse, physical abuse, sexual abuse, emotional neglect, physical neglect, domestic violence, household substance abuse, mental illness in household, parental separation or divorce, criminal household member) - All questions referred to respondents first 18 years of life	- Questions to define emotional and physical abuse adapted from the Conflict Tactics Scale (CTS) - Childhood Trauma Questionnaire (CTQ) to measure emotional and physical neglect	- Questions about growing up with domestic violence adapted from the Conflict Tactics Scale (CTS)	- Multivariate logistic regression - Multiple linear regression	- 86.5% of respondents who had experienced one ACE reported at least one additional ACE during childhood - Of those who had reported childhood exposure to domestic violence: - 31.3% were emotionally abused - 57.5% were physically abused - 36.4% were sexually abused -35.9% were emotionally neglected - 27.5% were physically neglected	83.33% 30/36
Hartley (2002) The co-occurrence of child maltreatment and domestic violence: Examining both	Examined differences in demographic characteristics, parental problems, and maltreatment characteristics for families involving	- 94 families with a founded incident of neglect and 86 families with a founded incident of physical abuse	- Child protections workers' reports of interviews with involved persons - Based on State of Iowa definitions of child abuse and	- Based on three different sources: - Assessment narratives completed by child protection assessment workers investigating the child abuse allegation	- Chi-square analyses - Factorial analyses	- Total of 82 (45.6%) families were identified as having domestic violence present in the home - Descriptive analysis found more	80.56% 29/36

neglect and child physical abuse	physical abuse or neglect and woman battering compared to families with the same type of maltreatment but no known woman-battering present		neglect	- Service authorization forms completed by child protection service workers on families referred for services after the initial investigation - Database kept by the Cedar Rapid's Police Department on all reports or arrests occurring in the city from January 1996 to July 1999 - Domestic violence was defined as occurring if the mother figure was the known victim of battering by the current father figure in the family		differences between families with co-occurring domestic violence and neglect, and neglect-only, than between co-occurring domestic violence and physical abuse, and physical abuse-only families	
Hazen, Connelly, Kelleher, Landsverk & Barth (2004) Intimate partner violence among female caregivers of children reported for child maltreatment	To determine the prevalence and correlates of IPV among female caregivers of children reported to child protective services	- Data from the National Survey of Child and Adolescent Well-Being (NSCAW), which consists of a child protective services component and a long-term foster care component - NSCAW consists of children in the US who were the subjects of child abuse and neglect investigations conducted by child protective service agencies - 4037 participants	- Children in the US who were the subjects of child abuse and neglect	- Conflict Tactics Scale (CTS2) - IPV in the preceding year - If no IPV in preceding year then any incidents of IPV in any past intimate relationships	- Bivariate analysis - Logistic regression - Poisson regression	- The lifetime and past year prevalence of IPV was 44.8% and 29% respectively	75% 27/36

		from the core child protective services sample of the NSCAW - Baseline interview with female caregiver (n = 3612) or a male caregiver (n = 364) - Child protection workers were interviewed about the case investigations that brought the families into the NSCAW study and about families' prior contact with child protection services					
Kohl, Edleson, English & Barth (2005) Domestic violence and pathways into child welfare services: Findings from the National Survey of Child and Adolescent Well-Being	To explore the role of domestic violence in determining the pathways of families through child welfare services (CWS) The study seeks to answer the following five research questions: 1. What maltreatment classification is given to children with co-occurring child maltreatment and exposure to domestic violence; 2. Are families with child maltreatment and	- Data from the National Survey of Child and Adolescent Well-Being (NSCAW) which is a national probability sample of children and families referred to and investigated by CPS systems - 3,931 caregivers of children who underwent an investigation of child maltreatment between October 1999 and December 2000 - Face-to-face interviews conducted	- Child welfare workers responded to questions regarding the circumstances surrounding the investigation of the child maltreatment allegations that lead to inclusion in NSCAW - Assessed 10 maltreatment types (physical, sexual, emotional, neglect: failure to provide, neglect: failure to supervise, abandonment, moral/legal	- The child welfare worker indicated whether active domestic violence toward the caregiver was present at the time of the investigation. - The worker also assessed for history of domestic violence against the caregiver	- Bivariate analyses - Multivariate analyses - Multinomial logistic regression - Binary logistic regression	- Active domestic violence in 14% of families - History of domestic violence in 19% of families - Significant relationship exists between most serious maltreatment type and recent domestic violence. - Active domestic violence was distributed fairly evenly across the three most serious maltreatment types: failure to supervise	94.44% 34/36

	domestic violence more likely to have substantiated cases of maltreatment; 3. Is domestic violence a critical factor influencing decisions made by the child welfare worker; 4. What is the relationship of domestic violence to other family and environmental risk factors; and 5. What family characteristics, including domestic violence, predict placement into out of home care?	with child welfare workers	maltreatment, educational maltreatment, exploitation, other) - Assessed level of harm (none, mild, moderate, severe)			(28%), physical abuse (23%), and emotional maltreatment (23%)	
Lamers-Winkelman, Willemen & Visser (2012) Adverse childhood experiences of referred children exposed to intimate partner violence: Consequences for their well-being	To investigate the severity and duration of IPV and whether adverse experiences other than IPV are related to behavioural and emotional problems and trauma symptoms in children exposed to IPV	- 208 clinical referred children whose primary caregivers were victims of IPV - Caregivers completed several questionnaires about demographic characteristics, adverse experiences and emotional and behavioural functioning of their children - If appropriate, children also	- Adverse childhood experiences (ACE) were completed using the second part of the Parents Report of Traumatic Impact - ACEs related to child abuse/neglect include: emotional abuse (recurrent humiliation), physical abuse (beating, not spanking), contact sexual abuse, and emotional neglect	- Caregivers and children were interviewed about the type of violent acts, the duration of IPV, and whether the child had also been a victim - Five types of violent acts were distinguished: verbal violence, physical violence, caregiver was seriously hurt, destruction of household and toys, and stalking	- Bivariate correlation analyses - Linear regression analyses - Multiple logistic regression analyses	- Of the sample of children whose primary caregivers were victims of IPV: - 53.6% experienced neglect - 51.9% experienced physical abuse - 39.9% experienced emotional abuse - 10.1% experienced sexual abuse - Children exposed	72.22% 26/36

		completed questionnaires about their functioning - Primary caregivers were extensively interviewed during their first contact with the therapist - Reports from other agencies (i.e. Office of Confidential Doctors, Child Protection Services, and Youth Agencies) were reviewed - When caregivers consented, the teacher of the child was approached to fill out a questionnaire				to IPV had also experienced other ACEs, such as diverse forms of abuse, household dysfunction, and neglect	
McGuigan & Pratt (2001) The predictive impact of domestic violence on three types of child maltreatment	To investigate the co-occurrence of domestic violence and three types of child maltreatment: physical child abuse, psychological child abuse, and child neglect	- Data obtained from families served by Oregon Healthy Start (OHS), a primary prevention program designed to prevent child maltreatment among high risk families - Near time of child birth, new mothers were screened using Hawaii Risk Indicators (HRI) checklist which includes known risks for child	- Data obtained from the Oregon child protective services agency - Physical child abuse was defined as head injuries, internal injuries, bruises, cuts, burns, shocks, poisoning, or any other physical abuse by parents confirmed by the state's child protection agency - Psychological child abuse was defined as	- After 6 months of OHS services, family support workers (FSWs) assessed the presence of domestic violence based on approximately 14 home visits made between child's birth and 6 months of age - Trained to assess domestic violence through observation and direct questioning - As part of regular home visits, couple relationships were discussed or observed	- Logistic regression	- Significant relationships between domestic violence and child maltreatment, such that physical child abuse was 3 times, psychological child abuse was 2 times and child neglect was 2 times more likely to occur when domestic violence occurred - Domestic violence occurred in 38% of the 155 cases of	80.56% 29/36

		maltreatment - Mothers with multiple risks on HRI were then assessed with Kempe Family Stress Inventory (KFSI) which is an in depth interview - Those at risk following KFSI then asked to participate in OHS home visitation service when child was 6 months old - 2,544 at-risk mothers with first-born children participated in a home-visiting child abuse prevention program. - Longitudinal design using multiple data collection methods investigated the effect of domestic violence during the first 6 months of child rearing on confirmed physical child abuse, psychological child abuse and child neglect up to the child's first 5 years	any of the following acts perpetrated by parents and confirmed by the state's child protection agency: threats of harm, humiliation, sensory deprivation, failure to promote parent-child attachment, restrictions of child's learning, or other mental or emotional abuse - Child neglect included lack of supervision, medical neglect, failure to provide food or clothing, inadequate shelter, desertion, abandonment, or any other physical neglect perpetrated by parents and confirmed by the state's child protection agency - Only most severe type of child maltreatment was reported by the state for each maltreating family	- Defined as any act of physical aggression between adult partners with the intent to do harm		confirmed maltreatment - Domestic violence preceded child maltreatment in 78% of the 59 cases of co-occurrence, as indicated by independent home observations and child protective service records	
Salzinger, Feldman, Ng-	To test a model of the effects on child	- 100 physically abused New York	- Confirmed cases of physical abuse were	- Assessed from family interaction section of the	- Path analysis	- Among the physically abused	77.78%

Mak, Mojica, Stockhammer & Rosario (2002) Effects of partner violence and physical child abuse on child behaviour: A study of abused and comparison children	behavioural outcome of child's exposure to partner violence and child abuse, in children who have experienced the two forms of victimisation either separately or together	City schoolchildren, aged 9 to 12 - 100 non-maltreated classmates, matched case by case for gender, age, race, ethnicity and socioeconomic status - A letter was sent out to families, with follow-up telephone calls inviting their participation - A home visit was arranged for families that agreed - Comparison subjects recruited case by case from among each abused child's classmates - Same letter sent to comparison subjects' families - Subsequent recruitment procedure was essentially the same - Interview conducted at home with the child's major caretaker - Sociometric assessment of the entire school class - Teacher completed a standardised behaviour rating on	identified among consecutive entries onto the New York State Register for Child Abuse - Measured as a dichotomous variable based on confirmation of abuse by Child Protective Services	parent/guardian interview - Behavioural descriptions of what happened during the worst arguments or disagreements between all pairs of household members plus any parent or surrogate who ever lived in the target child's household - Informant asked to rate frequency of any aggressive physical action mentioned (e.g. hitting, shoving) on the scale; daily, more than once a week, weekly, monthly, rarely, or never - Partner violence coded as present if it occurred at least monthly between any pair of parental figures	using logistic regression - Bivariate associations	children, 33% also had a presence of frequent partner violence - 29/33 male perpetrators of IPV (11/29 male perpetrators of IPV abused child) - 29/33 female victims of IPV (20/29 female victims of IPV abused child) - 11/33 female perpetrators of IPV (9/11 female perpetrators of IPV abuse child) - 8/33 male victims of IPV (4/8 male victims of IPV abused child) - Children are likely to suffer aggressive behaviour from both perpetrators and victims of IPV and the child's major caretaker, usually the mother, contributes substantially to the elevated risk - Among the matched non-maltreated comparison group, 11% had a presence	28/36

		each of the two children				of frequent partner violence	
Slep & O'Leary (2005) Parent and partner violence in families with young children: Rates, patterns, and connections	To address the four patterns of parent and partner aggression that may occur in two-parent families with young children, to lay the groundwork for a larger study designed to better understand patterns of and possible predictors of co-occurring partner and parent aggression, and to test a series of hypotheses regarding the relative risk imparted by one type of aggression for the presence of other types of family violence	- A total of 453 couples participated - Recruited through a random digit dialling procedure - A brief demographic interview was administered to al willing respondents to determine study eligibility - Respondents had to be living as a couple for at least 1 year, parenting a 3-7-year-old child who was the biological offspring of at least one of the parents, and able to complete the questionnaires in English - Eligible respondents completed a slightly longer interview about family functioning - Over a total of 6 hours, participants completed extensive batteries of questionnaires about themselves, their relationships, and	- Parent-Child Conflict Tactics Scale (CTS-PC) - Severe physical aggression corresponds to seven items regarding acts with a high potential to cause injury - Parents classified as having reported either any or severe physical aggression if they endorsed at least one act of that type	- Conflict Tactics Scale – Revised (CTS2) - Participants indicated the frequency that they and their partners engaged in specific acts during the preceding 12 months on a scale ranging from 0 (*never*) to 6 (*more than 20 times*) - Physical aggression was assessed with 12 item pairs that assessed mild (i.e. thrown an object that could hurt) and severe (i.e. beat up) aggression - Husband-to-wide and wife-to-husband aggression scores were based on both perpetration and victimisation reports	- Linear regression	- All types of physical aggression, at both the overall and severe levels, significantly co-occurred - 51% of families involved the presence of some type of any physical aggression occurring both between the partners and toward the child - 22% of families involved both adults aggressing against each other and both adults aggressing against the child - 4% of families reporting any physical aggression involved a sole perpetrator aggressing against partner and child - 3% of severely aggressive families involved a sole perpetrator aggressing against partner and child	80.56% 29/36

		their families - Some observational and physiological data were also collected					
Taylor, Guteman, Lee & Rathouz (2009) Intimate partner violence, maternal stress, nativity, and risk for maternal maltreatment of young children	To assess the unique combination of maternal IPV victimisation to maternal child maltreatment risk in a diverse, population-based sample	- Data from the Fragile Families and Child Well-Being Study (FFCWS) which is a national longitudinal cohort study - Baseline data collected at or near the time of the index child's birth - Since then additional waves of data have been collected - 2,508 mothers who completed interviews from FFCWS wave 3 (when child was aged 3) and the In-Home Longitudinal Study of Pre-School Aged Children	- Mothers' self-reported acts of psychological aggression, physical aggression, neglect, and spanking toward their children - First 3 variables assessed with 15 items from Parent-Child Conflict Tactics Scale - Psychological aggression assessed with 5 items (shouted, yelled, screamed; swore or cursed; said you'd send the child away or kick out; threatened to spank; and called dumb, lazy or something similar) - Physical aggression assessed with 5 items (shook, hit on the bottom with object, spanked, slapped, and pinched) - Neglect assessed with 5 items (had to	- Three items adapted from Conflict Tactics Scale and four items adapted from spouse observation checklist to assess mothers IPV victimization - Items included: slaps or kicks you, hits you with a fist or an object that could hurt you, and tries to make you have sexual intercourse or do sexual things you don't want to do, insults or criticises you, tries to keep you from seeing or talking with your friends or family, tries to prevent you from going to work or school, and withholds money, makes you ask for money, or takes your money	- Regression analyses - Bivariate analyses - t-test - Chi-square - Multivariate regression models	- Mothers who experience IPV, compared with those who did not, used psychological aggression against their child more frequently than no IPV - IPV was associated statistically with psychological aggression, spanking and neglect but not with physical aggression - IPV relative risk for child maltreatment was greater for foreign-born than US-born mothers - Of mothers who experienced IPV, they reported an average of 28 acts of psychological aggression, 18 acts of physical aggression and 85 acts of neglect toward their index	83.33% 30/36

		leave the child alone, too caught up to tell child you loved him or her, unable to feed, unable to get child medical care when needed, and too drunk or high to care for child) - For each item mother was required to indicate frequency of act in the past year on a 7-point ordinal scale	child in the previous year

Study Populations

Eleven of the studies included in the review were conducted in the United States of America (Casanueva et al., 2009; Chang et al., 2008; Cox, Kotch & Everson, 2003; Dong et al., 2004; Hartley, 2002; Hazen et al., 2004; Kohl et al., 2005; McGuigan & Pratt, 2001; Salzinger et al., 2002; Slep & O'Leary, 2005; Taylor et al., 2009), two were conducted in Hong Kong (Chan, 2011a; Chan, 2011b), one was conducted in the United Kingdom (Dixon et al., 2007) and one was conducted in the Netherlands (Lamers-Winkelman, Willemen & Visser, 2012). Twelve of the studies included both maternal and paternal IPV perpetration, however three studies only focused on the mother as the victim of IPV and one study only included maltreatment perpetrated by the mother. Types of child maltreatment and IPV will be discussed later in the review.

The majority of studies were based on data derived from reports of child abuse or neglect (Casanueva et al., 2009; Dixon et al., 2007; Hazen et al., 2004; Kohl et al., 2005; Salzinger et al., 2002), however three studies were based on representative population samples (Chan, 2011a; Chan, 2011b; Chang et al., 2008) and one involved a community sample (Slep & O'Leary, 2005). Three studies included in the review were based on a sample of high-risk or at-risk families, as defined by low socioeconomic status (Cox et al., 2003), high scores on a measure of family stress (McGuigan & Pratt, 2001) or children born to unmarried parents (Taylor et al., 2009). One study was based on families with a founded incident of neglect or abuse (Hartley, 2002), one study was based on clinic referred children whose primary caregiver was a victim of IPV (Lamers-Winkelman et al., 2012), and a further study was based on a sample of adult members of a health plan (Dong et al., 2004).

The age of the children included in the review varied from study to study. One study focused on children aged from birth to 3 years (Taylor et al., 2009), one study focused on children from birth to five years (McGuigan & Pratt, 2001), one focused on children aged between 3-7 years (Slep & O'Leary, 2005), and another focused on children aged 6-8 years (Cox et al., 2003). However, other studies included a broader age range: children aged 0 to 14 years (Casanueva et al., 2009), children aged one month to 15 years (Dixon et al., 2007), children from birth to age 17 (Chang et al., 2008), children aged 12-17 years of age (Chan, 2011b), and the first 18 years of life (Dong et al., 2004), children ranging from 2 to 12 years old (Lamers-Winkelman et al., 2012), and one study included children with a mean age of 10.54 years (Salzinger et al., 2002). The remaining five studies did not provide any detail as to the age range of children included in their studies.

Child Maltreatment

There were differences across studies in terms of definitions of child maltreatment as well as what form of child maltreatment was reported. Eleven of the studies included both child abuse and child neglect (Chan, 2011a; Chan, 2011b; Chang et al., 2008; Cox et al., 2003; Dong et al., 2004; Hartley, 2002; Hazen et al., 2004; Kohl et al., 2005; Lamers-Winkelman et al., 2012; McGuigan & Pratt, 2001; Taylor et al., 2009), two studies focused solely on physical child abuse (Salzinger et al., 2002; Slep & O'Leary, 2005), whilst the remaining studies focused on the most serious type (Casanueva et al., 2009; Dixon et al., 2007). Eight of the studies included in the review specified the type of abuse criteria that was used to define child maltreatment (Casanueva et al., 2009; Chan, 2011a; Chan, 2011b; Chang et al., 2008; Dong et al., 2004; McGuigan & Pratt, 2001; Slep & O'Leary, 2005; Taylor et al.,

2009). In terms of recency, two studies focused on preceding year and lifetime maltreatment (Chan, 2011a; Chan, 2011b), one study focused on parent conflict and discipline behaviours in the past 12 months (Slep & O'Leary, 2005), one study looked at reoccurrence of abuse (Casanueva et al., 2009), whereas the remaining studies did not specify a time frame of maltreatment and instead focused on any incidence of maltreatment.

With regard to substantiated data on child maltreatment, only four studies included in this review were based on substantiated reports (Cox et al., 2003; Dixon et al., 2007; Hazen et al., 2004; Salzinger et al., 2002). The other studies in the review found sufficient use of one adult informant (Chang et al., 2008; Cox et al., 2003; Dong et al., 2004; Lamers-Winkelman et al., 2012; Slep & O'Leary, 2005), information obtained from a child (Chan, 2011b) or solely from information provided by the mother (Taylor et al., 2009). One study was also based on retrospective reports of abuse (Dong et al., 2004), whilst four studies relied on reports from child welfare or caseworkers (Casanueva et al., 2009; Hartley, 2002; Kohl et al., 2005; McGuigan & Pratt, 2001). Furthermore, six studies made use of the Parent-Child Conflict Tactics Scale (Straus, 1979) in identifying abuse (Chan, 2011a; Chan, 2011b; Chang et al., 2008; Dong et al., 2004; Slep & O'Leary, 2005; Taylor et al., 2009).

Of the studies that focused on both mothers and fathers as perpetrators of child maltreatment, two studies found that the mother was more likely to be an abuser and/or more physically aggressive toward the child than the father (Chan, 2011a; Salzinger et al., 2002). Dixon et al. (2007) found that mothers perpetrated the highest amount of child neglect, whereas fathers perpetrated the highest amount of physical and/or sexual child maltreatment.

Intimate Partner Violence

The majority of studies included in this review focused on physical, psychological and sexual IPV. However, one study focused solely on psychological abuse between parents (Chang et al., 2008), two focused on aggressive physical actions (Salzinger et al., 2002; Slep & O'Leary, 2005), and one focused only on physical and verbal aggression (Cox et al., 2003). The majority of studies used self-reports of one informant (Salzinger et al., 2002), often based on the Conflict Tactics Scale (Straus, 1979) alongside interviews (Casanueva et al., 2009; Chan, 2011a; Chan, 2011b; Chang et al., 2009; Cox et al., 2003; Hazen et al., 2004; Slep & O'Leary, 2005; Taylor et al., 2009) or surveys (Dong et al., 2004) in order to identify IPV. However, one study relied on reports from child welfare workers (Kohl et al., 2005) and one relied on reports and direct observations from family support workers (McGuigan & Pratt, 2001). Two further studies identified the presence of IPV on the basis of reports that were constructed using multiple sources (Dixon et al., 2007; Hartley, 2002), with a further study identifying IPV on the basis of interviews with caregivers and children (Lamers-Winkelman et al., 2012).

Of the fifteen studies included in the review, eleven studies specified the type of abuse criteria used to define IPV (Casanueva et al., 2009; Chan, 2011a; Chan, 2011b; Chang et al., 2008; Dong et al., 2004; Hartley, 2002; Lamers-Winkelman et al., 2012; McGuigan & Pratt, 2001; Salzinger et al., 2002; Slep & O'Leary, 2005; Taylor et al., 2009). In the majority of studies, IPV was identified as present if the current married or cohabiting partner was the perpetrator (Chan, 2011a; Chan, 2011b; Cox et al., 2003) or the father figure of the family perpetrated violence against the mother figure (Hartley, 2002; Lamers-Winkelman et al., 2012). The remaining studies

did not state what constituted a 'partner' in their studies. Three studies assessed abuse occurring in the previous 12 months and in the lifetime of the relationship (Chan, 2011a; Chan, 2011b; Kohl et al., 2005), two looked at preceding year abuse (Chang et al., 2008; Slep & O'Leary, 2005), however if there was no preceding year abuse then IPV was assessed as present if the mother had been abused in any previous relationship (Casanueva et al., 2009; Hazen et al., 2004). Additionally, in order to reduce the amount of error in reporting the frequency of abusive acts, one study was based on experience of IPV in the three-months prior to the study (Cox et al., 2003), whilst contrastingly, another study looked at growing up with exposure to IPV in the first 18 years of life (Dong et al., 2004). In one study, IPV was identified as present based on 14 home visits made by a family support worker, in which discussion and observation of couple relationships were conducted (McGuigan & Pratt, 2001). The remaining studies did not specify a time period for which IPV was assessed. Three of the studies included in the review focused on the mother as the victim of IPV (Casanueva et al., 2009; Dixon et al., 2007; Taylor et al., 2009), whereas the other studies focused more broadly on partner abuse, encompassing both males and females as the perpetrators and victims of abuse.

Co-Occurrence of Child Maltreatment and Intimate Partner Violence

All of the studies included in the review examined the association between child maltreatment and IPV, either as a single risk factor, or within a combination of other risk factors (Dong et al., 2004). Rates of co-occurrence differed from study to study with rates of co-occurrence ranging from 4% to 64.2%; however as noted above, not all of the studies were examining the exact same form of child maltreatment or IPV.

Of the studies that included all forms of child maltreatment and physical, psychological and sexual IPV, the rates of co-occurrence differed greatly. The studies that stated co-occurrence in terms of a percentage are discussed first and are identified in Table 2.2. Chan (2011a) found a lifetime co-occurrence rate of 4%, whereas Chan (2011b) found lifetime co-occurrence of 18.1%. Further, in a population of families referred to child welfare services, active IPV was found in 14% of families and a history of IPV was found in 19% of families (Kohl et al., 2005). Kohl et al. (2005) also detailed their findings in regard to each form of child maltreatment and found that 28% of families referred for failure to supervise, 23% referred for physical abuse and 23% referred for emotional maltreatment had active IPV within the family. Cox et al. (2003) reported a significant overlap of child maltreatment and IPV, with 27.7% of maltreatment among those who experienced IPV when the child was 6 years of age, and 27.6% when the child was 8 years of age. When physical maltreatment, verbal maltreatment and child neglect were explored concurrently with psychological abuse between parents, a co-occurrence rate of 28% was found (Chang et al., 2008). Salzinger et al.'s (2002) study revealed co-occurrence rates of 33%, compared to 11% in a non-maltreated comparison group.

McGuigan and Pratt (2001) found that IPV occurred in 38% of child maltreatment cases, and also found that IPV preceded child maltreatment in 78% of cases. They reported significant associations between IPV and different forms of child maltreatment. They looked separately at physical child abuse, psychological child abuse and child neglect and found that when IPV was present in the family, physical child abuse was 3 times more likely to occur, and psychological child abuse and neglect were twice as likely to occur. Casanueva et al. (2009) found that 44% of mothers reported for alleged child maltreatment had experienced physical IPV. They

also looked at rates of co-occurrence and found that children of mothers who experienced IPV were more than twice as likely as mothers who had not to be re-reported to CPS.

In a sample of families who were the subject of child abuse and neglect investigations, Hazen et al. (2004) found a lifetime prevalence of IPV of 44.8%, with 29% of incidents occurring in the preceding 12 months of the study. Hartley (2002) found that 45.6% of cases with a founded incident of neglect or physical abuse also had IPV present in the home, whereas Slep and O'Leary (2005) found 51% of families experienced some type of physical aggression occurring between the partners and toward the child. Co-occurrence rates reduced to 22% for both adults aggressing against each other and the child, 4% when considering sole perpetrators of any physical aggression, and 3% when considering sole perpetrators of severe aggression (Slep & O'Leary, 2005). Lamers-Winkelman et al. (2012) found that, of the children whose primary caregiver was a victim of IPV, 53.6% had experienced neglect, 51.9% had experienced physical abuse, 39.9% had experienced emotional abuse and 10.1% had been sexually abused. Dong et al. (2004) found higher rates of co-occurrence, with 57.5% of individuals who had reported childhood exposure to IPV to have also reported physical abuse. Furthermore, 36.4% of those exposed to IPV were also sexually abused, 35.9% were emotionally neglected, 31.3% were emotionally abused and 27.5% were physically neglected. In a study of parents involved in childcare proceedings, Dixon et al. (2007) found a co-occurrence rate of 40.7%.

Table 2.2

Characteristics of Studies and Percentages of Overlap

Study	*N*	Referent Period	Type of Maltreatment	Target Relationship	Co-Occurrence (%)
Dixon et al. (2007)	105	N/A Child maltreatment cases	Child maltreatment	P-C	64.2
Dong et al. (2004)	8,629	First 18 years of life	Physical abuse	P-C	57.5
			Sexual abuse		36.4
			Emotional neglect		35.9
			Emotional abuse		31.3
			Physical neglect		27.5
Lamers-Winkelman, Willemen & Visser (2012)	208	Child's lifetime	Neglect	P-C	53.6
			Physical abuse		51.9
			Emotional abuse		39.9
			Sexual abuse		10.1
Slep & O'Leary (2005)	453	12 months	Physical aggression	P-C	51
Hartley (2002)	94	Active	Physical abuse or neglect	P-C	45.6

Hazen et al. (2004)	4,037	Lifetime	Child abuse and neglect	P-C	44.8
		Past year			29
Casanueva, Martin & Runyan (2009)	1,236	Last 12 months	Child maltreatment	P-C	44
McGuigan & Pratt (2001)	2,544	First 5 years of child's life	Physical child abuse, psychological child abuse and child neglect	P-C	38
Salzinger et al. (2002)	200	All pairs of household members plus any parent or surrogate who ever lived in the child's household	Physical child abuse		33
Chang et al. (2008)	1,149	Preceding year	Child maltreatment	P-C	28
Cox, Kotch & Everson (2003)	219	Child aged 6	Child maltreatment	P-C	27.7
		Child aged 8			27.6
Chan (2011b)	1,094	Lifetime	Physical	P-C	18.1
		Preceding year			7.3
Kohl et al. (2005)	3,931	Active		P-C	14
			Failure to supervise		28
			Physical abuse		23
			Emotional maltreatment		23
		History			19

Chan (2011a)	2,363	Lifetime	Physical	P-C	4
		Preceding year			1.5
Taylor et al. (2009)	2,508	Preceding year	Psychological aggression, physical aggression, neglect and spanking	M-C	No percentages given

Note. P = either parent; C = any child in the family; M = mother.

Although Taylor et al. (2009) did not report rates of co-occurrence in terms of a percentage, their study revealed that mothers who experienced IPV used psychological aggression against their child more often than mothers who did not experience IPV, and IPV was a relative risk factor for child maltreatment.

Other risk factors identified by these studies were: being newly arrived in the country, receiving social security, in-law conflict, negative attribution, low levels of social support, chronic illness, low self-esteem, jealousy, poor anger management, childhood witness of parental violence, violence approval, low social desirability, dominance (Chan, 2011a); young age of child (Chan, 2011a); young caregiver age, lack of religious involvement (Cox et al., 2003); low parental education (Cox et al., 2003; Taylor et al., 2009); financial difficulties (Chan, 2011a; Cox et al., 2003; Kohl et al., 2005); not being biologically related to the child (Hartley, 2002); criminogenic lifestyle, social isolation, residing with a violent adult (Dixon et al., 2007); childhood abuse (Dixon et al., 2007; Kohl et al., 2005); relationship difficulties (Chan, 2011a; Dixon et al., 2007); current or historical substance difficulties (Chan et al., 2011a; Dixon et al., 2007; Dong et al.., 2004; Hartley, 2002; Hazen et al., 2004; Kohl et al., 2005); mental health difficulties (Dixon et al., 2007; Dong et al., 2004; Hartley, 2002; Kohl et al., 2005; Lamers-Winkelman et al., 2012); parental separation, divorce or cohabitation (Dixon et al., 2007; Dong et al., 2004; Hartley, 2002; Lamers-Winkelman et al., 2012); single parenthood (Dixon et al., 2007; Hartley, 2002); criminal history (Chan, 2011a; Dixon et al., 2007; Dong et al., 2004; Hartley, 2002; Kohl et al., 2005), depression (Chan et al., 2011a; Hazen et al., 2004; Taylor et al., 2009); prior reports of maltreatment (Hazen et al., 2004; Kohl et al., 2005); antisocial child, withdrawn child (Salzinger et al., 2002); physically/mentally disabled child (Dixon et al., 2007); and stress (Chan et al., 2011a; Dixon et al., 2007; Salzinger et

al., 2002; Taylor et al., 2009).

DISCUSSION

This systematic review had one objective.

1. To determine co-occurrence rates of child maltreatment and IPV

Of the 15 studies included in this review, all studies found a co-occurrence between child maltreatment and IPV. Overall, the rate of co-occurrence of child maltreatment and IPV ranged from 4% to 64.2%.

When considering clinical significance, attention should be paid to one study in which IPV was found to precede child maltreatment in 78% of cases (McGuigan & Pratt, 2001). However, when considering statistical significance, one study suggested that IPV was amongst other risk factors that contributed to the occurrence of child maltreatment (Dong et al., 2004).

Strengths and Weaknesses of the Review

Rates of co-occurrence ranged depending on the definitions used to measure abuse, the type of child maltreatment, type of IPV, the samples of the studies, the accuracy of the data and the timeframe in which the abuse was based upon. Some of the variation found between co-occurrence rates may be a reflection of the different types of child maltreatment and IPV that individuals have experienced in the UK compared to the USA, the Netherlands and Hong Kong. These variations may be partly explained by cultural differences in definitions, recording and reporting of child maltreatment and IPV. However, there are also conceptual and methodological

variations in the literature, which may explain the variation in the rates of co-occurring child maltreatment and IPV.

Definition of abuse. Firstly, the definitions used to identify the prevalence of child maltreatment differed from study to study. The term child maltreatment is an expansive term that includes various types of abuse and negligent behaviour. The majority of studies in this review based the prevalence of such abuse on questions adapted from the Conflict Tactics Scale (Straus, 1979). Some studies only considered one form of maltreatment, whether that was child abuse or child neglect, whereas other studies compared the co-occurrence across different types of child maltreatment. Another issue associated with the definition of child abuse relates to whether exposure to IPV is considered a form of child maltreatment. Currently, UK laws regarding child neglect have been criticised for focusing on the physical effects of child abuse, which has led to a campaign for 'Cinderella Law' in which emotional cruelty will be considered a crime. According to UK Government, the new offence will consider anything that deliberately causes harm to a child's physical, intellectual, emotional, social or behavioural development to be an offence, such as deliberately ignoring a child or forcing a child to witness IPV. In the studies that compared different forms of child maltreatment, it was reported that there was a significant overlap between IPV and emotional or psychological abuse. The high levels of emotional maltreatment found in the current review could be a result of the exposure to IPV so the terms used to assess child maltreatment need to be explicitly stated.

Furthermore, not all studies provided a definition of IPV, and of those that did, different definitions were used. The studies included in this review relied heavily on the occurrence of specific violent acts using the Conflict Tactics Scale. Although this

is a validated measure that has been assessed for internal consistency and reliability, it would have been beneficial if the authors had stated what criteria they used to define the occurrence of IPV in the sample, with specific details as to what constituted abuse. Some of the studies in this review only focused on one form of IPV, such as physical, sexual or psychological abuse, whereas other studies considered a broad range of IPV. Of the studies that were based on case reports, terms such as 'spouse abuse' or 'domestic violence' were used which did not offer any further information of what types of violence the perpetrators of this abuse engaged in, how severe the acts were, or any details regarding frequency of abuse. For example, in the study conducted by Kohl et al. (2005), they referred to 'active domestic violence' or a 'history of domestic violence' but failed to specify the type of abuse being considered or the gender of the perpetrator and victim. Further, identifying an individual as 'abused' may have consequently affected their disclosure, as labelling is linked to a self-fulfilling prophecy, and so individuals labelled as abused may have exaggerated their self-reports (Holguin & Hansen, 2003).

With the variation in definitions used from study to study, it is expected that the results of each study will range in terms of co-occurrence rates. A further issue relating to the identification of abuse was whether prevalence or incidence rates were used. Some of the studies assessed both prevalence and incidence of abuse, whereas other studies assessed one or the other. This is likely to have affected the rates of co-occurrence, with prevalence levels expected to be higher. Unfortunately, many of the studies included in this review did not specify the type of IPV or child maltreatment that was occurring. Additionally, there were differences across studies in terms of the specified time of abuse, with some studies accounting for abuse across the lifetime, some focusing on preceding year abuse, and others not providing details. Three of the

studies included in the review accounted for both preceding year and lifetime abuse, with results yielding higher rates across the lifetime, as expected (Chan, 2011a; Chan, 2011b; Hazen et al., 2004). Further, if there were no incidents of violence in the preceding year, two studies assessed for violence within the mothers previous relationships (Casanueva et al., 2009; Hazen et al., 2004). Assessing violence in previous relationships may distort rates of co-occurrence, as IPV may be recorded, although it may not have occurred concurrently with child maltreatment. The inconsistencies between studies regarding the referent period are problematic, such that they are likely to yield different rates of abuse. For example, lifetime referent periods are likely to result in higher rates (Appel & Holden, 1998). In contrast, in terms of preceding year abuse, a child and/or parent may have been victimised outside of the referent period, which may still indicate that abuse had co-occurred within the family, but this abuse would go unidentified. Similarly, without specifying the period of abuse recall, a family may have experienced both child maltreatment and IPV at separate times, without actual co-occurrence taking place. With this in mind, the identification of child maltreatment and IPV is dependent upon the definitions used, and so studies not specifying definitions should be interpreted with caution. In order to gain a better understanding of the prevalence and co-occurrence of these forms of abuse, future studies should attempt to employ a universal definition of each form of family abuse. As mentioned earlier, there are cultural differences in what constitutes abuse, which affects the generalizability of the research, however, widely accepted definitions would allow for research in this area to grow to ensure an accurate understanding of the prevalence of such abuse.

Study samples. The sample used is also another factor that may have contributed to differences in rates of co-occurrence. A number of studies included in

the review were based on large population based representative samples. This is in comparison to other studies in which the sample was obtained from reports of child abuse or neglect, or cases where a family had been identified to be at-risk and consequently referred to child protection services for child maltreatment. In terms of at-risk samples, archived case records were obtained and information regarding IPV was consequently identified. This is problematic as the researcher was unable to obtain further information regarding the type, severity or duration of abuse that had been experienced. The variation in the samples used is likely to be a factor that contributed to the discrepancy in rates of co-occurrence, which makes drawing comparative conclusions difficult.

Data that was obtained from at-risk samples is likely to only represent the most severe cases, as these samples generally include individuals who have been investigated for such abusive behaviour. This will consequently artificially skew the results. This is also problematic as there are discrepancies and inconsistencies in the rates of abuse that are reported from differing samples. In order to gain a better understanding of the true nature of these forms of abuse, representative samples should be used. There were also inconsistencies in the age of the child that was being maltreated. Rates and types of child abuse are likely to differ depending upon the age of the child (Straus, Hamby, Finkelhor, Moore & Runyan, 1998). Furthermore, there was a lack of information regarding the relationship between the parent and the child, such as whether they were biologically related. Research has shown that children are likely to be at an increased risk of maltreatment from a stepparent (Wilson & Daly, 1987). The level of parental intellectual functioning was also not specified in the majority of the studies included in the review, which is problematic as research has indicated that low levels of parental intellectual functioning can be a risk factor for

child abuse and neglect (Lindsay, 2009). Demographic information is necessary in our understanding of violence within the family.

Source of information. A number of problems become apparent when considering the source of the information, which may impact on the accurate estimation of rates of co-occurrence. A number of studies included in this review were based on data from reports of the incidence of abuse that had been reported to child protective agencies, or from case files; however it can be hypothesised that these clinical samples are an overrepresentation of the true extent of co-occurrence. Studies that rely on case reports are dependent upon the author of the report to have accurately screened and documented the abuse. Child protection data is likely to differ from data that has been gathered from battered women's shelters, which highlights the need for studies to use multiple sources and multiple informants.

Some research studies used substantiated reports of violence, whereas others were based on unsubstantiated self-reports from parents. Often, this self-report data was based on a single informant, often the mother, whereas others used multiple reports to confirm the abuse. The issue of obtaining information from a single source is that men and women have differing rates in reporting violence (Edleson & Brygger, 1986) and children report differently to their parents (Sternberg, Lamb & Dawud-Noursi, 1998). Reports from a single informant are often biased (Appel & Holden, 1998), and there is usually no way of assessing the reliability and validity of their account. The informant may distort the information they provide, whether that is done consciously or unconsciously. For example, in a study where parents were referred to child protective services (Dixon et al., 2007) parents may have denied or underreported their perpetration of abuse out of fear of being prosecuted or denied

custody of their child. Similarly, in this case, a parent may exaggerate the abuse of their partner and highlight their own victimisation. Alternatively, some victims of IPV may be reluctant to disclose their victimisation for fear of the consequences of disclosure. Despite this, research has shown that reports from parents are likely to be more accurate than data from child protection agencies (Sidebotham, Golding & ALSPAC Study Team, 2001).

Further, some studies focused specifically on males as perpetrators of abuse and females as victims. It should be noted that not all victims of abuse are female, and the studies that only focused on males as perpetrators may have discounted a proportion of co-occurring child maltreatment and IPV. Some studies only recorded the most serious or most recent form of abuse, which is essentially discarding other valuable data. This is a drawback as the findings are limited and do not reflect the actual occurrence of abuse within the sample. Alternatively, some studies did not measure the level of harm that had been perpetrated. This information would allow for richer data regarding the co-occurrence of child maltreatment and IPV.

In one study, children were asked about their exposure to IPV and their experience of child maltreatment directly, whereas other studies were based on reports made from observations of a caseworker in which they were asked to provide information on the child's experience of abuse. Studies that ask parents or caseworkers to provide information on a child's experience can be assumed to be less accurate, more flawed and biased, as a parent or caseworker may not be aware of the full extent of abuse. Alternatively, one study asked participants to retrospectively report on their exposure to abuse as a child. This is problematic and limits the validity of the study as it is based on memories of abuse, which may become distorted over time.

Methodological Considerations

A comprehensive search strategy was employed in the current review, however as previously mentioned, due to time constraints, studies not written in the English language had to be excluded, and it was not possible to alternatively source unobtainable articles. Additional contact could have been made with experts in the field which would have not only allowed for a better understanding of statistical findings but may have resulted in further relevant studies being obtained for inclusion in the review.

As only the most methodologically robust studies were included in this review following quality assessment, some important findings may have been lost. However, by only including studies of a high quality, the review was less susceptible to other forms of bias, such as placing too much emphasis on studies that were otherwise weaker in design. It should be noted that, as with any systematic review, the chance of publication bias exists, such that only the studies that have found a positive result are published. Therefore, studies suggesting little or no co-occurrence of child maltreatment and IPV may not have been published, which would hinder what is believed to be the 'true' extent of abuse.

Another limitation of the current review is that the majority of the studies were conducted in the United States of America, with only two conducted in Hong Kong, two in the United Kingdom, and one in the Netherlands. Therefore, as there are cultural differences in what constitutes abuse, generalising the studies to other geographical areas should be done with caution. In addition, many of the studies included in the review did not state the racial, ethnic or cultural subgroups of their sample, which as mentioned, may be a variable with confounding effects. More focus

should be given to racial, ethnic and cultural factors, as this will aid in informing preventative and treatment strategies.

Interpretation of Findings

Consistent with previous reviews, the current review found that IPV was a significant predictor of child maltreatment, as there were substantial rates of co-occurrence. When assessed as an individual risk factor, IPV was found to precede child maltreatment. However, due to differences in terms of the definition of abuse, the sample and the source of information, assessing the strength of co-occurrence is difficult to establish.

It should be noted that some of the samples consisted of high-risk families (Dixon et al., 2007; Kohl et al., 2005) in which the perpetrators were victims of childhood abuse, were financially disadvantaged, unemployed or had poor educational levels. These factors may have affected the relative risk of child maltreatment and may have contributed to the co-occurrence of child maltreatment and IPV, and should therefore be considered when interpreting the findings of the review.

The current review also found that the type of IPV perpetrated might be relevant to the type of child maltreatment perpetrated, such that parents who abuse their partner may be more susceptible to perpetrating the same type of abuse towards their child (Casanueva et al., 2009; Chan, 2011a; Chan, 2011b; Chang et al., 2008; McGuigan & Pratt, 2001). This was not a focus of the current review, however further research would benefit from exploring the relationship between the type of IPV perpetrated alongside the type of child maltreatment perpetrated. Although some of the studies in the review identified who the perpetrators and victims were in their

study samples, other studies did not detail this information and therefore it is unclear whether the perpetrator of IPV is also likely to maltreat the child, or whether more instances of co-occurrence involve the victim of IPV maltreating the child. This information would be useful in identifying pathways to child maltreatment.

As discussed, there were several methodological inconsistencies in the studies included in the review, which may have contributed to the wide range of co-occurrence rates. It was notable that the majority of studies were not theory driven in their approach to the topic of co-occurring child maltreatment and IPV. There is consequently a lack of discussion regarding the dynamics of violence within the family, and underlying theoretical models of co-occurrence, such as unidirectional or bidirectional models (Appel & Holden, 1998). A discussion of these models would help to inform our understanding of pathways to violence within the family and the ways in which this links to the ecological model.

Conclusions and Recommendations: Implications of Findings and Limitations on Practice

From the inclusion of high quality studies, findings from the current review highlight the need for intervention programs and prevention strategies to be provided for individuals involved in co-occurring child maltreatment and IPV cases or individuals at risk of such abuse. This has previously been difficult, as each system has traditionally had different treatment goals. The current review has highlighted the importance of screening families that are brought to the attention of child protection services for exposure to IPV, and also the importance of assessing risk of child maltreatment in victims of IPV, such as women entering battered women's shelters, without placing the victims at additional risk of harm. This screening should be

automatic and child protection services and IPV agencies should work together to develop more effective screening procedures for these types of abuse. Any professional, whether coming from child protection or IPV services background should be alert to the potential of co-occurring abuse within the family unit. Identifying abuse early could play a vital role in the prevention of further maltreatment.

In terms of interventions, evidence-based parenting programs have illustrated the change in violent parents' behaviour from raising their child in a home of conflict to one of safety and protection (Chaffin & Friedrich, 2004). Programmes that have been implemented in schools to raise awareness of the problems of violence in intimate relationships have been shown to effect positive changes in the understanding of and attitudes towards relationship violence (Foshee et al., 2000, 2012). This increased understanding may help victims of abuse identify their experiences as abusive, which could consequently result in increasing numbers of victims reporting abusive behaviour, and bring the true prevalence rates to the surface. Professionals must also look beyond the victims' presenting issues and be aware of the potential of other victimisation experiences, such that a child with behaviour issues may not only be maltreated but may also be exposed to IPV in the home.

Currently, it appears that child protection agencies are failing to fully acknowledge the role of IPV as part of their risk assessment process. Acknowledgement of the role of IPV would help to identify families at risk and potentially prevent a significant amount of family violence from occurring. Research has suggested that caseworkers are not effectively trained in detecting abuse in the home (Alvarez, Kenny, Donohue & Carpin, 2004), so other methods or further

training need to be put in place. Ideally, as one of the main flaws of this review was the inclusion of studies with unsubstantiated self-reports, there is also a need for child maltreatment to be measured in a more robust way, with the inclusion of multiple sources or a number of informants to provide information on the abuse in the family. This would enhance reliability and validity of findings and help to reduce some of the bias.

It is important to note that family violence is not a gendered offence, so future studies should assess both male and female perpetrators and victims. Increasing awareness of the gender roles involved in perpetration and victimisation of violence within the family is also likely to encourage male victims to disclose abuse, which would also lead to more accurate representations of abuse. This would help to target intervention and prevention strategies and direct treatment based on the gender of the individual. Lastly, data needs to be gathered from representative and longitudinal samples, as these are the most effective ways of assessing the development of family violence in the community.

Finally, there is a clear need for researchers to adopt a common language and agreed definition of what constitutes child maltreatment and IPV which would allow for consistency across research studies. Narrow definitions that are currently being used are affecting the number of cases that could potentially be identified. Valid and culturally sensitive definitions and tools are necessary in future research. Future research should examine the relationship between various other risk factors in an ecological context, as this will allow for practical assessments and allocation of cases of child maltreatment. Researchers and practitioners should assess child, parental and environmental factors, as well as the interaction between these different domains. One such interaction is that of parental intellectual disability and child maltreatment,

attributable to the parental and child factors within the microsystem. The current review identified parental educational level as a potential risk factor associated with the co-occurrence of child maltreatment and IPV, however the majority of the included studies did not define the level of parental intellectual functioning of the samples they used. It would be important to consider the way in which risk of child maltreatment may differ depending upon a parent's level of intellectual functioning as this may guide treatment. This interaction will be explored in the research study detailed in Chapter Three. Another interaction is that of parenting stress, attributable to child and parent factors within the microsystem, the parent-child relationship within the microsystem, and environmental factors within the exosystem. This interaction will be explored within the critique of the Parenting Stress Index in Chapter Four.

CHAPTER THREE:

Exploring Risk Factors Associated with Child Maltreatment in Parents with Intellectual Disabilities Involved in Childcare Proceedings

ABSTRACT

Considerable research has investigated risk factors associated with child maltreatment; however there appears to be a dearth of research that has focused on risk factors for child maltreatment perpetrated by parents with intellectual developmental disorder (IDD). The aims of this study were to identify whether parents with IDD differed from parents without IDD in terms of risk factors for child maltreatment. The data, obtained from a sample of 204 parents involved in childcare proceedings, examined risk factors at each level of the ecological model: individual, microsystem and exosystem. Chi-square analysis was conducted on descriptive data and Mann-Whitney U was used for bivariate statistics to test the relationship between each potential predictor variable and intellectual functioning.

The two groups differed on several factors at the individual level, including insight, parenting stress, anger, coping skills and personality pathology; however there were also several commonalities between groups. Some significant differences were also found between groups in terms of child vulnerabilities. Microsystem level factors were also found to differentiate the two groups, such that parents with IDD were more likely to live with someone with criminal convictions, whereas parents without IDD were more likely to have criminal convictions themselves. No differences were found between groups in terms of societal factors. These results have implications for intervention and treatment based on identified differences between groups. Specialised clinical attention should be paid to a range of associated risk factors for parents involved in childcare proceedings, depending upon parental intellectual functioning.

INTRODUCTION

Child-rearing practices of individuals with an intellectual disability (intellectual developmental disorder: IDD, DSM-V) have been a topic of discussion for many years (Brandon, 1957; Mickelson, 1947); however, over recent years, this topic has received much more attention from researchers and practitioners (Sheerin, 1998). Stevenson (2007) has suggested that the literature tends to be polarised, with some professionals arguing for the justice of parents with IDD in terms of their right to parent, whilst others argue for the need to protect the child. Parental IDD has been highlighted as one of the main risk factors for the perpetration of child abuse and neglect, with increasing evidence suggesting that low levels of intellectual functioning can be a risk factor for child maltreatment (McGaw & Newman, 2005). Parents with IDD often come to the attention of child protective services due to allegations of child abuse or child neglect (James, 2004). However, it should be noted that parents with IDD may be overrepresented in child protective services as families facing multiple problems are often well known to children's services and welfare agencies and are therefore more likely to be detected (Cleaver & Freeman, 1995). The validity of IDD as a risk factor is therefore questionable.

Whilst statistics have indicated that there are over two million disabled parents in the United Kingdom, it is unclear how many of these parents have IDD (Stickland, 2003). However, according to the Department of Health (2007), it has been estimated that there are between 23,000 and 250,000 parents with IDD in the UK. These rates may reflect a lack of personal support and a lack of professional clarity regarding the risk of child maltreatment perpetrated by parents with IDD (Booth & Booth, 2005; McConnell, Llewellyn & Ferronato, 2000; Mildon, Matthews & Gavidia-Payne,

2003). Parents with IDD often face preconceived judgements regarding their ability to provide adequate care for their children (Booth & Booth, 2005). This presumption of incompetence is likely to act as a barrier against the help and treatment these parents receive, as their parenting difficulties are likely to be attributed to their intellectual functioning, rather than other factors that affect their ability to parent (Booth & Booth, 1996).

In terms of other factors that affect parenting capacity, researchers have indicated that parents with IDD are often unemployed or on a low income (Kroese, Hussein, Clifford & Ahmed, 2002; Pixa-Kettner, 1999), and are often single parents (Booth & Booth, 1999). Additionally, parents with IDD often experience social exclusion (Feldman et al., 2002), and are consequently likely to have limited opportunities for informal social learning (McGaw, Ball & Clarke, 2002) which can place them at increased risk of perpetrating child maltreatment. In a small-scale study conducted by Pixa-Kettner (1999), it was also found that parents with IDD had difficulties in terms of intimate relationships and appropriately disciplining their child. Whilst many of these factors have also been linked to poor parenting and child maltreatment in general, it has been suggested that parents with IDD are likely to be at an increased risk of experiencing these risk factors compared to other parents ("Social Care Institute for Excellence", 2005). Before risk factors related to parental IDD are outlined, it is first important to provide a definition of IDD.

Definition of Intellectual Developmental Disorder

According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-V, American Psychiatric Association, 2013), an intellectual disability (intellectual developmental disorder) involves "impairments of general mental

abilities that impact adaptive functioning in three domains, or areas. These domains determine how well an individual copes with everyday tasks:

- The conceptual domain includes skills in language, reading, writing, math, reasoning, knowledge, and memory.
- The social domain refers to empathy, social judgement, interpersonal communication skills, the ability to make and retain friendships, and similar capacities.
- The practical domain centres on self-management in areas such as personal care, job responsibilities, money management, recreation, and organising school and work tasks."
- Onset of intellectual and adaptive deficits during the developmental period."

(APA, 2013)

Intellectual disabilities are associated with a low cognitive ability, often characterised by an Intelligence Quotient (IQ) below 70 on a standardised test of intellectual functioning (American Psychiatric Association, 1994). However, individuals in the borderline range of intellectual functioning (i.e. IQ between 70 and 80) are also thought to potentially have limitations in their intellectual functioning (McGaw & Newman, 2005).

The common measure of intellectual functioning in the UK is the Wechsler Adult Intelligence Scale – Forth Edition (WAIS-IV; Wechsler, 2008), which indicates that an individual who yields a score of less than 70 is believed to have an IDD. A study conducted by Murphy, Harnett and Holland (1995) which aimed to identify the prevalence of IDD in a prison sample, found that whilst 16 out of 21 offenders indicated that they had learning difficulties, none of them had an intellectual disability

as measured by the WAIS-R (Wechsler, 1981). This highlights the importance of a consistent definition being used, as there appears to be a discrepancy in what constitutes an IDD.

Prevalence of Parents with IDD

Parents with IDD are thought to be a 'hidden population' with no accurate prevalence rates having been established (Booth & Booth, 2000; Edgerton, 2001). However, observed rates of parents with IDD appear to be on the rise cross-culturally (Bernard, 2007; Feldman, Leger & Walton-Allen, 1997; McConnell et al., 2006; Pixa-Kettner, 2008). Although parents with IDD appear to be a very small minority in the general population of parents, the unfortunate truth is that they face a higher risk of having their children removed from their care than the general population (Booth & Booth, 2000), and this is evidenced by figures of child protection rates, with parents with IDD being overrepresented (Booth et al., 2005; McConnell et al., 2000).

This overrepresentation of parents with IDD has been found to be true internationally, as research in New South Wales found that their sample of court files contained 8.8% of parents with IDD (McConnell et al., 2000), and a UK study found 15.1% of cases of child protection involved a parent with IDD (Booth et al., 2005). In a USA based study, Lightfoot, Hill and LaLiberte (2010) suggested that parents with intellectual disabilities were at a high risk of discrimination or termination of their parental rights on the basis of their intellectual disability, rather than on the basis of parental behaviour. However, figures of termination of parental rights appear to range from 30-80% depending upon geographical differences (Booth & Booth, 2000). McGaw (2000) report that studies conducted in the USA have shown that approximately half of children of parents with IDD may be at risk of being abused or

neglected, with approximately a quarter of children being taken into care. These rates are substantial, and appear to be significantly greater than rates of abuse amongst parents without IDD.

Parents with IDD often face numerous problems, are typically presumed to be incompetent parents by society, and also face discrimination by professionals (Booth et al., 2005; McConnell et al., 2000). Booth, Booth and McConnell (2004) found that, in a sample of parents with IDD, children were returned to their home in 10.2% of cases, indicating that disproportional rates of child removal were found in parents with IDD. Their research found that, whilst the difficulties these parents faced was associated with their intellectual functioning, they were not given any specific support to address these needs. Booth and Booth (2000) also indicated that the needs of parents with IDD were often ignored as the law, policies and practice tended to be based on assumptions of parental inadequacy. Furthermore, parents with limitations in their cognitive functioning who were involved in child protective services stated that they felt they were not supported to ensure that they were fairly represented in assessments and childcare proceedings (Booth & Booth, 2005). This suggests that, whilst the general population of parents may be able to access support themselves, those with IDD may struggle to communicate their needs and find difficulty in seeking the support they require.

Booth and Booth (2000) highlight that not all parents with IDD are incapable of parenting, and argue that it is often stereotypes, prejudicial attitudes and poor communication that shape the decisions made by professionals (Jones, 2013). Researchers have argued that IDD on its own is not a sufficient indicator of inadequate parenting (Mildon et al., 2003). Cleaver and Nicholson (2007) suggested that, whilst the presence of parental IDD was found to impede the assessment process,

the results of their study showed that IDD was not the reason for the removal of the child from the parents care, and was instead an accumulation of other factors.

It is important to note that there is a dearth of research regarding parental IDD. Lamont and Bromfield (2009) found that, despite broad inclusion criteria, only twenty-five studies focusing on parental intellectual disability and family court case outcomes were found between 1997 and 2009, with neglect being the more common form of child maltreatment. These findings have been replicated internationally (Booth et al., 2004, 2005; Glaun & Brown, 1999; James, 2004). The concerns regarding parents with IDDs often relate to the likelihood of maltreatment by omission, rather than intentional abuse (Kelly, Morisset, Barnard & Patterson, 1996; Llewellyn, McConnell & Ferronato 2003; Sheerin, 1998; Tymchuck, 1992). This is supported by Kaatz (1992) who suggested that neglect often occurs as a result of the parent's inability to recognise the needs of their child (Crain & Millor, 1978). Sheerin (1998) went on to suggest that parents with IDD might lack intuition due to their limited cognitive functioning.

It is therefore important to consider whether parents with IDD are more likely to experience risk factors associated with child abuse and child neglect at a greater rate, compared to parents without IDD. It is essential to recognise that, although a presence of risk factors may increase the level of risk of child maltreatment, it does not necessarily mean that the parents are at a high risk of abusing or neglecting their child, as a presence of protective factors may counterbalance their risk of maltreatment (Ronan, Canoy & Burke, 2009). However, recognising risk factors is central to increasing our awareness of parents with IDD, as this may aid in identifying and addressing their needs.

Risk Factors Associated with Child Maltreatment at the Ecological Levels

The ecological model (Belsky, 1980) considers risk factors across four levels: individual level, microsystem, exosystem and macrosystem. Each level of the ecological model will be discussed, and notable risk factors at each level will be outlined for parents with and without IDD. It should be noted that some of these factors fall into more than one level of the ecological model, and due to the interaction of factors between and within the ecological domains, there may be some crossover when risk factors at each of these levels are described.

Individual level. The individual level encompasses both parental problems and child vulnerabilities related to biological and personal history factors (Jewkes, Sen & Garcia-Moreno, 2002).

Parental problems. In terms of parental characteristics, one of the main risk factors for the perpetration of child maltreatment is the perpetrators experience of violence in their own childhood, whether that is witnessing violence between their parents, or having been abused themselves as children (Beasley & Stoltenberg, 1992; Caesar, 1988; Clarke et al., 1999; Hamberger & Hastings, 1991; Kalmuss, 1984; Rosenbaum & O'Leary, 1981). Whilst the research does not determine a causal relationship between the current perpetration of abuse and the experience of abuse in childhood, there does appear to be a consistent correlation between the two factors, which supports the theory of the intergenerational transmission of violence and highlights that early childhood maltreatment is a risk factor for the later perpetration of abuse (Cuadra, Jaffe, Thomas & DiLillo, 2014; Hotaling & Sugarman, 1986). As a consequence of the intergenerational transmission of abuse, parents may lack

adequate parenting skills, modelling their parenting skills on those of their abusive caregivers, resulting in the unintentional perpetration of child maltreatment (Smith & Segal, 2013).

Similar results have also been found for parents with IDD. Dowdney and Skuse (1993) found that parents with IDD often reported having been childhood victims of physical and sexual abuse. High rates of childhood trauma were also found in a sample of parents with IDD (Glaun & Brown, 1999; Pixa-Kettner, 1998). These rates are substantial and have been supported by more recent research conducted by Llewellyn, McConnell and Mayes (2003) who found that approximately half of their sample of mothers with intellectual or psychiatric disorders reported being victims of childhood physical and/or sexual abuse. Again, McGaw, Shaw and Beckley's (2007) research also supported these findings, but found higher rates of childhood abuse and neglect in parents with IDD, with 79.6% of their sample having experienced maltreatment as children. It appears that parents with IDD are more likely to have been victims of child abuse or neglect (Glaun & Brown, 1999), and may consequently develop distorted perceptions of appropriate parent-child relationships. Additionally, they may also find it difficult to raise a child when they have unresolved psychological trauma themselves.

A lack of knowledge regarding normal child development can also be a risk factor for child maltreatment, as parents may have unrealistic expectations of their children (Black et al., 2001; Douglas, 2013; Zuravin & Taylor, 1987). If a child is unable to meet these expectations, parents may become frustrated and consequently lash out at the child (Goldman et al., 2003). Perpetrator age may also be a factor as younger mothers are more likely to be physically abusive towards their child than older mothers (Black et al., 2001; Connelly & Straus, 1992). However, it is important

to note that findings are inconsistent (Schumacher, Slep & Hayman, 2001), with some researchers suggesting that the link between parental age and the likelihood of child maltreatment is influenced by other factors such as lower economic status, a lack of social support and high levels of stress (Buchholz & Korn-Bursztyn, 1993).

Parents experiencing high levels of stress and a lack of personal support are also more likely to maltreat their children (Tucker & Rodriguez, 2014). Smith and Segal (2013) suggest that this is because the task of parenting can itself be a very difficult job, with additional stressors, such as financial and relationship problems causing further difficulties. Lamont and Bromfield (2009) identified several studies that related to parental characteristics, parental IDD and family court case outcomes. Aunos et al. (2008) found that parental stress measured by the PSI was directly associated with child problem behaviour in mothers with IDD. Similarly, other researchers found that mothers with IDD experienced greater levels of parenting stress than a normative sample, and found that this stress was associated with life experiences, history of abuse, unemployment, stigmatisation, having a child of school age and having a lack of social support (Aunos et al., 2008; Feldman et al., 1997, 2002). However, it should be noted that samples are often sourced from social services or welfare agencies, so it is unclear whether parents with IDD in the general population also experience similar levels of stress.

Theories of psychopathology have suggested that abusive parents are impulsive, emotionally immature, and chronically aggressive, and have difficulties expressing their anger (Pianta, Egeland & Erickson, 1989). However, no consistent set of personality characteristics or traits have been documented in the literature (Goldman et al., 2003). Research conducted by Kempe and Kempe (1978) revealed that only a small percentage of perpetrators of child maltreatment had a presence of

psychopathy and indicated that parents who maltreated their child did not have a specific abusive type of personality (Goldman et al., 2003). Smith and Segal (2013) also highlighted untreated parental mental illness as a risk factor for child maltreatment, identifying that a parent with a mental illness was likely to have difficulty in taking care of themselves, much less their dependants.

In an Australian study conducted by Llewellyn, McConnell and Mayes (2003), it was found that mothers with IDD self-reported significantly more health related problems than did the general population of women, however, it was unclear whether they differed from the general population of mothers. Many researchers have acknowledged high rates of mental health difficulties in individual with IDD (Cleaver & Nicholson, 2007; Costello & Bouras, 2006; Hudson & Chan, 2002; McGaw & Newman, 2005). Parents with IDD are at increased risk of comorbid mental health difficulties, with prevalence rates of mental health difficulties between two to three times higher for parents with IDD compared to those without IDD (Cleaver & Nicholson, 2007; McConnell & Llewellyn, 2000; McGaw et al., 2007). Additionally, mothers with IDD are also more likely to have psychiatric disorders (Glaun & Brown, 1999) and have difficulties with coping with high intensity emotions (Gray, Fraser & Leudar, 1983). Physical health difficulties have also been identified as a risk factor for child maltreatment. These comorbid difficulties consequently place parents with IDD at greater risk of maltreating their children (Cowling, 2004; Williams & Cowling, 2008).

Ammerman et al. (1999) and Besinger, Garland, Litrownik and Landsverk (1999) found that substance abuse was likely to increase the risk of child maltreatment, as intoxicated parents are likely to struggle to provide an adequate level of care for their children or make acceptable parenting decisions whilst under the

influence of drugs and/or alcohol (Smith & Segal, 2013). In a review of the literature, Davies and Ward (2012) found that two thirds of children who had been neglected also had substance-misusing parents. The review indicated that substance abuse was not a single indicator of child maltreatment, but was a co-occurring issue with other risk factors including mental health difficulties, IPV and socio-economic disadvantages. Similarly, according to Cleaver and Nicholson (2007) and Glaun and Brown (1999), substance misuse is a common issue associated with parents with IDD.

Another factor that has been found to increase the risk of child maltreatment is parental IDD (Booth et al., 2005). Parents with IDD are found to be overrepresented in childcare proceedings, and are more likely to have their parental rights terminated, usually following concerns for the child's well-being, as well as concerns regarding the absence of appropriate support (Booth et al., 2005; Tarleton, Ward & Howarth, 2006). Whilst low levels of intellectual functioning are found to be linked to criminal behaviour, Lindsay (2009) argues that this link appears to break when looking at individuals in the lowest level of intellectual functioning as they are found to have lower levels of offending behaviour. Lindsay (2009) makes reference to several studies regarding intellectual functioning and crimes committed against children, with these research findings indicating that men who offend against children are likely to have a lower level of intellectual functioning, though their level of functioning appears to still exceed that of an individual with IDD (Cantor, Blanchard, Robichaud & Christensen, 2005). However, Milner and Chilamkurti (1991) provide some support for the link between low intelligence and the perpetration of physical child abuse.

Child vulnerabilities. Ammerman and Patz (1996) found that child characteristics were more predictive of child maltreatment than demographic and

parental factors. Whilst a child is not responsible for any maltreatment they suffer, researchers have indicated that there are certain child characteristics that increase a child's vulnerability to experiencing abuse or neglect, such that researchers have found that some children who have been abused and consequently removed from the care of their abusers, have then gone on to be abused in alternative care (National Research Council, 1993). For example, according to Mraovich and Wilson (1999), child age is a factor that affects the type of maltreatment that is likely to be suffered, with younger children being at greater risk of neglect, and risk of sexual abuse increasing with age. Mraovich and Wilson (1999) also found that gender was a factor that affected child maltreatment risk, with females at greater risk of sexual abuse than males. Further, according to Crosse et al. (1993) and Jones et al. (2012) children with physical or intellectual disabilities are at an increased risk of being maltreated. Of the available literature, researchers such as Lynch and Roberts (1977) and Oates, Davies, Ryan and Stewart (1979) have found that children with a physical or intellectual disability were at increased risk for becoming victims of child maltreatment as their disability was believed to interfere with the parent-child attachment bond (Ammerman, 1990).

Ammerman (1990) also suggested the cumulative effect of risk, such that a parent may have negative reactions to the birth of a disabled child. Ammerman (1990) cited parenting factors such as depression, hostility and unrealistic expectations of the disabled child, which may contribute to the risk of child maltreatment. Additionally, parenting a child with a disability may be a stressful task, which may consequently lead to frustration and physical child abuse. Floyd and Gallagher (1997) note that several factors may contribute to parenting stress in parents of disabled children, such

as having to cope with extensive child care demands, difficulties managing the child's behaviour and a lack of personal time.

Whilst child physical or intellectual disability has been linked to child maltreatment, Martin and Beezley (1974) highlight that disabled children are not at risk of child maltreatment if the parent recognises that the child's behaviour is characteristic of their disability and is not deliberate. They suggest that children with conditions such as attention deficit hyperactivity disorder, of which the unintentional nature of disruptive behaviour would be less apparent to the parent, may be more vulnerable to child maltreatment as the parent may perceive the child as intentionally misbehaving or being difficult. However, other researchers have found contradictory evidence, suggesting that the parent's perception of the child's intent has no bearing on the likelihood of child maltreatment occurring, and instead found that child maltreatment was more likely to be associated with a child's resistance to intervention (Rosenberg & Reppucci, 1983). Nonetheless, it should be noted that research regarding child characteristics and child maltreatment is sparse (Ammerman, 1990).

Comparably, although certain child characteristics have been found to increase the risk of child maltreatment, there appears to be a lack of research that specifically assesses the relationship between child characteristics and parental IDD (Lamont & Bromfield, 2009). As mentioned earlier, child age appears to be a factor that increases levels of parenting stress, which is a finding that has also been indicated to contribute to heightened risks of child maltreatment for parents with IDD (Feldman et al., 1997). According to Feldman et al. (2007) mothers with IDD who have school-aged children experience heightened levels of stress in comparison to mothers of pre-school children. Additionally, research conducted by James (2004) suggested that, in a sample of parents with IDD, highly dependent children were most vulnerable. James

(2004) also highlighted that parents with IDD were likely to struggle with managing their child's behaviour, particularly when the child's level of intellectual functioning surpassed that of the parents.

Microsystem: Family factors. Within the microsystem, factors that increase risk of child maltreatment are a result of family composition and relations with family members or intimate partners (Jewkes et al., 2002). In terms of family characteristics, IPV has been identified as a marked risk factor for child maltreatment (Cleaver et al., 1999; Feldman et al., 2002). Researchers have indicated high rates of co-occurrence, with IPV commonly preceding child maltreatment (Appel & Holden, 1998). IPV is also an issue that affects the ability of parents with IDD to fulfil their parenting role and to respond to the needs of their child (Cleaver & Nicholson, 2007). In a series of one to one interviews, parents with IDD identified that they had difficulties within intimate relationships and also struggled with disciplining their children (Pixa-Kettner, 1999).

Family size has also been identified as a risk factor as researchers have indicated that families characterised by neglect often have more children or a greater number of individuals living in the household (Sedlak & Broadhurst, 1996). Additionally, family structure has been found to have an influence on the likelihood of child maltreatment, with children of single parents, or stepparents at higher risk of child abuse or neglect compared to children living with both biological parents (Sedlak & Broadhurst, 1996; Turner, Finkelhor & Ormrod, 2007). A study conducted by Dufour, Lavergne, Larrivee and Trocme (2007) found that single parent families were overrepresented in the child protection system as they accounted for almost half of child neglect cases. Demographic data has also been compared with child

protection data, with results indicating that sole-mother families represented 33.7% of cases of child maltreatment. In the same view that multiple risk factors contribute to child maltreatment (Gridley, Hutchings & Baker-Henningham, 2013; Simkiss, Stallard & Thorogood, 2013), Dufour et al. (2007) found that single mothers also experienced more personal and social problems such as substance abuse, mental health difficulties, low educational attainment, higher rates of unemployment, and were more likely to be living in poverty compared to two-parent families (Wilkins, Warren, Hahn & Houng, 2011). According to Booth and Booth (1999), many mothers with IDD are also single mothers, and it has been suggested that this may increase risk of sexual abuse, as a mother with IDD is likely to be vulnerable to being taken advantage of by men wishing to gain access to her children to perpetrate sexual abuse. Whilst the structure of the family can be identified as a risk factor for child maltreatment, the effect of the family structure can often be overemphasised (Hunter & Price-Robertson, 2012; Turner et al., 2007), and it is important to also consider the role of other factors.

Exosystem: Social factors. Factors within the exosystem level are related to the influence of community and social environments (Jewkes et al., 2002). These factors often accompany child, parent and family risk factors (Goldman et al., 2003). Sedlak and Broadhurst (1996) found that poverty was linked to child maltreatment, and was particularly related to child neglect (Black, 2000). Plotnik (2000) discussed several theories regarding the link between poverty and child maltreatment, suggesting that, as a result of low income, families living in poverty were likely to experience greater levels of stress, which could heighten the risk of maltreatment (Cleaver et al., 1999; Feldman et al., 2002). They also identified that a lack of

employment and low income were factors related to the perpetration of child maltreatment. Although many families living in poverty do not maltreat their children, they are found to be at greater risk for child maltreatment (Cawson, 2002). Likewise, Cleaver and Nicholson (2007) conducted a study in the UK and identified that parents with IDD were more likely to be living in poverty. Emerson (2007) also found that individuals with IDD, of mild or moderate range, were almost five times more likely to be residing in disadvantaged parts of society. Socio-economic status has been another factor that has been associated with negative parenting outcomes and child maltreatment perpetrated by parents with IDD (Cleaver & Nicholson, 2007; Ehlers-Flint, 2002; Feldman & Walton-Allen, 1997; Llewellyn & McConnell, 2002; McConnell et al., 2006). Researchers have argued that parents with IDD may be at a socio-economic disadvantage due to being unemployed, having financial difficulties or residing in inadequate housing. (Ehlers-Flint, 2002; Pixa-Kettner, 1999).

Further, social isolation has been found to be a marked risk factor for the perpetration of child abuse and neglect, and has been identified as a common problem for parents involved in childcare proceedings (Cleaver et al., 1999; DePanfilis & Zuravin, 1999; Feldman et al., 2002; Kotch et al., 1999). Researchers have indicated that mothers who abused their children were found to have a smaller network of social support, and rated the social support that they did receive as being of a lower quality (Bishop & Leadbeater, 1999; Chan, 1994). Similarly, parents with IDD were also found to have limited support networks (Feldman et al., 2002; Llewellyn & McConnell, 2002; Llewellyn, McConnell & Mayes, 2003).

The research base points out that parents with IDD are likely to experience higher rates of social isolation than parents without IDD (Ehlers-Flint, 2000; Llewellyn & McConnell, 2002; Willems, de Vries, Isarin & Reinders, 2007). A study

conducted by Llewellyn and McConnell (2002), which focused on 70 mothers with IDD, revealed that they received the majority of their support from their families; however they were identified as being particularly vulnerable if this support ceased. They also found that the mothers in their sample lacked support from friends and were more likely to be isolated from their communities. In contrast, Feldman et al. (2002), in a study of 30 mothers with IDD, found that the majority of support that these mothers received was from support workers, and less so from members of their family. Mothers with IDD who reported having a large social support network reported better levels of psychological wellbeing, and their perceived helpfulness of the support they did receive was found to be related to increased levels of self-esteem (Kroese et al., 2002).

Whilst the evidence base indicates that parents with IDD are more likely to be socially isolated than parents in the general population, other researchers have found that mothers with IDD can be pro-active in seeking support and are capable of building social connections with others (Mayes, Llewellyn & McConnell, 2008). Tarleton and Ward (2007), in a UK study, found that parents with IDD were happy to receive support from services and acknowledged that they needed support throughout parenting, particularly with participating in aspects of the community, such as employment, increasing their social network and identifying services that were available to them (Llewellyn, McConnell & Bye, 1998). The researchers concluded that individuals with IDD could be adequate parents if given appropriate support. Types of insufficient support include a lack of parenting models (Cicchetti & Rizley, 1981), and professionals involved in their care being untrained and using interventions that are not specifically designed for a population with IDD (McConnell et al., 2006).

Macrosystem: Cultural beliefs and values. The macrosystem level relates to larger societal factors that influence the risk of child maltreatment (Jewkes et al., 2002). Cultural factors, such as the normalisation of violence in culture and the media have also been identified as contributing to the risk of child maltreatment (Garbarino, 1980), however this appears to be the least researched level of the ecological model as risk factors in this domain are often more difficult to determine (Thomas et al., 2003). Tzeng, Jackson and Karlson (1991) suggest that societal factors associated with child abuse and neglect include societal acceptance of violence and political and religious views. However, there appears to be a lack of information in the literature regarding the relationship between cultural beliefs, parental IDD, and risk of child maltreatment.

Summary

Although there has been evidence for parental IDD as a risk factor for child maltreatment, other researchers have suggested that it is a poor indicator of parental capacity (Mildon et al., 2003). Lamont and Bromfield (2009) highlight that there are numerous other factors that affect the capacity of a parent with IDD to provide an adequate level of care for their child. They suggest that the difficulties that parents with IDD face may be hindered by a multitude of other factors that make the task of parenting difficult.

Whilst the relationship between intellectual functioning and child maltreatment is an important area of study, most of the research in the area has focused on individuals with lower levels of intellectual functioning and not individuals with IDD per se. As variations in intellectual ability differ from study to study and also person-to-person, parental skills and other factors should also be

considered. Regardless of rates of maltreatment, individuals with IDD are a population warranting clinical attention, as this will inevitably inform assessment and treatment of these individuals. As Lindsay (2009) notes, offenders with IDD require further attention.

Limitations of Previous Research

The majority of cited research studies have several methodological limitations. Many of the studies rely on very small sample sizes, which inherently restricts the generalizability of the research findings (Lamont & Bromfield, 2009). There are also disparities across studies with regard to the methods that have been used to identify child maltreatment and IDD, as some researchers have relied on self-reports whilst others have relied on more robust psychometric testing. Many of the studies did not include comparison groups (Llewellyn & McConnell, 2002; Llewellyn, McConnell & Mayes, 2003) and many did not give detailed descriptions of the methodology that they used (Lamont & Bromfield, 2009). Therefore, it is unclear whether parents with IDD differ from parents without IDD in terms of risk (Gilberg & Geiger-Karlsson, 1993; James, 2004).

Further, the majority of the research was based on mothers and had excluded fathers, which may affect results as parental gender has been found to influence risk of child maltreatment (Feldman et al., 2002; Kroese et al., 2002; Llewellyn, McConnell, Cant & Westbrook, 1999). The majority of samples were also recruited from support agencies and this overrepresentation may therefore inaccurately reflect the general population of parents with and without an IDD. The findings of research studies were complicated by differences in the definition of child maltreatment and IDD (Sheerin, 1998), varying degrees of IDD which may cause inconsistencies,

different types of child maltreatment, and geographical differences in what constitutes competent parenting (Dowdney & Skuse, 1993; Lindsay, 2009). Additionally, research also tended to focus on young children, and therefore parents' ability to adapt to the changing developmental needs of the child is unclear ("Social Care Institute for Excellence", 2005).

The Current Study

Identifying risk factors associated with child maltreatment perpetrated by parents with IDD is valuable as it may help to ascertain the treatment and support needs of these parents. Additionally, identifying risk factors may also highlight situations in which a child's safety or wellbeing is being compromised. As a result of limitations of previous research, the current research will compare risk factors at each of the levels of the ecological model, for parents with and without IDD, who have been referred to childcare proceedings for abuse or neglect. Due to the nature of the present sample and limited information regarding race, ethnicity and culture, it is not possible to explore cultural differences between groups.

The following hypotheses are considered:

1. There will be significant differences in the presence of parental risk factors between parents with and without IDD.
2. There will be significant differences in terms of child factors between parents with and without IDD.
3. There will be significant differences in the presence of family factors between parents with and without IDD.

4. There will be significant differences in the presence of societal factors between parents with and without IDD.

METHOD

Sample

The data used in the current study was historical data obtained in England and Wales over an 11-year period, from December 1999 to June 2010. It consisted of information gathered from parenting assessment reports of parents involved in childcare proceedings. The reports were considered to be 'dead cases' as the assessment had already been completed and there had been no subsequent contact between the psychologist(s) who undertook the assessment and the client. The data from the childcare proceeding reports was inputted into a database by a member of staff at Forensic Psychology Practice Ltd (FPP) based on a standardised proforma, which detailed how to code each item (see Appendix 6).

The original data set contained information for 780 participants referred for assessment due to concerns of child abuse (573) or child neglect (207). For the purpose of the study, in order to make comparisons between participants with IDD to those without IDD, the sample was divided into two groups based on Full Scale IQ (FSIQ) from psychometric assessment. Participants were matched on their FSIQ as studies have indicated that parents with IDD (i.e. FSIQ < 70) have a number of unique clinical presentations and are more likely to have their children removed, or struggle to meet standards of 'good enough' parenting than parents without IDD (Booth et al., 2005). Therefore, by dividing participants on the basis of FSIQ, comparisons could be made. However, it should be noted that participants in the IDD group were classified on the basis of cognitive impairment with a FSIQ below 70 and it is unclear whether the participants in the IDD group met the diagnosis for IDD.

Participants below the age of 18 were excluded from the sample to ensure that the data reflected that of an adult sample. Participants with missing referral data (i.e. referred for abuse or neglect) and missing data regarding FSIQ were also excluded from the sample. As some of the original sample contained information for more than one child per parent, one child per parent was randomly selected to increase the internal validity of the study. Subsequently, the sample consisted of 572 'normally functioning' parents (i.e. parents without IDD), and 102 parents with IDD. Using the 'random sample of cases' option in SPSS, one hundred and two participants were then randomly selected from the sample of 'normally functioning' parents to ensure that the final sample included an equal number of parents with and without IDD. The final sample consisted of 204 participants aged between 18 and 57 years (mean age = 32.48, *SD* = 9.085; 88 males; 116 females). The children in the final sample were aged between two months and 17 years of age (mean age = 5.27, *SD* = 4.957; 106 males; 98 females). In the final sample, 143 participants had been referred for *child abuse*, and 61 had been referred for *child neglect*.

Procedure

Variables used in the analysis were extracted from an existing database for the purpose of analysis. The information in the dataset included a number of comprehensive variables for each participant:

- Referral information
- Early childhood history
- Education and employment history
- Relationship history
- Substance misuse history

- Forensic history
- Mental health history
- Risk factors
- Psychometric testing results

To ensure the reliability of the dataset used, previous studies using the same database were referred to for rates of inter-rater and intra-rater reliability (Dixon et al., 2007; 2010). In both studies, researchers systematically extracted variables from reports using definitions outlined in a coding dictionary. Each rater completed the standardised proforma for the same two parents at two different points in time. The three researchers reached a 100% agreement for inter-rater reliability for each variable measured, as well as a 100% rate of agreement for intra-rater reliability.

Measures

Independent and dependent variables. Using the different levels of the ecological model described in Chapter 1 as a guiding framework, the variables included in this study were based on existing literature. Risk factors for child maltreatment identified in the literature, which were also coded in the database, were used to test the hypotheses. The dependent variable included in this study was intellectual functioning (1 = normally functioning/without IDD, 2 = intellectually disabled/IDD). There were five categories of independent variables in this study: *demographics*, *parental problems, child vulnerability, family factors,* and *societal factors*. Factors related to the wider cultural context were not included in the study as it was not possible to explore such differences in the present sample. Table 3.1 provides an overview of the independent variables included at each level of the

ecological model, with further information regarding specific psychometric measures that have been used detailed below.

Information was chosen from the variables listed below and in Table 3.1 as they allowed for the exploration of relationships between child maltreatment and parental intellectual functioning. They also allowed comparisons to be made on the participants' psychometrically assessed stress, anger, coping skills, personality pathology and relationships. Aside from scores on psychometric testing, variables were coded as '0' if 'no/not present' and '1' if 'yes/present'. No further details were available within the data set. For details on how each factor was coded, please see Appendix 6.

Table 3.1

Independent Variables Included at Each Level of the Ecological Model

Independent Variables				
	Individual Level		Microsystem Level	Exosystem Level
Demographics	Parental Problems	Child Vulnerabilities		
Parental age	Under 21 years of age	Complications during birth/separated from baby due to poor health	Number of children in family	Parent feels isolated
Age of child	Lived in foster care/care home for a period of time in childhood	Infant was seriously ill, premature, or weighed less than 2.5kg at birth	Relationship between adult and child (biological or not)	Parent feels current partner is not supportive
Parental gender	Witness to partner/spouse abuse	Mental or physical disabilities	Spouse abuse	Parent has serious financial problems
Gender of child	Abused or neglected as a child	Developmental delay	Single parent	
FSIQ of parent	Victim of bullying	Mental problem	Adult in house with violent tendencies	
Parental education	Negative behaviour at school		Lives with someone with criminal convictions	
Parental employment	Psychosis			
	Conduct disorder			
	Personality disorder			
	Depression/anxiety			
	Dependency on drugs/alcohol			
	Other mental health problems			
	Criminal status			
	Lacks insight			
	Punctuality/first time attendance			

Psychometric measures. In addition to the variables listed above, several psychometric measures will also be used to assess differences between parents with and without IDD at the individual level.

Parenting Stress Index – Third Edition (PSI; Abidin, 1995). The PSI consists of 120 items that identify dysfunctional parenting and predict the potential for parental behaviour problems and child adjustment difficulties within the family system. The PSI yields a Total Stress Score, as well as scores for Child and Parent Characteristics, and Life Stress. The child characteristics are comprised of six subscales: *Distractibility/Hyperactivity, Adaptability, Reinforces Parent, Demandingness, Mood,* and *Acceptability*. The parent characteristics are comprised of seven subscales: *Competence, Isolation, Attachment, Health, Role Restriction, Depression,* and *Spouse*. Reliability and validity is reported to be good, ranging from .55 to .80 for the parent domain, and .62 to .70 for the child domain. Test-retest reliability after one year has been reported as .70 for the parent domain and .55 for the child domain. For detailed scale descriptions, please refer to Appendix 7.

State-Trait Anger Expression Inventory-2 (STAXI-2; Speilberger, 1999). The STAXI-2 is a 57-item inventory that measures intensity of anger as an emotional state (*State Anger*) and the disposition to experience angry feelings as a personality trait (*Trait Anger*). It also consists of an *Anger Expression Index* that provides an overall measure of total anger expression. Items consist of 4-point scales that assess intensity of anger at a particular moment and the frequency of anger experience, expression, and control.

State-trait theory has helped researchers in the field of anger, and the STAXI-2 is an established instrument which has been the preferred psychometric for assessing the experience and expression of anger as it has a strong conceptual basis (Lilly & Beckstrand, 2011; Martin & Dahlen, 2007). The STAXI-2 manual provides evidence supporting the validity of the anger expression scales. The STAXI-2 subscales have robust psychometric properties, including high internal consistency, external validity, and construct validity (Speilberger, 1999). Internal consistency reliability has a Cronbach's alpha value ranging from .84 or higher for all scales and subscales, with the exception of *Angry Reaction* for normal adults, which is .76 for females and .73 for males; *Anger Expression-Out* for normal adults, which is .74 for females and .73 for males; *Anger Expression-In* for normal adults, which is .78 for females and .74 for males; and *Anger Expression-Index* for normal adults, which is .75 for females and .76 for males. For detailed scale descriptions, please refer to Appendix 8.

Coping Responses Inventory (CRI; Moos, 1992). The CRI has commonly been used to assess coping (Reich, Zautra & Hall, 2010). The CRI is composed of eight subscales that assess four types of coping processes: *cognitive approach*, *behavioural approach*, *cognitive avoidance* and *behavioural avoidance*. This brief inventory identifies cognitive and behavioural responses that the individual has used to cope with a recent problem or stressful situation. This questionnaire contains 48 items with four-point response scales. The scales internal consistency was found to be moderate. The author reported Cronbach's alpha coefficients fluctuating between .74 and .61 for men (average alpha = .67) and between .71 and .58 for women (average alpha = .64). For scale descriptions, please refer to Appendix 9.

Millon Clinical Multiaxial Inventory-III (MCMI-III; Millon, Millon, Davis & Grossman, 2009). The MCMI-III is a psychological assessment tool that provides information on psychopathology, as well as specific disorders outlined in the DSM-IV. It consists of 175 true-false questions related to 14 personality disorder scales (*Schizoid, Avoidant, Depressive, Dependent, Histrionic, Narcissistic, Antisocial, Sadistic, Compulsive, Negativistic, Masochistic, Schizotypal, Borderline* and *Paranoid*), 10 clinical syndrome scales (*Anxiety, Somatoform, Bipolar: Manic, Dysthymia, Alcohol Dependence, Drug Dependence, PTSD, Thought Disorder, Major Depression* and *Delusional Disorder*), and 5 correction scales (*Disclosure, Desirability, Debasement, Invalidity* and *Inconsistency*). Cronbach's alpha statistics have been found to range from .66 (Compulsive) to .90 (Major Depression). Test-retest reliability has ranged from .82 (Debasement) to .96 (Somatoform), which suggests that the measure is highly stable over a short period of time. For scale descriptions, please refer to Appendix 10.

Golombok Rust Inventory of Marital State (GRIMS; Rust, Bennun, Crowe & Golombok, 1986). The GRIMS is a 28-item inventory that assesses the quality of the relationship between a married or cohabiting couple. The scale has good reliability for women (.90) and for men (.92). Content and face validity have also been found to be good, and there is also some evidence of discriminative validity. For a description of the measure, please refer to Appendix 11.

Ethics

This research, and the use of the database was approved by the Ethics Committee at University of Birmingham on 19th November 2013 (ERN_13-1220) and has also previously been approved by the Family Court Division for research purposes.

Treatment of Data

Analysis of the data was conducted using SPSS. Chi-square analysis was conducted on descriptive data. As the data violated parametric assumptions, Mann-Whitney U was used for bivariate statistics to test the relationship between each potential predictor variable and intellectual functioning.

RESULTS

Descriptive Information

Demographics. Due to the criteria for categorising the two groups, as expected, parents significantly differed in terms of their intellectual functioning. Parents with IDD (*Mean Rank* = 51.50; *mean* = 62.88, *SD* = 4.388) had significantly lower FSIQ compared to parents without IDD (*Mean Rank* = 153.50; *mean* = 93.93, *SD* = 16.152), *U* = .000, *z* = -12.346, $p < .001$, r = -.864. In addition, Chi-square results revealed that there was a significant difference in education, such that parents with IDD were significantly less likely to have gained qualifications prior to the age of 18, compared to parents without IDD ($\chi^2(2, N = 204) = 27.908$, $p < 0.001$, $\phi = -.367$). However, the two groups did not differ in terms of qualifications obtained after the age of 18.

As can be seen in Table 3.2, more parents in the sample had been referred for child abuse rather than child neglect. Of NF parents, 72.5% had been referred for child abuse and 27.5% had been referred for child neglect. Of parents with IDD, 67.6% had been referred for child abuse, whereas 32.4% had been referred for child neglect. Chi-square tests revealed that this difference was not significant: ($\chi^2(1, N = 204) = .585$, $p > 0.05$, $\phi = .054$).

The age of the parents was similar across both groups. The mean age of parents without IDD was 32.15 years and the mean age of parents with IDD was 32.80 years. Age of the child was also similar between groups, with a mean age of 5.34 years for children of parents without IDD, and a mean age of 5.2 years for parents with IDD. Chi-square was used to determine whether there was a significant

difference in gender of parents with and without IDD. Results revealed that 69.6% of parents with IDD were female, compared to 44.1% of parents without IDD. This

Table 3.2

Descriptives of Maltreatment Type for Parents with and without IDD

	IDD	NF	
Maltreatment Type	N (%)	N (%)	Total
Abuse	69 (67.6)	74 (72.5)	143
Neglect	33 (32.4)	28 (27.5)	61
Total	102	102	204

Note. IDD = Intellectually Disabled, NF = Normally Functioning (without IDD).

difference was statistically significant ($\chi^2(1, N = 204) = 13.509$, $p < 0.001$, $\phi = .257$). There were a similar number of boys and girls in the sample.

There was a significant difference in employment, with parents with IDD significantly less likely to be employed (white collar) compared to parents without IDD ($\chi^2(1, N = 204) = 7.669$, $p < 0.01$, $\phi = -.194$). Furthermore, parents with IDD were significantly less likely to be employed (blue collar) compared to parents without IDD ($\chi^2(1, N = 204) = 4.042$, $p < 0.05$, $\phi = -.141$).

Bivariate Statistics

This section of the results describes bivariate relations between each of the independent variables related to each level of the ecological model, and the dependent variable. In order to measure whether there was a significant difference between the effects of the predictor variables on intellectual functioning, a Chi-square test was used. Further, as the data violated parametric assumptions, the non-parametric

equivalent to the independent samples t-test, Mann-Whitney U, was used to assess whether there was a statistically significant difference between the two groups. Type 1 error was not corrected for as research has indicated that these corrections may not be necessary in exploratory studies (Bender & Lange, 2001).

Hypothesis 1: There will be significant differences in the presence of parental risk factors between parents with and without IDD. Chi-square analyses were completed in order to assess the associations between individual risk factors and intellectual functioning. A full list of these is presented in Table 3.3.

There was a significant difference in criminal status, such that parents with IDD had significantly fewer criminal convictions than parents without IDD (χ^2(1, N = 204) = 4.433, $p < 0.05$, ϕ = -.147).

Parents with IDD were also significantly more likely to lack insight into the reasons for their referral and child protection's concerns compared to parents without IDD (χ^2(1, N = 204) = 5.667, $p < 0.05$, ϕ = .167).

Independent sample Mann-Whitney U test were completed to assess for differences between parental intellectual functioning and scores on the parent domain, total stress and life stress scales of the PSI. A full list of these results are presented in Table 3.4. Parents with IDD obtained significantly higher scores on all but two scales of the PSI (*spouse* and *life stress*).

In terms of the STAXI-2, independent samples Mann-Whitney U test revealed significant differences between parents with and without IDD on four subscales (*feeling angry*, *anger control out*, *anger control in*, and *anger expression index*). A full list of STAXI-2 results is presented in Table 3.5. Parents with IDD scored significantly higher on the *feeling angry* subscale (U = 4842, z = 2.012, $p < .05$, r =

.149) and the *anger expression index* subscale (U = 5303.5, z = 3.212, p < .001, r = .237) of the STAXI-2 compared to parents without IDD.

However, parents without IDD scored significantly higher on the *anger control out* subscale (U = 3298.5, z = -2.412, p < .05, r = -.178) and the *anger control-in* subscale (U = 2974, z = -3.323, p < .001, r = -.246) of the STAXI-2 compared to parents with IDD (MR = 77.90).

Table 3.3

Individual Level (Parental Problems) Risk Variables for Parents with and without IDD

	Percentage		
Variables - Parental problems	IDD	NF	χ^2
Has criminal convictions	46.1	60.8	4.433*
Lived in foster care/care home for a period of time in childhood	16.7	21.6	.793
Under 21 years of age	24.5	22.5	.109
Witness to partner/spouse abuse	18.6	24.5	1.043
Abused or neglected as a child	50	46.1	.314
Reports few positive childhood memories	33.3	30.4	.203
Victim of bullying	49	39.2	1.988
Negative behaviour at school (i.e. bullying, fighting, truanting etc.)	52	54.9	.177
Psychosis	5.9	2.9	1.046
Conduct disorder	1	0	1.005
Personality disorder	2	1	.338
Depression/anxiety	53.9	51	.177
Dependency on drugs/alcohol	18.6	20.6	.124
Other mental health problems	13.7	12.7	.043
Lacks insight	57.8	41.2	5.667*
Punctuality/first time attendance	85.3	88.2	.384

Note. IDD = Intellectually Disabled, NF = Normally Functioning (without IDD), * p < .05, ** p < .01, *** p < .001

Parents with and without IDD also differed in terms of their scores on the following CRI scales: *logical analysis, seeking support, problem solving, cognitive avoidance*

and *emotional discharge*. A full list of CRI results is presented in Table 3.6. Parents without IDD scored significantly higher on *logical analysis* (U = 3226.5, z = -3.268, $p < .001$, r = -.238), *seeking support* (U = 3588, z = -2.304, $p < .01$, r = -.168) and *problem solving* (U = 3412.5, z = -2.773, $p < .01$, r = -.202) compared to parents with IDD.

Table 3.4

Results on the Parent Domain, Total Stress and Life Stress Scales of the PSI for Parents with and without IDD

	Mean		
	IDD (n = 42)	NF (n = 43)	U
PSI Parent Domain Scales			
Competence	65.00	48.91	1204.5**
Isolation	70.57	51.21	1264***
Attachment	73.55	51.81	1338***
Health	55.95	43.58	1131*
Role restriction	46.00	30.51	1259**
Depression	59.60	47.60	1144*
Spouse	65.43	57.14	1034
Parent domain total	65.21	47.09	1259.5**
Total stress	71.29	49.23	1322***
Life stress	77.83	75.12	879.5

Note. IDD = Intellectually Disabled, NF = Normally Functioning (without IDD), * $p < .05$, ** $p < .01$, *** $p < .001$

In contrast, parents with IDD obtained significantly higher scores on *cognitive avoidance* (U = 5549.5, z = 2.938, $p < .005$, r = .214) and *emotional discharge* (U = 5402.5, z = 2.549, $p < .05$, r = .185) in comparison to parents without IDD.

In terms of the MCMI-III, parents with IDD scored significantly higher than parents without IDD on the following scales: *disclosure, debasement*, *schizoid*, *avoidant, depressive*, *negativistic, masochistic, schizotypal, paranoid, anxiety, somatoform, bipolar: manic*, *PTSD*, *thought disorder, major depression* and

delusional disorder. However, parents without IDD scored significantly higher than parents with IDD on the *desirability* and *histrionic* scales. A full list of MCMI-III results is presented in Table 3.7.

Independent samples t-test was completed to assess for differences between parental intellectual functioning on the GRIMS as this data did not violate parametric assumptions, however parents with IDD did not differ significantly from those without IDD ($t(43, N = 45) = -1.103$, $p > 0.05$).

Hypothesis 2: There will be significant differences in terms of child factors between parents with and without IDD. There were no significant differences between parents with and without IDD on the following child vulnerability variables: *complications during birth/separated from baby due to poor health* ($\chi^2(1, N = 204) = 2.928$, $p > 0.05$)*, infant was seriously ill, premature, or weighed less than 2.5kg at birth* ($\chi^2(1, N = 204) = .354$, $p > 0.05$)*, child has mental or physical disabilities* ($\chi^2(1, N = 204) = .049$, $p > 0.05$)*, child has developmental delay* ($\chi^2(1, N = 204) = .756$, $p > 0.05$)*,* and *child has a medical problem* ($\chi^2(1, N = 204) = .000$, $p > 0.05$).

However**,** independent sample Mann-Whitney U tests were also completed to assess for differences between the child domain scales of the PSI and parental intellectual functioning. A full list of these results is presented in Table 3.8. Parents with IDD obtained significantly higher scores on all child domain scales of the PSI.

Table 3.5

Results on the STAXI-2 for Parents with and without IDD

	Mean		
	IDD (n = 84)	NF (n = 99)	U
STAXI-2 Subscales			
State anger	50.58	46.18	4756
Feeling angry	50.79	46.55	4842*
Feel like expressing anger verbally	53.75	52.02	4342
Feel like expressing anger physically	53.85	51.24	4379
Trait anger	40.92	30.58	4798
Angry temperament	48.73	45.94	4321.5
Angry reaction	30.05	21.27	4708.5
Anger expression out	46.38	42.78	4431
Anger expression in	56.11	48.64	4733.5
Anger control out	44.50	55.62	3298.5*
Anger control in	45.23	59.64	2974***
Anger expression index	55.12	40.33	5303.5***

Note. IDD = Intellectually Disabled, NF = Normally Functioning (without IDD), * p < .05, ** p < .01, *** p < .001

Table 3.6

Results on the CRI for Parents with and without IDD

	Mean		
	IDD (n = 89)	NF (n = 100)	U
CRI Subscales			
Logical analysis	40.45	45.35	3226.5***
Positive re-appraisal	47.31	46.72	4458
Seeking support	49.97	52.73	3588**
Problem solving	49.11	53.09	3412.5**
Cognitive avoidance	53.78	49.26	5549.5**
Acceptance	52.55	51.55	4672.5
Alternative rewards	48.96	49.43	4317.5
Emotional discharge	58.22	54.36	5402.5*

Note. IDD = Intellectually Disabled, NF = Normally Functioning (without IDD), * p < .05, ** p < .01, *** p < .001

Hypothesis 3: There will be significant differences in the presence of family factors between parents with and without IDD. Chi-square analysis revealed that there was a significant difference on three variables at the macrosystem

Table 3.7

Results on the MCMI-III for Parents with and without IDD

	Mean		
	IDD (n = 83)	NF (n = 97)	U
MCMI-III Subscales			
X Disclosure	66.88	55.90	5257.5***
Y Desirability	56.67	64.56	3.121**
Z Debasement	63.12	51.25	5322.5***
1 Schizoid	66.30	49.75	5614***
2A Avoidant	62.61	44.59	5470.5***
2B Depressive	61.34	49.20	4909.5*
3 Dependent	53.71	49.62	4369
4 Histrionic	41.67	51.27	3009.5**
5 Narcissistic	53.49	55.64	3622.5
6A Antisocial	53.24	47.78	4515.5
6B Sadistic	49.86	44.00	4683.5
7 Compulsive	55.36	56.25	3963.5
8A Negativistic	58.76	47.30	5040.5**
8B Masochistic	59.24	47.08	4737.5*
S Schizotypal	56.14	41.41	5115.5**
C Borderline	48.87	40.96	4648
P Paranoid	69.63	55.84	5326***
A Anxiety	63.70	49.43	4912.5*
H Somatoform	45.98	33.67	4939**
N Bipolar: Manic	55.43	47.66	4.859*
D Dysthymia	52.36	44.32	4656
B Alcohol Dependence	51.87	48.56	4060
T Drug Dependence	51.34	46.07	4439.5
R PTSD	52.53	41.37	4775*
SS Thought Disorder	48.52	39.37	4805.5*
CC Major Depression	53.80	36.20	5219.5***
PP Delusional Disorder	58.93	47.32	4713.5*

Note. IDD = Intellectually Disabled, NF = Normally Functioning (without IDD), * p < .05, ** p < .01, *** p < .001

level (*relationship between adult and child* and *adult in house with violent* biological relationship to the child compared to parents with IDD (χ^2(1, N = 204) = 3.9, p < 0.05, ϕ = -.138), whilst parents with IDD were significantly more likely to be living with an adult with violent tendencies compared to parents without IDD (χ^2(1, N = 204) = 4.485, p < 0.05, ϕ = .148). Parents with IDD were also significantly more

Table 3.8

Results on the Child Domain Scales of the PSI for Parents with and without IDD

	Mean		
	IDD (n = 42)	NF (n = 43)	U
PSI Child Domain Scales			
Distractibility/hyperactivity	68.21	44.74	1,345.5***
Adaptability	74.40	56.09	1236.5**
Reinforces parent	75.86	58.81	1255**
Demandingness	64.02	50.30	1178*
Mood	76.10	53.77	1295***
Acceptability	76.10	54.44	1236**
Child domain total	74.88	50.14	-1350***

Note. IDD = Intellectually Disabled, NF = Normally Functioning (without IDD), * p < .05, ** p < .01, *** p < .001

likely to live with someone with a criminal conviction compared to parents without IDD (χ^2(1, N = 204) = 5.734, p < 0.05, ϕ = .168).

Hypothesis 4: There will be significant differences in the presence of societal factors between parents with and without IDD. In terms of factors at the exosystem level, Chi-square analyses revealed no significant differences between parents with and without IDD on the following social factor variables: *parent feels isolated* (χ^2(1, N = 204) = .046, p > 0.05), *parent feels current partner is not supportive* (χ^2(1, N = 160) = 1.730, p > 0.05), *parent has serious financial problems* (χ^2(1, N = 204) = .000, p > 0.05).

DISCUSSION

The main aims of this study were to determine whether parents with IDD differed from parents without IDD in terms of risk factors associated with child maltreatment at each level of the ecological model. Evidently, these hypotheses have been partially proven through the analysis process; parents with IDD significantly differed from those without IDD on several factors at the individual and familial level. These findings extend previous research that has indicated that there are certain factors that amplify risk of child maltreatment perpetrated by parents with IDD (Cleaver et al., 1999; Feldman et al., 2002). However, it should be noted that analysis also revealed certain factors at the individual and familial level of which parents without IDD achieved significantly greater scores. As will be discussed further, it is important to note that there were several risk factors at the individual and familial level, as well as all factors at the societal level, that did not differentiate parents with IDD from parents without IDD.

Overview of Findings

Analysis revealed that overall, more parents in the current study had been referred for child abuse than child neglect. Although previous research has suggested that parents with IDD are more likely to neglect their children due to a failure to understand the needs of their children (Crain & Millor, 1978; Llewellyn, McConnell & Ferronato, 2003), the present study offers some insight into the potential of a parent with IDD to inflict physical, psychological or sexual harm to their child. Whilst it is not possible to identify the parents' intention, results of previous literature and the findings of the current study lead to the hypothesis that parents with IDD may abuse

their children due to a lack of understanding regarding parenting practices, such as discipline (Pixa-Kettner, 1999).

Hypothesis 1: There will be significant differences in the presence of parental risk factors between parents with and without IDD. In terms of the first hypothesis, analysis revealed that parental gender was a differentiating factor, with parents with IDD more likely to be female. This finding advances previous literature as no available research has identified gender differences in maltreating parents with IDD. The findings may suggest that parental gender plays a role in risk of perpetrating child maltreatment, dependent upon parental intellectual functioning. It would be useful to explore gender differences associated with parental IDD in future research, to identify whether mothers significantly differ from fathers in terms of risk variables. In terms of other parental characteristics, as expected, parents with IDD had significantly poorer insight in relation to the reason for their referral to child protective services, which may be a reflection of their limited cognitive functioning and associated difficulty with understanding the adaptations that need to be made to the demands of daily life when raising a child (Taylor, Lindsay & Willner, 2008).

Parents without IDD were more likely to have criminal convictions than parents with IDD. This finding appears to contradict previous research that has indicated that individuals with IDD are more vulnerable to engaging in criminal behaviour due to poor emotional control and suggestibility (Hall, 2000; Hodgins, 1992). It is unclear why parents without IDD scored higher on this variable. More research is needed to identify the types of criminal convictions that these parents are likely to have and the associated impact that this may have on their risk for child maltreatment.

Parents with IDD did not differ from parents without IDD on other parental risk variables such as age, or childhood factors such as negative behaviour at school, or being a victim of bullying. Experiencing abuse or neglect as a child, witnessing partner/spouse abuse and living in foster care were also factors that did not differentiate parents with IDD from those without IDD. These findings suggest that these factors are similar for all parents, regardless of their level of intellectual functioning. Previous research has suggested that negative early life experiences, such as prior maltreatment (Hamberger & Hastings, 1991) are important risk factors for child maltreatment, and the findings of the present study suggest that they contribute to the risk of child maltreatment at equal rates for parents with and without IDD. Mental health problems, as identified as a significant contribution towards risk of maltreatment in the literature (Feldman et al., 2002; Smith & Segal, 2013), were also found to equally contribute towards risk of maltreatment in parents with and without IDD. This finding supports previous research that suggests that maltreating parents often have mental health difficulties (Browne & Herbert, 1997).

In terms of psychometric measures that were used to assess for differences between groups, significant differences were found between groups on all scales of the PSI, with the exception of *spouse* and *life stress*. These findings suggest that parents with IDD do not differ from parents without IDD in their experience of general life stress, or relationship stress, but differ in terms of stress related to their individual characteristics. This contradicts previous research that has found an association between parenting stress and life experiences (Aunos et al., 2008). However, consistent with previous research, the results suggested that parents with IDD experienced significantly higher levels of parenting stress than parents without IDD (Aunos et al., 2008). Parenting stress in the present study may more likely be

related to individual characteristics such as the lack of understanding and consequent frustration that parents with IDD may have regarding child development and appropriate parent-child interaction.

Although Belsky's (1980) ecological model recognises the interactive aspect of the parent-child system, there may also be aspects of the parents functioning that contribute to their experience of parenting stress. An explanation for this may be that parents with IDD feel more overwhelmed and inadequate to the task of parenting compared to parents without IDD (Abidin, 1995). They may lack practical child development knowledge or possess a limited range of child management skills. Additionally, parents with IDD may lack assertiveness and authority toward their child, particularly if the child does not have an intellectual disability, or if the child's level of intellect supersedes that of the parents. The present findings suggest that parents with IDD may benefit from interventions that are focused on developing their parenting skills, as well as increasing support to reduce potential feelings of parental inadequacy.

Parents with IDD were also more likely than parents without IDD to achieve higher scores on the *feeling angry* and *anger expression* subscales of the STAXI-2. However, parents without IDD reported higher levels of *anger control in* and *anger control out*. These results may be due to the limited ability of parents with IDD to manage difficult emotions and to regulate their anger (Black, Cullen & Novaco, 1997). These results indicate that parents with IDD may benefit from treatment that addresses their experience and expression of anger, such as relaxation and self-monitoring. These methods of intervention have been found to be effective in individuals with IDD as there is less focus on cognitive procedures (Whitaker, 2001).

On the other hand, findings suggest that parents without IDD may not require as much intervention in this area.

In terms of coping skills, parents without IDD adopt *approach* coping styles, whereas parents with IDD adopt *avoidance* coping styles. Results indicated that parents without IDD were more likely to attempt to understand and prepare mentally for a stressor, were more likely to attempt to seek information, guidance or support, and were also more likely to take action to deal with their problem. In contrast, parents with IDD were more likely to utilise *avoidance* coping responses, such as avoiding thinking realistically about a problem, and reducing tension by expressing negative feelings. Their tendency to use *avoidant* coping strategies is supportive of research that suggests that individuals with IDD have poor coping skills (Gray et al., 1983; Hartley & MacLean, 2005). This may be a result of limited skills in problem solving, as well as difficulties with flexible and abstract thinking (Hartley & MacLean, 2008). Identifying the specific types of coping strategy used by parents with and without IDD is a fundamental step toward developing interventions aimed at improving coping strategies and potentially reducing the likelihood of maltreatment occurring. Interventions should be aimed at teaching parents with IDD how to replace their cognitive attempts to ignore thoughts about a problem and behavioural efforts to express negative feelings with approach coping strategies.

Differences were also found between parents with and without IDD on several variables related to personality disorders and clinical syndromes. These findings provide support for previous research that has indicated that some personality disorders were common in individuals with IDD (Alexander & Cooray, 2003); however, their research suggests that individuals with IDD often display behaviours that overlap with features of personality disorders. Therefore, these findings should be

interpreted with caution, and diagnostic criteria specific for different developmental levels should be incorporated to accurately assess personality traits and disorders of individuals with IDD. This study does not distinguish between different personality disorders and only considers the presence of a trait rather than a disorder; thus, it is not possible to draw conclusions about specific forms of personality disorders associated with parents with and without IDD.

Notably, parents without IDD achieved higher scores on the *histrionic* subscale as well as higher scores on *desirability* compared to parents with IDD. Previous research has found that parents instructed to 'fake-good' scored highly on the desirability and histrionic subscales (Lenny & Dear, 2009). This suggests that elevations on these subscales may be an artefact of socially desirable responding rather than pathology in these areas, and so this profile should be interpreted with caution within child custody evaluations (Lenny & Dear, 2009). No differences were found between groups on a measure of relationship quality, which suggests that parents with IDD did not differ from those without IDD in terms of the quality of their intimate relationship.

Hypothesis 2: There will be significant differences in terms of child factors between parents with and without IDD. In terms of the second hypothesis, there were no differences between the groups on variables related to the child, such as *complications during birth or separation from the baby due to poor health*, *infant was seriously ill, premature, or weighed less than 2.5kg at birth, child has mental or physical disabilities, child has developmental delay* and *child has a medical problem.* These results suggest that, whilst certain child vulnerabilities may contribute to risk of child maltreatment, these vulnerabilities are no more or less likely to occur in parents

with IDD, and are found to contribute equally to risk of maltreatment in parents of varying levels of intellectual functioning. Therefore, whilst a parent with IDD may have more individual vulnerabilities, this does not indicate that their child will also have characteristics that increase their vulnerability of experiencing maltreatment.

Parents with IDD did score significantly higher than parents without IDD on all variables related to child characteristics of the PSI. A parent with IDD may find it particularly difficult to meet and respond to their child's needs. They may also experience difficulty adjusting to the child, may have unrealistic expectations of the child, and may misinterpret the child. Parents with IDD may also lack understanding regarding the need to meet the child's attachment needs in a predictable and attuned manner. Furthermore, due to their own challenges and needs, parents with IDD may experience heightened levels of stress when attempting to also meet the needs of their child. If this is the case, intervention for parents with IDD should focus on behavioural observation of the child and parent-child interaction, to determine whether the difficulties are arising as a result of the behaviour of the child, or whether it is a result of the parent's distorted representation of the child's behaviour. Intervention should also address issues related to discipline and compliance training. As no differences were found between groups on general child variables, these results suggest that the high scores on the child domain of the PSI are more likely a result of the intellectually disabled parent's perception of the child and the parent-child relationship, rather than actual characteristics related to child vulnerability.

Hypothesis 3: There will be significant differences in the presence of family factors between parents with and without IDD. Familial factors were also investigated to assess for differences between groups at the microsystem level for the

third research hypothesis. Parents without IDD were significantly more likely to have a *non-biological relationship to the child* than parents with IDD. Whilst a substantial amount of previous research has supported the notion that single parent families are at risk of maltreatment (Sedlak & Broadhurst, 1996), the present study provides some support for the finding that parents who bring a stepparent into the home increase the risk of child maltreatment (Tooley, Karakis, Stokes & Ozannesmith, 2006). This may be supportive of research that has indicated that some perpetrators of child abuse intentionally develop relationships with vulnerable females in order to gain access to their children for the purposes of maltreatment (Booth & Booth, 1999). It may be that individuals with IDD have reduced capacity to plan to develop a relationship in order to intentionally maltreat a child in this way. However, the present study did not allow for such an in depth analysis to identify the types of maltreatment that had been perpetrated by biological and non-biological parents. This would be a useful avenue for future research, as this information would increase understanding of the family dynamics associated with child maltreatment and would assist in tailoring interventions accordingly.

Parents with IDD were more likely to live with someone with a criminal conviction compared to parents without IDD. Researchers have suggested that individuals with IDD may display behaviours that put themselves or others at risk (Emerson, 2001), and living with someone who has criminal convictions may be an example of this. Parents with IDD may lack the understanding of the risks involved with living with someone with a criminal background, in terms of the potential harm to their child. This hypothesis is supported by the significantly lower score attained by parents with IDD on the insight variable which indicates that they have a more limited recognition and understanding of social service concerns. Further, parents with IDD

were significantly more likely to be *living with an adult with violent tendencies*. These parents may have deficits in their ability to communicate their needs or seek support (Gaag, 2009), with research suggesting they often seek support from their partners and family before seeking help from professionals (Llewellyn, 1995). Therefore, they may struggle to obtain support with protecting their child from potential harm.

Hypothesis 4: There will be significant differences in the presence of societal factors between parents with and without IDD. The analysis revealed no significant differences between groups in terms of societal factors, which contradicts the fourth hypothesis. No differences were found between groups in terms of *parent feels isolated*, *parent feels current partner is not supportive* and *parent has serious financial problems.* These findings are consistent with previous research that suggests that parents who maltreat their children often experience social isolation (Cleaver et al., 1999), a lack of support (Bishop & Leadbeater, 1999) and financial difficulties (Pixa-Kettner, 1999), however contradict the assumption that parents with IDD may struggle significantly more than parents without IDD in this domain. This indicates that parents who maltreat their children need the same level of support in terms of integrating within their community and receiving support, both interpersonally and financially, regardless of their level of intellectual functioning.

Limitations

There are a number of limitations that should be considered that may have impacted upon the analysis and interpretation of results. Whilst it was possible to identify the broad category of child maltreatment (i.e. abuse or neglect), the dataset

did not specify which subtype of abuse had been perpetrated (i.e. physical, psychological and/or sexual), and there was also no categorisation for parents who had both abused and neglected their child concurrently. This information, had it been available, would have allowed for a more thorough analysis of the data. Access to this information would have been beneficial in understanding the dynamics of child maltreatment perpetrated by parents with and without IDD, as research has suggested that it is rare for types of abuse to occur in isolation and that victims of repeated child maltreatment often experience several types of maltreatment (Higgins, 2004). However, it should be noted that this study advances some of the previous literature that has focused on only one type of child maltreatment.

Another limitation regarding the dataset was that much of the information made available had been based on self-reports and therefore may be somewhat susceptible to an underreporting of risk variables of child abuse and neglect. Self-reports are often inaccurate, particularly in court-ordered evaluations, due to impression management of the participant (Helfritz et al., 2006). Parents in childcare proceedings may be reluctant to divulge information regarding risk variables for fear of the repercussions of such disclosure. This potential limitation may result in an underestimation of the actual relationship between child maltreatment and its risk factors. Brown et al. (1998) suggest that, where possible, data should be obtained from official records and self-reports, rather than a reliance on one source of data, as the use of multiple informants would have increased the validity of the research (McGee, Wolfe, Yuen, Wilson & Carnochan, 1995). The findings of the present study bring light to the difficulties parents with IDD may have in completing psychometric measures. For example, results revealed higher rates of disclosure in parents with IDD as measured by the MCMI-III opposed to higher rates of desirability in parents

without IDD. These findings indicate that both groups are not completing the psychometric measures in the same way. Future research may seek to collect a more complete profile of violence within the family, which includes psychometric measures, reports from the parents and children involved, as well as support for other risk variables at each level of the ecological model.

The use of parents' responses for a range of risk variables were subject to differing forms of recall and response biases, particularly due to the sensitive nature of some of the topics questioned, such as early negative childhood events and experience of mental health difficulties. The study was based on retrospective accounts and therefore relied on the individuals in the sample to accurately recall events over a long period of time, such as factors related to their childhood. This may have been more problematic for parents with IDD, as research has indicated that cognitively impaired individuals have poorer explicit memory (Carlesimo, Marotta & Vicari, 1997). Relying on retrospective information can also limit the data as participants' recollection of events may have changed over time and may not be as accurate. Alternatively, some parents may have difficulty recalling certain negative events as a protective mechanism (Lew, 1988). To enhance the reliability of the data, future research should make use of multiple sources of information, including both prospective and retrospective sources of data.

As the present study involved secondary analysis of existing data, there was limited control over which variables could be assessed for differences between groups, as some risk factor variables were not made available within the dataset. Furthermore, as the data was obtained from a pre-existing dataset, it cannot be guaranteed that data was accurately inputted, and confidence must be placed in the use of the standardised proforma.

It is important to note that there are some methodological limitations of using child protection data, or data from assessments of parents who are involved in childcare proceedings. In the present study, it is important to acknowledge that database used is a skewed sample by virtue of the fact that it contains families who underwent court proceedings. Allen (1995) identified that, whilst parents with IDD have often been regarded as incapable of providing adequate parental care, the samples used in previous studies have often used individuals who have been identified as needing support and are therefore likely to already be at risk. For example, some family types, such as single parent families, are more likely to come to the attention of child protection services than other types of families (Cawson, 2002). Therefore, results should be interpreted accordingly. Accessing parents via other routes, such as women's refugees or shelters is likely to yield different risk variables compared to the population explored in this study. The research findings should be interpreted in light of the nature of the sample studied, that is parents undergoing legal childcare proceedings in England and Wales.

The current research study lacked control groups of parents with and without IDD who had not been referred for child maltreatment. This limits the interpretation and generalizability of the present findings. Samples more representative of the general population, such as groups of non-maltreating parents with and without IDD are needed as comparison groups in order to accurately determine group differences in terms of risk factor variables. The inclusion of comparison groups would also have helped to identify protective factors, addressing the question of why some parents go on to maltreat their children whilst others with the same risk factors do not.

With the absence of comparison groups, such as maltreating parents who were not currently involved in childcare proceedings, or parents with IDD who were

receiving community support, a caveat of the current analysis is that the identification of risk factors associated with child maltreatment may be an underestimation, due to the extent of child maltreatment that has not been brought to the attention of child protective services. The inclusion of samples from alternative sources may affect the observed differences in risk factors between groups, and may indicate that the risk factors identified in the present study are representative of risk associated with being reported for child maltreatment, rather than maltreatment itself.

The findings of the present study were based on maltreatment perpetrated against a wide age range of children, from two months old to seventeen years old. This is problematic as researchers have indicated that the likelihood of child maltreatment may differ according to a child's age (Mraovich & Wilson, 1999). Accounting for child age is particularly important when making comparisons between parents with and without IDD. The age of the child is likely to present an array of challenges for parents with IDD, especially where the child's level of intellectual functioning exceeds the parents', but also in the early stages of parenting when adjustments must be made following the birth of the baby. Therefore, it would be beneficial for future research to identify the differential impact of risk factors for parents with and without IDD depending upon child age.

Another important limitation of this study is that, despite including both male and female perpetrators of child maltreatment, which is an advancement of previous literature, the gender of the perpetrator was not controlled for within the analysis. It may be that mothers would have different risk variables associated with child maltreatment than fathers, as previous research has indicated gender differences in risk variables (Feldman et al., 2002). Therefore, this would be an avenue for further research, as although the present study has indicated that parents with IDD may

require differential and specialised treatment from parents without IDD, mothers with IDD may also warrant different treatment to fathers with IDD, and this distinction is important in terms of child protection.

Despite these limitations, the present study has contributed to an emerging literature on risk factors associated with child maltreatment. The findings suggest that parents with IDD may warrant differential clinical concern to parents without IDD. The present findings suggest that services that address employment, insight, anger, emotion regulation, parenting skills as well as mental health difficulties may be important in effectively addressing the psychosocial needs of parents with IDD. Alternatively, parents without IDD are likely to require more support in the form of addressing their criminal tendencies.

Implications and Further Research

An accumulation of risk factors may be the most important concern when understanding pathways to child maltreatment, and the present study has highlighted that the accumulation of factors may differ depending upon the parent's level of intellectual functioning. Approaching further research on child maltreatment with a cumulative risk framework is likely to advance our understandings of these constructs and how they differ depending upon parental IDD. The next fundamental step is to identify and develop practical approaches to integrate the distinctions found between groups into practice, policy and treatment of child maltreatment. Although child protective services have made considerable advances in integrating with other services, they still experience difficulty when faced with families with an amalgamation of complexities (Moles, 2008; Murphy, 2010). It is crucial that efforts

are placed in building expertise in the identification and response to a variety of child maltreatment risk factors.

Implications for practice. The findings of the present study have considerable significance for both practitioners and researchers. For practitioners, the findings highlight the need to assess a number of risk factors as this may assist in the identification of children who are at high risk of maltreatment. Not only will such identification allow preventative efforts to be focused on where they are most needed, it will also provide useful indications of possible causes of maltreatment. Similarly, results indicate that researchers will need to assess a range of risk factors in order to achieve a broader understanding of the causes of maltreatment for parents with and without IDD.

As a result of the current findings, a more comprehensive understanding of risk factors associated with child maltreatment for parents with and without IDD may raise 'red flags' that should be regarded as warning signals to indicate the need for further assessment or referrals. Conversely, the findings also aid both practitioners and researchers in identifying risk factors that are most commonly associated with child maltreatment perpetrated by parents with and without IDD, which may consequently reduce the amount of risk factors that require assessment.

Whist the ecology of child maltreatment is broad, results indicate that parental IDD should not be overlooked in understanding the aetiology or in implementing preventative measures. The findings support previous research conducted by McGaw (2000) who suggested that parents with IDD require specialist support. In order to assist parents with IDD with their parenting role, parent training programs have been developed, and have been evaluated in the research literature (Heinz & Grant, 2003;

Feldman & Case, 1999; McGaw et al., 2002), however the findings of the effectiveness of these programmes has been unsubstantiated. In terms of programmes aimed at parents with IDD, the focus has been on ensuring that the material being covered during these programmes is applicable to real world situations (Hur, 1997) due to difficulties that individuals with IDD may have with abstract thinking. Research has suggested that the best methods of parent training, and those with highest rates of success are those that are conducted within the home, as opposed to training delivered externally (Hur, 1997, Llewellyn, McConnell, Russo, Mayes & Honey, 2002). Going forth, the results of the present study should be interpreted in light of previous research to ensure that interventions are delivered in an appropriate manner. It is important that treatment is accessible and tailored to the individual needs of the parent with IDD (Morris, 2003). Research has indicated that parents with IDD benefit most from behavioural-based interventions (Wilson, McKenzie, Quayle & Murray, 2014) and interactive forms of training with an emphasis on repetition (Hur, 1997; Feldman & Case, 1999).

Given the considerable differences in risk variables between the two groups, interventions catering for general child maltreatment may not be sufficient and thus tailored treatment is required to address specific needs (Seagull & Scheurer, 1986). The efforts of child welfare services in treating child maltreatment, or recognising risk factors in order to prevent it occurring in the first place could be sabotaged when the focus is on addressing risks that are not present. Whilst this study does not intend to minimise the importance of interventions addressing parenting skills, the brief versions of these interventions that are commonly being used by child welfare services (Barth et al., 2005) are unlikely to address the general risk profiles of maltreating parents with and without IDD.

Recognition of risk factors for child maltreatment based on parental IDD can ensure that more supportive services are provided for parents experiencing significant difficulties. The findings highlight the need for practitioners to be aware of the role of various correlates of child maltreatment, as well as the need for collaboration between child and adult mental health and social services (Maitra & Jolley, 2000). Reder and Duncan (1999) have highlighted the need for such interagency collaboration in meeting the varied and specialised needs of the client. In exploring care in the community, the Royal College of Psychiatrists (2002) have identified an increased number of adults being treated for mental health difficulties living with their children, and recognise the need for psychiatrists to liaise with other services. For example, primary care health visitors should be informed of parental risk profiles for child maltreatment and should be encouraged to deliver early intervention or make referrals for further assessment to appropriate services accordingly, to reduce the potential of child maltreatment in high-risk families. Case planning should also include services that are equipped to address the multiple issues present in these families.

Future research. Based on the present findings, evaluation of parental problems, child vulnerabilities and family factors, as well as the implementation of services that address these problems is important. Additional research should address programmatic interventions targeting at-risk groups of parents with and without IDD. If there is a lack of resources for parents with IDD, or if current programs are shown to be ineffective, it will be important to aim research towards creating new treatment programs specific to the needs of those parents. On the other hand, if the programs are found to be effective, then research aimed at dissemination and implementation will be essential. Since in this study, certain variables were found to be significantly more

present in parents with IDD and some were more present in parents without IDD, future research aimed at looking more closely at these variables and why each group experienced a higher prevalence of certain factors would be useful. Further, as it is unclear whether risk factors were contributing factors or consequences of the perpetration of child maltreatment, future research may help in clarifying the direction of the correlates. Whilst a strength of the current study was that the data had been sourced over a period of 11 years, which increases the reliability of findings, future research would benefit from the use of a larger sample of parents with and without IDD in order to more powerfully indicate the possibility of group differences in risk factors for child maltreatment. It would be useful for future research to identify the relative contribution and the predictive effects of each risk factor for child maltreatment, controlling for certain factors to see how each factor, or domain of factors, contribute. Future research should also seek to incorporate more risk variables related to the exosystem and macrosystem levels, as the current study did not allow for these variables to be measured thoroughly.

Though the present study relied on an IQ measure of intellectual functioning, future research should also make use of direct assessments of parenting skills and parenting knowledge. As intellectual deficits vary from person to person, relying on an IQ assessment does not take into account the individuals ability to adapt to their environment and also does not recognise their social functioning, both of which are important factors in determining parenting ability.

Conclusion

The present study identified an array of data pertaining to 204 parents referred to a parenting assessment service following reported child maltreatment in an effort to

explore the ecological correlates of child abuse and neglect, differentiating parents with IDD from those without IDD. The study offered a new perspective of risk variables, and found that many factors previously found to be associated with the perpetration of child maltreatment were confirmed in the study. Some correlates of child abuse and neglect were more apparent in parents without IDD, whilst other risk factors were more evident in parents with IDD. There were also commonalities between groups.

It is evident that important distinctions exist between risk variables for child maltreatment of parents with and without IDD, however it is hoped that the findings of the current study shift the focus away from a presumption of incompetence to a focus on addressing these particular vulnerabilities. It is anticipated that these findings will contribute to the literature and help guide programs and future research when working with families who experience violence. To understand the aetiology of child maltreatment, it is important to keep in mind that there is no single cause; rather, multiple and interacting factors at the individual, familial, community, and societal levels contribute to child maltreatment (Belsky, 1980).

The present exploratory study identified correlates specific to maltreating parents with and without IDD, indicating the potential for distinct aetiologies, processes or consequences. Practitioners in the field of child protection may benefit from increased understanding of the processes and characteristics involved with maltreatment according to parental intellectual functioning. However, whilst an identification of risk factors and characteristics may be suggestive of an increased likelihood of child maltreatment, these correlates do not provide information regarding individual cases, and should be treated cautiously in assessing child custody case outcomes. Acknowledging correlates may be useful in other ways, such as to

signal to practitioners particular problems that may be occurring, which can consequently be addressed through treatment or referral to alternative services. Although the direction of these correlates and the nature of the relationships are unclear, these risk factors still remain important and can be enquired about, and subsequently addressed when planning interventions.

An integrative intervention is called for to end child maltreatment. Treatment for children suffering from child maltreatment as well as treatment for parents with a range of risk variables should be considered. Training for assessing effective responses to child maltreatment is necessary for child protective service workers who should be aware of the interconnections between various risk variables and child maltreatment, dependent upon parental intellectual functioning. Intervention with the consideration of parental IDD should therefore be implemented to ensure that the treatment parents receive is tailored to their needs.

The following chapter draws on one of the identified risk factors for child maltreatment, parenting stress, and provides a critique of the Parenting Stress Index.

CHAPTER FOUR:

Critique of a Psychometric Assessment – Parenting Stress Index (PSI-3)

INTRODUCTION

Psychometric testing is a key aspect in applied psychology (Cohen, 2005). Whilst subjective judgement can be biased, psychometric tests objectively measure variables and can help to reduce errors (Butcher, 2002). However, the use of psychometric measures within forensic assessments has long been a topic of debate (Heilbrun, 1992) with critics questioning the validity and applicability of tests with forensic samples (Ziskin, 1981).

With regard to child custody evaluations, ethical dilemmas are often at the forefront, with conflict between parties and the emotional nature of the cases creating difficulties (Bow & Quinnell, 2001). Due to the impact that expert psychological evidence can have on the individuals involved, it is vital that psychometric measures are both valid and reliable, and are also theoretically and psychometrically adequate (Ackerman & Kane, 1998). A study conducted by Quinnell and Bow (2001) revealed an increased use of psychometric measures related to parenting. This chapter offers a critique of the Parenting Stress Index (PSI; Abidin, 1995), a psychometric measure that is often used in the assessment of parents in childcare proceedings (Allison, 1998).

Parenting Stress

Parental stress is a risk factor that has gained considerable attention in the abuse literature (Barton & Baglio, 1993; Begle, Dumas & Hanson, 2010; Chan, 1994; Rodriguez & Green, 1997) and has been identified as a risk factor for child maltreatment (Barton & Baglio, 1993; Chan, 1994; Rodriguez & Green, 1997; Taylor, Guterman, Lee & Rathouz, 2009; Webster-Stratton, 1988). According to Webster-

Stratton (1988), high levels of parental stress have been found to be associated with controlling and abusive parenting and parental vulnerability (Abidin, 1990). A relationship has also been found to exist between parental stress and a child's adjustment (Abidin, Jenkins & McGaughey, 1992; Zakreski, 1983) and parent health (Brummelte, Grunau, Synnes, Whitfield & Petrie-Thomas, 2011; Deater-Deckard, 2004; Spiegelhoff & Ahia, 2011).

Researchers have suggested that high levels of stress within the home can contribute to increased levels of conflict between family members and can also affect the extent to which family members can cope and/or seek support (Bardi & Borgognini-Tari, 2001; Tucker & Rodriguez, 2014). Whilst research has shown that a high level of parental stress is associated with child maltreatment, studies have also identified a link between stress and IPV (Lee, Perron, Taylor & Guteman, 2011) and marital dissatisfaction (Arena, 1989; Lavee, Sharlin & Katz, 1996). Following a meta-analytical review, Erel and Burman (1995) reported a relationship between marital conflict, distress and parent-child relationships. Additionally, researchers have demonstrated that victims of IPV may consequently engage in child maltreatment due to an inability to manage parental stress (Coohey, 2004; Renner & Slack, 2006).

Parental stress has been assessed by a number of measures, including both general measures of parenting stress, such as the PSI (Abidin, 1995) and the Parental Stress Scale (PSS; Berry & Jones, 1995), and more context specific measures, such as the Family Stress Scale (FSS; Quittner, Glueckauf & Jackson, 1990; Quittner, Steck & Rouiller, 1991).

The Parenting Stress Index – Third Edition (PSI; Abidin, 1995) has been identified as the most widely used measure of parenting stress (Perminas & Viduoliene, 2013), with Ackerman and Ackerman (1996, 1997) and Quinnel and Bow

(2001) having acknowledged that the use of this measure has increased. The PSI was devised to be an objective psychometric measure, providing statistical data on the identification of parent-child problem areas. The author of the PSI (Abidin, 1995) suggested that it was important to be able to identify parent-child systems that are under excessive stress as this could feed into preventive programmes aimed at early identification and intervention. The measure has also been used as a tool for treatment planning as it helps to identify problematic areas that the parent finds to be stressful, allowing practitioners to target treatment in these areas (Abidin, Austin & Flens, 2013).

The PSI has frequently been used in cases of child maltreatment and custody evaluations and has been identified as a useful source of data for childcare proceedings (Condie, 2003; Dyer, 1999), as the focus is on factors related to the parent and child which may indicate dysfunctional parenting (Abidin, 1995). The PSI has also been used in relation to research on parenting children at risk (Holden & Ritchie, 1991; Webster-Stratton & Hammond, 1988). However, the PSI has come under scrutiny by researchers such as Berry and Jones (1995) who have argued that the PSI creates a discrepancy between reports by mothers and fathers. The PSI has also been scrutinised by other researchers who suggest that a single measure of parenting stress does not encapsulate the complexity of parenting stress (Deater-Deckard, 1998). Nonetheless, as stress has been identified as a risk factor for child maltreatment, the PSI has been selected for this critique, due to its attempts to identify stress in the parent-child relationship.

Whilst the PSI is currently in its fourth edition (PSI-4; Abidin, 2012), the third edition will form the basis of this critique, as this was the version that was used in the research project of the current thesis. As the PSI-4 is a relatively new edition, there is

also a lack of research regarding its reliability and validity. However, it is important to note that the PSI-4 retains the original structure of the PSI, but has been revised to improve the psychometric characteristics of individual items and to update item wording. Validity studies have also been provided which suggest that the PSI-4 is valid for a variety of foreign populations. The PSI-4 also has new norms, presented as percentiles and *T* scores, for both mothers and fathers, organised by each year of child age.

OVERVIEW OF THE PSI

The PSI was designed based on the concept that parental stress results from a combination of significant child characteristics, parent characteristics, family context and life stress, and as such, was developed to assess these components of the parent-child dyad (Grisso, 2002). The development of the PSI was directed by a number of assumptions. Firstly, it was assumed that the assessment tool would be developed on the existing knowledge base. Secondly, it was assumed that the PSI would integrate existing knowledge with clinical issues of identification and diagnosis of individual parent-child systems under stress. It was also assumed that stressors or sources of stress are additive, and multidimensional. Consequently, three components were created to form the PSI, encompassing child characteristics, parent characteristics and life stress.

Abidin (1995) recognised that improvements were to be made of earlier versions of the PSI. The third edition was created to permit easier hand scoring and to reduce the length of the 150-item instrument. Correlations between each test item and each domain scale were gathered in order for a decision to be made regarding which items were suitable to remain in the PSI. Obtaining these correlations allowed the test author to identify consistency between the test item and the given domain, and also highlighted the capacity of the items to discriminate between individuals with varying levels of the attribute.

The PSI – Third Edition is a self-report questionnaire consisting of 120 items that focus on two domains: Child Domain and Parent Domain. There are an additional optional nineteen items measuring Life Stress. The Child Domain consists of six subscales (Distractibility/Hyperactivity, Adaptability, Reinforces Parent,

Demandingness, Mood and Acceptability), whilst the Parent Domain consists of seven subscales (Competence, Isolation, Attachment, Health, Role Restriction, Depression and Spouse). In terms of the Life Stress scale, discretion is given by the administrator as to whether the respondent is required to answer the additional items. It should be noted that the subscales of the PSI are specifically related to parenting. For example, unlike other assessments that measure general depression, the depression subscale on the PSI is associated with the parenting role, and is therefore likely to have a weaker association with a diagnosis of clinical depression than perhaps a general measure of depression would (Abidin et al., 2013).

The PSI has a Defensive Responding scale, which indicates a parent's attempt to respond in a defensive manner. The inclusion of such a scale is something that has been recommended as an important part of psychometric testing (Otto, Edens & Barcus, 2000). The Defensive Responding scale of the PSI consists of fifteen items, sporadically placed throughout the subscales of the Parent Domain. A respondent is considered to have responded defensively to the test if they achieve a score of twenty-four or above on this scale, and their results should consequently be interpreted with caution.

The PSI should be completed by a parent, regarding a single child. In terms of administration, respondents are provided with an item booklet, answer sheet, and a pen or pencil. Respondents are asked to provide basic demographic information and are instructed to respond to each of the test items on a Likert scale by circling the answer sheet SA (*strongly agree*), A (*agree*), NS (*not sure*), D (*disagree*) or SD (*strongly disagree*). Participants are prompted for alternate methods of responding where appropriate. For example, certain test items require the participant to select a response from one to five and the Life Stress scale requires a dichotomous response

style. A number of test items are descriptive in nature and assess whether the child engages in specific behaviours, whilst other items relate to the effect of the child's behaviour on the parent, and whether the child's behaviour is as the parent expected.

In terms of scoring, the subscales form separate Child Domain and Parent Domain scores, and are also combined to form a Total Stress score, with the exclusion of the Life Stress scale. Raw scores on these scales are then converted into percentile scores based on data from the original normative sample. If a respondent has not answered all items, domain and subscale scores can still be calculated, though scores must be interpreted with caution. Scores should not be calculated in cases where more than three items are missing from either the Parent Domain or Child Domain, more than one item is missing from a subscale, or more than five items are missing in total (excluding the Life Stress scale). As the PSI is based on a parent's perception of themselves, their child and situational factors, it should be interpreted in the context of other sources of information regarding the parent and child, and not used as an isolative measure, to ensure that inaccurate conclusions are not made. Although the PSI is focused on preschool children, it can be used with parents of children up until the age of twelve. However, it should be noted that the paternal normative data is only applicable to fathers with children between the ages of one month to six years.

Scores at or above the 85th percentile on the Total Stress scale require closer examination of the individual Child Domain, Parent Domain and Life Stress scores in order to identify the origin of the stress. However, it should be noted that a parent could obtain a Total Stress score that falls within the normal range (15th to 85th percentile), but may still have elevations on individual subscales. High scores in the Child Domain (85th percentile) are suggestive of children who display qualities that make it difficult for parents to fulfil their parenting role. Similarly, high scores in the

Parent Domain (85th percentile) indicate that the dysfunction of the parent-child system may be due to dimensions related to the parents functioning. For respondents who also complete the optional Life Stress scale, scores are provided regarding the amount of stress that the respondent experiences outside of the parent-child relationship. High scores on this domain (85th percentile) are indicative of parents who find themselves in stressful situations that are often beyond their control.

Administration of the PSI can take approximately 20 minutes. Clinicians and researchers who regularly use the PSI requested the development of a validated tool that measures stress in the parent-child relationship, which can be administered in less than 10 minutes. Subsequently, a short form of the PSI-Short Form (PSI-SF; Abidin, 1995) was developed. This shorter version of the PSI is a direct derivative of the full version, consisting of thirty-six items that have been directly taken from the PSI. The PSI-SF consists of three subscales (Difficult Child Temperament, Dysfunctional Parent-Child Interaction, and Parental Distress), which form a Total Stress score when combined. The PSI-SF has good test-retest reliability, ranging from .84-.91 for Total Stress (Abidin, 1995), however Abidin (1995) has stated that there is a lack of literature regarding validity of the PSI-SF. Nonetheless, the Total Stress score of the PSI-SF correlates with the Total Stress score of the full PSI, which suggests that the validity scores are likely to be similar (Abidin, 1995).

CHARACTERISTICS OF THE PSI

According to Kline (1986), a good psychological test must include data that is at least interval level, and should be reliable and valid, with appropriate norms. The level of measurement used in the PSI is ordinal level data. Participants are asked to rate, using a Likert scale, how much they agree or disagree with a statement. There is no objective distance between any two points on the scale, and therefore, the scale only allows for interpretation of gross order, not the relative potential distances between the points on the scale (Field, 2009).

The PSI is a well-established measure of parenting stress and has been used in a variety of published studies. Studies using the PSI include use of the measure with special populations such as parents of autistic children (Donenberg & Baker, 1993), cross-cultural studies (Perez, 1989), battered women (Holden & Ritchie, 1991) and depressed parents (Gelfand, Teti & Randin Fox, 1992; McBride, 1989). The PSI has also been translated into various languages and has been used with individuals of Chinese, European, Italian, Portuguese, Latin American Hispanic, French-Canadian and Swedish decent (Hofecker Fallahpout, Benkert, Riecher-Rössler & Stiieglitz, 2009; Lacharite, Ethier & Piche, 1992; Solis & Abidin, 1991; Sperry, 2004; Tam, Chan & Wong, 1994; Zaad, Hermans & Feltzer, 2004) and has demonstrated comparable psychometric properties to that of the original PSI. This suggests that the PSI is a robust tool that maintains its validity with non-English-speaking cultures.

The PSI is a self-report measure, which makes administering the assessment easier. With regard to the sensitive nature of the topic, researchers have found there to be higher rates of disclosure of physical violence and abuse of children with the use of self-report assessments, and has found self-report data to be a significant source of

information (Knudsen, 1992). Accordingly, parents may be more honest with disclosing levels of stress using a self-report measure. However, as with any self-report measure, issues arise regarding social desirability bias as the respondent may under-report in order to minimize their problems. This is problematic when using the PSI in child custody evaluations, as participants who are asked to respond to items regarding their parenting, and issues related to the parent-child relationship, may respond dishonestly out of fear that their child will be removed from their care, or because they do not want to appear to be inadequate parents. However, as mentioned earlier, the PSI does include a validity scale (Defensive Responding scale) that indicates whether the parent has attempted to respond in a defensive manner, which should help to address these issues regarding self-reporting. Nevertheless, it should be noted that Milner and Crouch (1997) suggest that the validity scale of the PSI may not be as useful in detecting invalid responses as other measures, such as the Child Abuse Potential Inventory (CAP; Milner, 1986), and therefore Heinze and Grisso (1996) suggest that indicators of stress should be further explored verbally. Alternatively, another issue with using self-report measures is that respondents may be mistaken or may misinterpret items, which would consequently cause implications with the results.

Reliability

Internal reliability. Internal reliability refers to the extent to which a measure is consistent within itself, and whether test items are measuring the same thing. To see how well items loaded onto each scale of the PSI, alpha reliability coefficients (Cronbach, 1951) were calculated. In order for a test to be deemed adequate, a

minimum coefficient score of .70 is required (Wells & Wollack, 2003). Results from a study conducted by Abidin (1995) on the PSI demonstrated that the coefficients were sufficiently large, ranging from .70 to .95, indicating a high degree of internal consistency. These results were based on a normative sample of 2,633 parents. It is important to note that the original normative sample consisted entirely of mothers and therefore, despite the large sample size, the results cannot be applied to fathers. However, subsequent studies have also provided evidence for the internal consistency of the PSI (Hutcheson & Black, 1996; Loyd & Abidin, 1985).

Evidence has also been established for the cross-cultural use of the PSI and the use of the PSI for diverse populations that are vastly different from the original normative sample (Abidin, 1990). As part of a cross-cultural validation study outside of the United States, Hauenstein, Scarr and Abidin (1987) administered the PSI, to a sample of 435 parents and all scales were found to be acceptable (.71-.95), except for Mood (.59) and Reinforces Parent (.63) in the Child Domain, and Attachment (.62) and Health (.57) in the Parent Domain.

In a study of French-speaking parents, the PSI was translated and normed on a sample of 377 parents with results indicating alpha reliabilities that were very similar to those reported in the original PSI (Bigras, LaFreniere & Abidin, 1996). These results indicate the PSI has cross-cultural reliability. The PSI has also been used on samples that vary from the normative sample in terms of ethnicity, socioeconomic class, child age and child disability and results have indicated comparable alpha reliabilities to those of the normative sample (Innocenti, Huh & Boyce, 1992; Solis & Abidin, 1991).

Test-retest reliability. Test-retest reliability measures the consistency of a psychological test across time. It is measured by administering a test more than once, at different points in time, using the same subjects. Difficulties may arise with assessing test-retest reliability of the PSI as it is based on statements relating to thoughts and feelings, which are prone to changing across time. Test-retest reliability of the PSI has been examined in several studies ranging from a retest period of three weeks to one year (Burke, 1978; Hamilton, 1980; Zakreski, 1983). These studies have used samples ranging from 15 to 54 participants, and have yielded correlation coefficients ranging from .55 to .96. Hutcheson and Black (1996) reported low to good test-retest reliability over a six-month retest period with a sample of 110 African-American mothers (i.e. .60 for the Child Domain, .38 for the Parent Domain and .70 for the Total Stress score). However, as with internal reliability, it should be noted that test-retest reliability has only been conducted on samples of mothers.

Validity

Face validity. Face validity relates to whether a test appears to measure what it is set out to measure. Although this is the more obvious form of validity, a test may have good face validity but may not actually achieve good validity. The original PSI test items were developed following a literature review, and from items that the test author considered to be relevant to parent-child interactions. Following the formation of the list of items, a pilot study of 208 mothers of children under the age of three were recruited from well-child paediatric visits. In order to test the face validity of the measure, six professionals working in the field of parent-child relationships were asked to rate each item for the relevance of content and adequacy (Abidin, 1995;

Loyd & Abidin, 1985) and the final list of items was then formed, indicating good face validity.

Scale development is one of the PSI's strengths as various processes were completed in order to develop the test items. Although face validity is arguably the weakest form of validity, when used as a supplemental form of validity, it can have its advantages, such as encouraging participants to take part if they feel that the items are relevant and are measuring what they should be.

Concurrent validity. Concurrent validity refers to the extent that the psychometric measure correlates with other instruments that are aimed at measuring the same construct. A study by Östberg, Hagekull and Wettergren (1997) measured parental stress in a sample of mothers with children between six months and eighteen months of age. Using a global measure of parental stress made on a visual analogue scale (0 = no stress and 10 = very high level of parental stress) alongside the PSI, findings suggested that the measures were positively correlated, suggesting that the PSI is a reliable and valid measure of parental stress. In a separate study, the PSI was also administered alongside the Parental Stress Scale, and the Perceived Stress Scale (PSS; Cohen, Kamarck & Mermelstein, 1983), with results indicating consistency across scales ($r = .75$, $p < .01$) (Berry & Jones, 1995). However, despite the study indicating good levels of correlation, it should be noted that the researchers used a small sample, which largely consisted of parents with a high income. Rodriguez and Murphy (1997) also found high levels of correlation between the PSI and the CAP Inventory (Milner, 1986) ($r = .74$, $p < .001$), however their study utilised a small sample size, based on developmentally delayed children of a higher age range than the norms of the PSI, indicating a flawed methodology.

Predictive validity. Predictive validity measures how well a test predicts future performance. For a test to have predictive validity, there must be a statistically significant correlation between test scores and the criterion being used to measure validity. The author of the PSI identified that the development of a tool that could identify excessive stress in the parent-child relationship could help to inform prevention and intervention programmes. However, it is important to note that the PSI was designed as a screening and diagnostic assessment, and not designed to be a predictive measure. The robustness and validity of the PSI has been evidenced in the research literature (Abidin, 1990).

Researchers have found good predictive value of the PSI for later parent-reported behaviour problems, suggesting that the PSI is useful as an early screen for children at risk of behavioural problems, particularly internalising problems (Goldberg et al., 1997). The PSI has also been found to have good predictive value for future problems related to a child's behaviour and emotions (Ashford, Smit, van Lier, Cujipers & Koot 2008) as well as identifying problematic areas and strengths within the parent-child system (Johnson, Franklin, Hall & Prieto, 2000; Simon, Murphy & Smith, 2005). Additionally, Cowan and Cowan (1986), in a study of marital satisfaction and self-esteem, found that over a six-month period, low self-esteem and high levels of life stress were predictive of fathers' parenting stress.

PSI scores have also been found to have good predictive value for the maltreatment of children (Greenley, Holmbeck & Rose, 2006; Holden, Willis & Foltz, 1989; Lacharite, Ethier & Couture, 1999). The measure has also been cited as a useful tool in legal proceedings regarding child custody (Condie, 2003; Dyer, 1999) as the measure helps to identify sources of stress within the family system that

hypothetically relate to actual or likely child maltreatment (Abidin et al., 2013). Particularly in complex child custody cases, where there are other risk factors involved, such as IPV, mental illness or substance abuse, results from the PSI can help to identify the impact that this may have on the parent-child relationship (Abidin et al., 2013).

Content validity. Content validity refers to whether a test includes all aspects of the construct being measured. Researchers have indicated that the PSI appears to have good content validity due to the way that the tool was developed, based on a review of the general and specific literature, guided by clinical expertise, and piloted by a panel of professionals (Marchetti, 2008). Bigras et al. (1996) have also indicated that the PSI has content validity as they report that PSI scores were predictive of eight known risk factors. Furthermore, the two-factor solution of the original sample has been confirmed in Portuguese and Lithuanian translations of the PSI (Abidin & Santos, 2003; Perminas & Viduoliene, 2013).

However, in a Swedish version of the PSI, researchers suggested that improvements could be made to the content validity of the PSI (Östberg et al., 1997). Östberg et al. (1997) suggested that the majority of subscales did not load above .50 in both the Child Domain and the Parent Domain. Despite this, Östberg et al. concluded that the PSI is a valid and reliable tool and is therefore regarded as having good content validity.

Construct validity. Construct validity refers to a tests ability to measure the psychological concept being studied. Abidin (1995) investigated the construct validity using a three-factor analysis (i.e. Child Domain, Parent Domain and Total Stress) with

a sample of 534 clinic referred and non-clinic referred mothers. A varimax rotation criterion was used on each of the thirteen subscales. Following the analysis, a two-factor solution was obtained, which accounted for 58% of the variance (Abidin, 1995; Loyd & Abidin, 1985). The results suggest that each subscale is measuring a moderately distinct source of stress. However, it should be noted that the sample size used was not sufficient for a factor analysis and the results should therefore be treated with caution (Ehrlich, 2008).

The PSI manual cites a mass of research that relates to the construct validity of the PSI with a wide variety of populations including children with developmental and behavioural issues, children with disabilities, at risk families, and families from a range of ethnic backgrounds. These studies indicate that the PSI has construct validity, however, Conoley and Kramer (1989) have suggested that the PSI does not measure the construct of stress nor does it measure the potential for child maltreatment. Additionally, concerns regarding the factor structure of the PSI have been raised, such that many test items on the subscales of the PSI do not substantially load on the underlying dimensions and some test items also translate to other subscales (Grisso, 2002).

Criticism relating to construct validity of the PSI notwithstanding, the validity of the measure has been well established (Grisso, 2002). For example, research has indicated that the scales and subscales of the PSI correlate with other theoretically relevant constructs that are hypothesised to correlate with stress, such as maternal depression (Webster-Stratton & Hammond, 1988), child abuse potential (Holden, Willis & Foltz, 1989) and infant attachment (Teti, Nakagawa, Das & Wirth, 1991). The construct validity of the PSI has also been examined in the areas of child development, marital problems and parenting (Marchetti, 2008). In a study conducted

by Adamakos, Ryan and Ullman (1986) relating to predictive factors of stress in the assessment of risk of child maltreatment, results indicated that low scores on the Parent Domain were related to social support. Additionally, the PSI has been correlated with a variety of other psychometric tools measuring the same construct. For example, using the Beck Depression Inventory, Breen and Barkley (1988) found significant correlations with several scales of the PSI. Significant correlations have also been found between the Child Behaviour Checklist and the subscales of the Child Domain of the PSI (Lafiosca & Loyd, 1986). The PSI appears to be a useful measure, holding its construct and predictive validity even after translation. As mentioned previously, studies using translated versions of the PSI have also supported the two-factor solution of the original PSI (Abidin & Santos, 2003; Perminas & Viduoliene, 2013).

Evidence for the discriminant validity of the PSI has also been established. Researchers have found that PSI scores can distinguish stress in several areas such as developmental issues, and parent-child issues (Nair, Schuler, Black, Kettinger & Harrington, 2003; Ross, Blanc, McNeil, Eyberg & Hembree-Kigin, 1998). For example, the PSI has differentiated levels of stress in all areas related to parenting stress between mothers of children with a developmental disorder compared to mothers of healthy children (Perminas & Viduoliene, 2013). Analysis of the PSI conducted by Bigras et al. (1996) also demonstrated discriminant validity, as their results showed a lack of correlations between scales that were not theoretically expected to correlate with parenting stress.

It should also be noted that confidence intervals are not provided for the PSI, which may limit the ability to provide sound expert witness testimony in such cases of childcare proceedings. Thus, further research on errors of measurement and the

applicability of the PSI in this area would be useful. However, it has been suggested that the PSI has good sensitivity and specificity (Measure Profile, 2011) and is sensitive to changes resulting from intervention across a variety of populations and treatments (Kuendig, Ippen & Mayorga, 2005; Lacharité et al., 1999; Reder, Duncan & Lucey, 2003).

Normative Samples

A normative sample is presumed to be representative of the entire population of potential test takers. The normative sample of the PSI is one area that has been criticised. The standardisation sample of the PSI contained only female caregivers primarily recruited from paediatric clinics in central Virginia, which restricts the applicability of the norms of the test to female caregivers. The PSI manual also includes data gathered from a normative group of 200 male caregivers, however, this data only applies to male caregivers of children aged one month to six years, and does not form part of the data used to profile results. Therefore, the percentiles are based on the sample of 2,633 female caregivers of children aged one-month to twelve years. As Allison (1998) highlights, this is problematic and gendered, and Abidin (1990) has also suggested that fathers respond differently to mothers on the PSI. Male caregivers of children aged six months to six years tend to report less parenting stress than female caregivers of such children (Abidin, 1990). Therefore, mothers and fathers should not be compared to each other on the basis of the PSI.

The final normative sample predominantly consisted of middle class Caucasians, however the PSI manual also includes data from a Spanish version of the measure, which is based on a sample of 223 Hispanic parents from New York City.

However, the raw scores from this sample appear to be elevated in comparison to the original PSI.

The normative sample of the PSI is one of the tests limitations as it is effectively a sample that has been gathered as a means of opportunity, with no attempt having been made to match the sample on demographics (Grisso, 2002) or for a stratified sample to have been gathered. Indeed, there is a lack of normed data relating to children in terms of age or gender. This may be problematic, as researchers have suggested that the age of the child (Orr, Cameron, Dobson & Day, 1993), and the child's gender (Scher & Sharabany, 2005), may impact upon levels of parenting stress. Additionally, although the PSI is normed for children from the age of one month, when examining test items, some items appear to be irrelevant to children of this age, such as item six "*My child wanders away much more than I expected"*. However, as previously mentioned, there has been a vast amount of research that has supported the use of the PSI, both transculturally and with diverse populations (Abidin, 1990, Reitman, Currier & Stickle, 2002) and many of these limitations have been addressed in the PSI-4.

Although the PSI has not been normed or developed for its use in at-risk samples, it has increasingly been used for these purposes, such as in samples of battered women (Holden & Ritchie, 1991), negligent mothers (Ethier et al., 1995), parental drug exposure (Kelley, 1992), and teenage parents (Passino et al., 1993). A study by Telleen et al. (1989) also found that their sample of at-risk families, defined as those who were living in a region of high unemployment and increased rates of confirmed child abuse, differed from a control sample on the majority of PSI scales.

The PSI has also been used within forensic samples, childcare proceedings, and with parents charged with child abuse, neglect or non-accidental injury, and is

ever more being used for these purposes in forensic contexts (White, 2005). This is due to its relevance in evaluation and treatment (White, 2005). For example, Mash, Johnson and Kovitz (1983), in a study of physically abusive and non-abusive mothers, found significant differences on all scales of the PSI, which is likely to have implications for its usefulness within civil assessment in childcare proceedings. Similarly, a study conducted by Seagull et al. (1987) found significant differences on several of the Child Domain subscales on the PSI when comparing physically abused Jewish children to a non-abused control group. These findings, as well as factors related to validity and reliability, suggest that the PSI is useful as part of psychological assessment within childcare proceedings where parents face criminal prosecution, as well as civil assessment to determine the outcome of child placement (Reder et al., 2003).

Additionally, although the normative sample of the PSI does not include intellectually disabled parents, the PSI has been used in studies to examine levels of stress in intellectually disabled mothers (Feldman et al., 1997). The results have indicated that parents with IDD experience significantly higher levels of stress in comparison to a control group. This questions the extent to which the normative data can be used with parents with IDD. Future research should look to explore the applicability of the PSI to predicting the occurrence or reoccurrence of child abuse and neglect, in terms of normally functioning parents and those with IDD.

CONCLUSION

The PSI is a widely used psychometric measure of parenting stress that appears to have been developed on sound psychological theory, with test items having been developed on the basis of empirical research (Grisso, 2002). In terms of evaluating the research base of the PSI, difficulties have arisen due to variations in research methodology. Nonetheless, generally, research has indicated that parents who achieve high scores on the PSI are likely to experience increased stress in their interactions with their children. The validity and reliability of the PSI has been supported by a number of studies with accompanying normative data. However, one of the main criticisms of the third edition of the PSI is related to the original normative sample, which has since been updated to include male caregivers.

Whilst the PSI was not developed with the intention of being used in child custody evaluations, it has frequently been used for these purposes. As with any self-report measure, and particularly in forensic contexts and legal proceedings, it should be kept in mind that a parent may be presenting as defensive. Nonetheless, the PSI does include a scale that is proposed to detect a defensive response style, though there has been research to suggest that this scale is not as good at identifying invalid responses as other measures are. Further research establishing the sensitivity of this validity scale would be useful.

In terms of implications for practice, as the tool requires the parent to respond subjectively, results should be interpreted within the research base. For example, in cases of child custody evaluations, the PSI should not be used in isolation and should not be used to propose that a parent is maltreating, or at risk of maltreating, their child. Professionals using the PSI in forensic contexts should be mindful of the tests

limitations, and should also consider factors relating to the client, such as the likelihood of defensive responding. While the test can be accused of being open to 'subjectivity bias', particularly relating to the parents perceptions of their parent-child relationship, where problems exist, implicitly, this may reflect the degree to which the parents expresses insight into the stressors of their parent-child relationship.

One of the main advantages of the PSI is its applicability with a range of diverse populations. As discussed in this critique, the PSI has been used with parents with IDD, and parents and children with behavioural problems, disabilities and mental health problems. It can be used as a screening tool or as an additional source of data in examining the impact of stress on parent-child relationships. The PSI has also been translated into several languages and has maintained its validity with non-English speaking cultures. The diverse and cross-cultural use of the PSI demonstrates its robustness as a measure of parenting stress.

CHAPTER FIVE:

Discussion

DISCUSSION

Presentation of Findings

The purpose of this thesis was to explore factors associated with risk of child maltreatment, within an ecological framework of family violence. The thesis did not aim to provide a causal explanation for child maltreatment but aimed to contribute to an understanding of the range and interplay of risk factors. Chapter two provided a comprehensive review of the current literature, extracting IPV, a recognised risk factor of child maltreatment, and examining the co-occurrence of these forms of family violence. Co-occurrence of child maltreatment and IPV was supported, however rates of co-occurrence varied. The literature review also highlighted a number of methodological issues with research in this area that should be addressed, such as the lack of consistency in definitions of child maltreatment, sampling issues such as obtaining data from at-risk populations, and over-reliance on unsubstantiated reports of violence. Therefore, the findings of these studies may not be totally representative of the population of maltreating parents.

In chapter three, an empirical piece of research was presented examining the under-researched area of parental IDD and associated risk factors for child maltreatment. As there is a lack of research regarding parents with IDD, this factor was isolated in order to investigate variables at each level of the ecological model that are associated with risk of child maltreatment for parents with and without IDD. This research indicated that parents with IDD differed in terms of risk factors associated with the perpetration of child maltreatment. These differences were particularly evident within the individual factors related to the parent, and less so for factors related to the child, family or society, although some differences were found in terms

of child and family factors. Whilst the study did not examine the effectiveness of parenting programmes, these findings may imply that a generic parenting skills programme may not sufficiently address the differential needs of parents with IDD compared to parents without IDD.

Chapters two and three brought light to the need to consider the interplay of various factors in their contribution to child maltreatment, with parenting stress being highlighted as risk factor. As such, chapter four provided a critique of the Parenting Stress Index; a psychometric tool measuring types of stress associated with child maltreatment. The critique highlighted the applicability of the PSI as a robust measure of parenting stress, focusing on parental, child and situational factors, and highlighted research supporting the predictive validity of the PSI for child maltreatment. The critique also identified the practical usefulness of the PSI for evaluating parenting stress within child custody evaluations.

Contribution to Literature

Support has been provided for various risk factors that contribute to child maltreatment, reinforcing the need for professionals involved in child protection to take an ecologically-informed approach to the assessment and treatment of families characterised by child maltreatment.

Previous reviews investigating the co-occurrence of child maltreatment and IPV have often focused on one specific form of maltreatment, or have tended to include studies from populations of victimised mothers and their children, which may create biased results. The review presented in this thesis differs in that it focuses on a wide definition of abuse, inclusive of all forms of child maltreatment and types of

IPV, as well as both male and female victims of IPV. The present review is, therefore, deemed to be a valuable addition to literature in this area.

The literature review indicated that few studies investigated other risk variables as associated with the occurrence of child maltreatment, such as parental intellectual functioning. Therefore, the research presented in chapter three, whilst not specifically focusing on co-occurrence of child maltreatment and IPV, does address some of the limitations of previous studies and attempts to bridge the gap in the literature by focusing on a variety of risk variables that differentiate parents with IDD from those without IDD. The results from this study revealed significant differences between parents with and without IDD. This has highlighted areas of further research, advancing our understanding of risk factors of child maltreatment in this client group.

The critique of the psychometric assessment tool in chapter four may be of use in broadening understanding of the potential utility of the PSI for clinicians and researchers, particularly in relation to child custody cases. It also identified areas for future research, namely the need to establish the sensitivity of the validity scale; to explore the applicability of the PSI to reliably predicting the occurrence or reoccurrence of child maltreatment; and to establish errors of measurement. This would prove useful for being able to place confidence in the use of the tool in terms of providing expert witness testimony in childcare proceedings.

Limitations

As highlighted in each chapter, the thesis is not without limitation. The main limitation of the literature review was that the majority of included studies were primarily from the USA. This may have resulted in skewed findings as child maltreatment may vary depending upon cultural differences. The review also

excluded research that was not written in English, which again may have limited the generalizability of the findings to the Western culture. Had there not been constraints on time, the literature review would have benefitted from a broader search criteria, with the inclusion of cross-cultural research as well as research not written in the English language to increase generalizability. It would also have been useful to include unpublished work to reduce the possibility of publication bias, and to have hand searched through more applicable journals to broaden the search.

In terms of the research study in chapter three, aside from psychometric data, much of the analysis relied upon self-report data and may consequently have been open to socially desirable responding. Further, whilst accounting for both child abuse and neglect, the dataset did not specify the subtype of abuse that had been perpetrated. Having this information available would have allowed for a more thorough analysis. Other limitations of the study included the lack of control over the variables that were available, and the inability to gain further information from participants due to secondary analysis of pre-existing data. The study also lacked a control group of non-abusing parents. In order to look for further differences between abusing and non-abusing parents, future research would benefit from using a control group of parents not involved in childcare proceedings. Further, as the study was not longitudinal in design, no causal interpretations could be made.

The thesis also did not take into account any protective factors that may have mediated risk of maltreatment. Future research would benefit from a full understanding of child maltreatment, in the context of the nature of the interactions between the parent, child, family and environment, identifying both positive and negative contributions. Working on both strengths and risks may be an important strategy to resolve difficulties within families. Future research would also benefit

from investigating differences in risk factors for child abuse compared to child neglect, as risks associated with these distinct types of maltreatment are likely to differ. It is hoped that future research can shed light on the issues that cannot be addressed in the current thesis; however this thesis can serve as a foundation for future research.

Clinical Implications

Within each chapter of the thesis, clinical implications and suggestions for future research have been identified and discussed. Principally, the research presented in chapter three signified that, for interventions to be most effective, specific risk variables needed to be addressed depending upon the intellectual functioning of the perpetrator. Aside from general parenting programmes, parents with IDD may benefit more from interventions that address their difficulties in gaining employment, lack of insight, anger, emotion regulation, parenting skills and mental health difficulties. This is because the findings suggest that these risk variables are significantly more present in parents with IDD than those without IDD. Conversely, parents without IDD may benefit from additional support in addressing their criminal tendencies. As well as population based approaches to interventions, such as parenting skills programmes, targeted programmes that address specific risk factors would be valuable and should be implemented. It may be possible to develop an approach that refines existing evidence-based interventions and incorporates diverse and complex client needs. Therefore, this thesis is of use to clinicians involved in the child protective system.

Practitioners, such as those involved in primary health care, the legal system, domestic violence services, and child and adult services, are in a unique position to identify early signs of difficulties in parents and children that are associated with child

maltreatment, and are also in a position to consider the potential impact of parental vulnerabilities on child welfare. In order to recognise and respond sufficiently to child maltreatment, these practitioners should be well informed of the key risk variables associated with child abuse and neglect. They should also be aware of the differences in pertinent risk factors in families where a parent has IDD. Additionally, practitioners should be aware of the link between child maltreatment and IPV, in the context of other risk factors, and should provide routine screening for such violence within the family.

In terms of implications for research, the thesis identifies a number of potential future avenues. For example, the literature review indicates the need for more research into the relationship between violence within the family and associated risk factors, and the critique supports this, accounting for factors related to the parent, the child and situational factors. The research study highlights the need for future research into the respective contributions of these risk factor domains in predicting child maltreatment perpetrated by parents with and without IDD. Longitudinal research is required to investigate causality of these factors, and further research is needed to establish normative psychometric data for parents with IDD.

It is important to note that, although certain characteristics may be suggestive of risk of child maltreatment, correlates do not indicate causation and do not provide information regarding individual risk. However, the identification of correlates in the current thesis may serve to indicate specific areas of need, particularly differentiating parents with IDD from those without IDD. Although the present thesis did not shed light on the nature and causality of the relationships between risk factors and child maltreatment, these are still factors that signify potential risk for child maltreatment and should be enquired upon and addressed in the planning of interventions.

It is hoped that these findings go some way to altering prejudicial attitudes towards the parenting capacity of parents with IDD. The research suggests that it is not the IDD itself that puts a parent at risk of child maltreatment, but the associated cumulative risk factors that these parents often present with. Many parents involved in childcare proceedings have a multitude of risk factors that are associated with child maltreatment and subsequent involvement in the child protection system. Thus, the findings of this thesis indicate that clinicians and parents should attempt to address this multitude of risk early on. It is hoped that by addressing these risk variables early on, the subsequent likelihood of child maltreatment occurring would be reduced.

Overall, the thesis has demonstrated that, to reliably understand the nature and dynamics of child maltreatment, researchers, clinicians and members of society should consider various factors, as well as the interaction between factors, at each level of the ecological model. In doing so, it is hoped that understanding of child maltreatment will increase, and improvement will also be noted in terms of the effectiveness of interventions for perpetrators of child maltreatment.

Conclusions and Recommendations

The thesis identified correlates to child maltreatment, pointing to possibly distinct aetiologies. Child maltreatment is a complex phenomenon that is influenced by a variety of factors. No singular factor can answer the question as to why parents maltreat their children, but rather consideration must be given to the interplay of several factors at the individual, familial and environmental level. The need for child protective services and welfare agencies to adopt a holistic approach, identifying and addressing risk factors for the abuse and/or neglect of a child at each level of the ecological model is highlighted within this thesis. Therefore, professionals working

with child victims of abuse and neglect should take a broad perspective when assessing and treating families characterised by child maltreatment, including the attributes of the victims and their associated environments, such as the family and wider society. Practitioners should be cautious about making assumptions about the impact of single issues, such as IPV or parental IDD, on risk of child maltreatment. Similarly, it is important that families are not stigmatised on the basis of the presence of certain characteristics that have been found to be associated with child maltreatment.

This thesis supports such an approach and provides and empirical basis which professionals can draw upon to aid in enhancing assessment and treatment programmes, as well as developing training, policies and practice for those working with maltreated children and their families. A degree of understanding of their risk variables is fundamental to working effectively with such parents. Strengthening the need for an ecological approach to violence within the family will encourage practitioners to consider a multi-factorial and holistic perspective, potentially preventing the occurrence or reoccurrence of child maltreatment. It is important for this ecological perspective to be extended nationally and for further research to be conducted internationally to ensure a consistent approach to child protection is implemented. Evidence-based interventions that are flexible to accept adaptation or the introduction of additional modules to allow for case diversity are recommended.

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APPENDICES

APPENDIX 1: SEARCH TERMS AND SYNTAX

PsycINFO

1. (child* adj2 ((abuse and neglect) or maltreat*)).ti,ab.
2. (domestic* adj2 (abuse or violence)).ti,ab.
3. (partner adj2 (abuse or violence)).ti,ab.
4. (famil* adj2 (abuse or violence)).ti,ab.
5. (link* or co-occur* or cooccur* or overlap* or prevalence or associat*).ti,ab.
6. 2 or 3 or 4
7. **1 and 5 and 6**

MEDLINE

1. (child* adj2 ((abuse and neglect) or maltreat*)).ti,ab.
2. (domestic* adj2 (abuse or violence)).ti,ab.
3. (partner adj2 (abuse or violence)).ti,ab.
4. (famil* adj2 (abuse or violence)).ti,ab.
5. (link* or co-occur* or cooccur* or overlap* or prevalence or associat*).ti,ab.
6. 2 or 3 or 4
7. **1 and 5 and 6**

EMBASE

1. (child* adj2 ((abuse and neglect) or maltreat*)).ti,ab.
2. (domestic* adj2 (abuse or violence)).ti,ab.
3. (partner adj2 (abuse or violence)).ti,ab.
4. (famil* adj2 (abuse or violence)).ti,ab.
5. (link* or co-occur* or cooccur* or overlap* or prevalence or associat*).ti,ab.
6. 2 or 3 or 4
7. **1 and 5 and 6**

ASSIA

((child abuse) or (child neglect) or (child maltreatment)) AND ((domestic abuse) or (domestic violence) or (partner abuse) or (partner violence) or (family abuse) or (family violence)) AND ((link) or (co-occur*) or (cooccur*) or (overlap) or (prevalence) or (associat*))

Web of Science

1. TI=(child AND (abuse OR neglect OR maltreatment))
2. TI=(domestic AND (abuse or violence))
3. TI=(partner AND (abuse or violence))
4. TI=(family AND (abuse or violence))
5. TI=(link OR co-occur* OR cooccur* OR overlap OR prevalence OR associat*)
6. #4 OR #3 OR #2
7. **#6 AND #5 AND #1**

Science Direct

TITLE-ABSTR-KEY(((child abuse) or (child neglect) or (child maltreatment))) and TITLE-ABSTR-KEY(((domestic abuse) or (domestic violence) or (partner abuse) or (partner violence) or (family abuse) or (family violence))) and TITLE-ABSTR-

KEY(((link) or (co-occur*) or (cooccur*) or (overlap) or (prevalence) or (associat*)))

APPENDIX 2: INCLUSION/EXCLUSION CRITERIA

	Inclusion	Exclusion
Population	Adult perpetrators and/or victims of domestic violence Maltreated children under the age of 18	Adolescents
Exposure	Risk factor: Domestic violence	Other risk factors associated or not associated with child abuse
Comparator	No risk factors OR Non-domestic violence	N/A
Outcomes	Child abuse, child neglect, child maltreatment or potential child maltreatment	N/A
Study design	Cohort	Opinion papers, commentaries, editorials, non-English papers, unpublished papers, case series designs, treatment interventions

APPENDIX 3: LIST OF EXCLUDED STUDIES

References of excluded studies	Reason for exclusion
Anderson, K. L., Umberson, D., & Elliott, S. (2004). Violence and abuse in families. In A. Vangelisti (Ed.), *Handbook of Family Communication* (pp. 629-645). Mahwah, New Jersey: Lawrence Erlbaum Associates, Publishers.	Book chapter
Angeles, C. M. (1997). Abusive family interaction: A review. *Aggression & Violent Behaviour, 2,* 215-240.	Review
Appel, A. E., & Holden, G. W. (1998). The co-occurrence of spouse and physical child abuse: A review and appraisal. *Journal of Family Psychology, 12,* 578-599.	Review
Ascione, F. R., & Arkow, F. (1999). *Child abuse, domestic violence, and animal abuse: Linking the circles of compassion for prevention and intervention*. Purdue University Press.	Book
Bard, M. E. A. (2013). Prevalence of intimate partner violence in Latin America and the co-occurrence of physical and inappropriate discipline. *Dissertation Abstracts International: Section B: The Sciences and Engineering, 73*.	Population characteristics
Belsky, J. (1988). Child maltreatment and the emergent family system. In K. Browne, C. Davies & P. Stratton (Eds.), *Early prediction and prevention of child abuse* (pp. 267-287). Oxford, England: John Wiley & Sons England.	Book chapter
Bourassa, C. (2007). Co-occurrence of interparental violence and child abuse and its effects on the adolescents' behaviour. *Journal of Family Violence, 22,* 691-701.	Population characteristics
Bourassa, C., Lavergne, C., Damant, D., Lessard, g., & Turcotte, P. (2006). Awareness and detection of the co-occurrence of interparental violence and child abuse: Child welfare worker's perspective. *Children & Youth Services Review, 28,* 1312-1328.	Population characteristics
Browne, K. D. & Hamilton, C. E. (1999). Police recognition of the links between spouse abuse and child abuse. *Child Maltreatment, 4,* 136-147.	Poor quality assessment

Burgess, A. W. & Roberts, A. R. (1996). Family violence against women and children: Prevalence of assaults and fatalities, family dynamics, and intervention. *Crisis Intervention and Time-Limited Treatment, 2,* 65-80.	Unable to access journal article
Capaldi, D. M., Kim, H. K., & Pears, K. C. (2009). The association between partner violence and child maltreatment: A common conceptual framework. In D. J. Whitaker & J. R. Lutzker (Eds.), *Preventing partner violence: Research and evidence-based intervention strategies* (pp. 93-111). Washington, DC: American Psychological Association.	Book chapter
Casanueva, C. E. (2006). Child maltreatment, maternal parenting and use of parenting services among intimate partner violence victims involved with child protective services. *Dissertation Abstracts International: Section B: The Sciences and Engineering, 67,* 208.	Unable to access journal article
Connelly, C. D., Hazen, A. L., Coben, J. H., Kelleher, K. J., Barth, R. P., & Landsverk, J. A. (2006). Persistence of intimate partner violence among families referred to child welfare. *Journal of Interpersonal Violence, 21,* 774-798.	Poor quality assessment
Coohey, C. (2004). Battered mothers who physically abuse their children. *Journal of Interpersonal Violence, 19*, 943-952.	Study design
Cort, N. A. (2008). Processes underlying maternal intergenerational transmission of child maltreatment: The role of attachment insecurity, intimate partner violence victimization and psychological distress. *Dissertation Abstracts International: Section B: The Sciences and Engineering, 69,* 1319.	Unable to access journal article
Daisy, N. V. (2005). The cycle of violence: The role of dissociation in the relationship between child maltreatment and intimate partner violence among urban women with and without a history of substance abuse. *Dissertation Abstracts International: Section B: The Sciences and Engineering, 66,* 2301.	Unable to access journal article
de la Vega, A., de la Osa, N., Ezpeleta, L., Granero, R., & Domènech, J. M. (2011). Differential effects of psychological maltreatment on children of mothers exposed to intimate partner violence. *Child Abuse & Neglect*, *35*, 524-531.	Poor quality assessment

Dixon, L. & Browne, K. D. (2007). The heterogeneity of family violence and its implications for practice. *Issues in Forensic Psychology, 6*, 116-124.	Review article
Doe, S. S. (2000). Cultural factors in child maltreatment and domestic violence in Korea. *Children & Youth Services Review*, *22*, 231-236.	Review article
Dube, S. R., Anda, R. F., Felitti, V. J., Edwards, V. J., & Williamson, D. F. (2002). Exposure to abuse, neglect, and household dysfunction among adults who witnessed intimate partner violence as children: implications for health and social services. *Violence & Victims*, *17*, 3-17.	Poor quality assessment
Edleson, J. L. (1999). The overlap between child maltreatment and woman battering. *Violence Against Women*, *5*, 134-154.	Review
Edleson, J. L. (2001). Studying the co-occurrence of child maltreatment and domestic violence in families. In S. A. Graham-Bermann & J. L. Edleson (Eds.), *Domestic violence in the lives of children: The future of research, intervention, and social policy* (pp. 91-110). Washington, DV: American Psychological Association US.	Book chapter
Edleson, J. L. (2012). Making prevention of violence against women and children a priority. *Sex Roles*, *67*, 251-252.	Unable to access journal article
Edleson, J. L., Gassman-Pines, J., & Hill, M. B. (2006). Defining child exposure to domestic violence as neglect: Minnesota's difficult experience. *Social Work*, *51*, 167-174.	Unable to access journal article
English, D. J., Edleson, J. L., & Herrick, M. E. (2005). Domestic violence in one state's child protective caseload: A study of differential case dispositions and outcomes. *Children & Youth Services Review*, *27*, 1183-1201.	Poor quality assessment
English, D. J., Graham, J. C., Newton, R. R., Lewis, T. L., Thompson, R., Kotch, J. B., & Weisbart, C. (2009). At-risk and maltreated children exposed to intimate partner aggression/violence what the conflict looks like and its relationship to child outcomes. *Child Maltreatment*, *14*, 157-171.	Poor quality assessment

Flett, G. L., & Hewitt, P. L. (2012). Personality factors and substance abuse in relationship violence and child abuse: A review and theoretical analysis. In C. Wekerle & A-M. Wall (Eds.), *Violence and addiction equation: Theoretical and clinical issues in substance abuse and relationship violence* (pp. 64-97). New York, US: Brunner-Routledge.	Book chapter
Folsom, W. S., Christensen, M. L., Avery, L., & Moore, C. (2003). The co-occurrence of child abuse and domestic violence: An issue of service delivery for social service professionals. *Child & Adolescent Social Work Journal, 20,* 375-387.	Poor quality assessment
Fujiwara, T., Okuyama, M., & Izumi, M. (2010). The cycle of violence: childhood abuse history, domestic violence and child maltreatment among Japanese mothers. *Psychologia*, *53*, 211-224.	Poor quality assessment
Fusco, R. A. (2013). "It's hard enough to deal with all the abuse issues": Child welfare workers' experiences with intimate partner violence on their caseloads. *Children & Youth Services Review*, *35*, 1946-1953.	Population characteristics
Graham, A. M., Kim, H. K., & Fisher, P. A. (2012). Partner aggression in high-risk families from birth to age 3 years: Associations with harsh parenting and child maladjustment. *Journal of Family Psychology*, *26*, 105.	Population characteristics
Gratz, K. L., Paulson, A., Jakupcak, M., & Tull, M. T. (2009). Exploring the relationship between childhood maltreatment and intimate partner abuse: Gender differences in the mediating role of emotion dysregulation. *Violence & Victims*, *24*, 68-82.	Only abstract available
Hamby, S., Finkelhor, D., Turner, H., & Ormrod, R. (2010). The overlap of witnessing partner violence with child maltreatment and other victimizations in a nationally representative survey of youth. *Child Abuse & Neglect*, *34*, 734-741.	Poor quality assessment
Hartley, C. C. (2004). Severe domestic violence and child maltreatment: Considering child physical abuse, neglect, and failure to protect. *Children & Youth Services Review*, *26*, 373-392.	Poor quality assessment
Heyman, R. E., & Slep, A. M. S. (2001). Risk factors for family violence: introduction to the special series. *Aggression & Violent Behaviour*, *6*, 115-119.	Not an empirical study

Holden, G. W., Barker, E. D., Appel, A. E., & Hazlewood, L. (2010). Partner-abusers as fathers: testing hypotheses about their child rearing and the risk of physical child abuse. *Partner Abuse*, *1*, 186-199.	Population characteristics
Holmes, M. R. (2013). Aggressive behaviour of children exposed to intimate partner violence: An examination of maternal mental health, maternal warmth and child maltreatment. *Child Abuse & Neglect*, *37*, 520-530.	Population characteristics
Juby, C., Downs, W., & Rindels, B. (2013). Intimate partner violence victimization, maternal child maltreatment, and the mediating impact of changes in family structure. *Child & Adolescent Social Work Journal*, 1-13.	Only abstract available
Kaslow, N. J., & Thompson, M. P. (2008). Associations of child maltreatment and intimate partner violence with psychological adjustment among low SES, African American children. *Child Abuse & Neglect*, *32*, 888-896.	Poor quality assessment
Knickerbocker, L., Heyman, R. E., Slep, A. M. S., Jouriles, E. N., & McDonald, R. (2007). Co-occurrence of child and partner maltreatment. *European Psychologist*, *12*, 36-44.	Review
Kohl, P. L., Barth, R. P., Hazen, A. L., & Landsverk, J. A. (2005). Child welfare as a gateway to domestic violence services. *Children & Youth Services Review*, *27*, 1203-1221.	Poor quality assessment
Kotch, J. B., Muller, G. O., & Blakely, C. H. (1999). Understanding the origins and incidence of child maltreatment. *Issues in Children & Families Lives*, *11*, 1-38.	Unable to access journal article
Lavergne, C. (2007). Domestic violence and maltreatment of children: Related phenomena studied from different paradigms. *Revue de Psychoeducation, 36,* 317-328.	Unable to access article - Emailed author
Lee, L. C., Kotch, J. B., & Cox, C. E. (2004). Child maltreatment in families experiencing domestic violence. *Violence & Victims*, *19*, 573-591.	Unable to access journal article
Lessard, G., Flynn, C., Turcotte, P., Damant, D., Vézina, J. F., Godin, M. F., Paradis, F., Delisle, R., Alcedo, Y., Juneau, L, Rock, L., & Rondeau□Cantin, S. (2010). Child custody issues and co□occurrence of intimate	Population/outcome

partner violence and child maltreatment: controversies and points of agreement amongst practitioners. *Child & Family Social Work*, *15*, 492-500.	
Matsuura, N., Fujiwara, T., Okuyama, M., & Izumi, M. (2013). Testing a cascade model of linkage between child abuse and negative mental health among battered women in Japan. *Asian Journal of Psychiatry*, 6, 99-105.	Poor quality assessment
McCloskey, L. A., Treviso, M., Scionti, T., & dal Pozzo, G. (2002). A comparative study of battered women and their children in Italy and the United States. *Journal of Family Violence*, *17*, 53-74.	Population characteristics
McKay, M. M. (1994). The link between domestic violence and child abuse: assessment and treatment considerations. *Child Welfare: Journal of Policy, Practice, & Program*, *73*, 29-39.	Review
Merrill, L. L., Crouch, J. L., Thomsen, C. J., & Guimond, J. M. (2004). Risk for intimate partner violence and child physical abuse: Psychosocial characteristics of multirisk male and female Navy recruits. *Child Maltreatment*, *9*, 18-29.	Poor quality assessment
Merrill, L. L., Hervig, L. K., & Milner, J. S. (1996). Childhood parenting experiences, intimate partner conflict resolution, and adult risk for child physical abuse. *Child Abuse & Neglect*, *20*, 1049-1065.	Poor quality assessment
Moles, K. (2008). Bridging the divide between child welfare and domestic violence services: Deconstructing the change process. *Children & Youth Services Review*, *30*, 674-688.	Review paper
Moore, D. R., & Florsheim, P. (2008). Interpartner conflict and child abuse risk among African American and Latino adolescent parenting couples. *Child Abuse & Neglect*, *32*, 463-475.	Exposure
Moore, J. G., Galcius, A., & Pettican, K. (1981). Emotional risk to children caught in violent marital conflict - The Basildon treatment project. *Child Abuse & Neglect*, *5*, 147-152.	Study design - Treatment
Murphy, R. A. (2010). Multi-system responses in the context of child maltreatment and intimate partner violence. *Child Abuse & Neglect*, *34*, 555-557.	Study design - Commentary paper

Nicklas, E., & Mackenzie, M. J. (2013). Intimate partner violence and risk for child neglect during early childhood in a community sample of fragile families. *Journal of Family Violence*, *28*, 17-29.	Poor quality assessment
O'Leary, K. D., Slep, A. M. S., & O'Leary, S. G. (2000). Co-occurrence of partner and parent aggression: Research and treatment implications. *Behaviour Therapy*, *31*, 631-648.	Review
Osofsky, J. D. (2003). Prevalence of children's exposure to domestic violence and child maltreatment: Implications for prevention and intervention. *Clinical Child & Family Psychology Review*, *6*, 161-170.	Not an empirical study
Patel, M. N., Bhaju, J., Thompson, M. P., & Kaslow, N. J. (2012). Life stress as mediator of the childhood maltreatment–intimate partner violence link in low-income, African American women. *Journal of Family Violence*, *27*, 1-10.	Poor quality assessment
Peled, E. (2011). Abused women who abuse their children: A critical review of the literature. *Aggression & Violent Behaviour*, *16*, 325-330.	Critical review of literature
Postmus, J. L., & Merritt, D. H. (2010). When child abuse overlaps with domestic violence: the factors that influence child protection workers' beliefs. *Children & Youth Services Review*, *32*, 309-317.	Population
Postmus, J. L., & Ortega, D. (2005). Serving two masters: When domestic violence and child abuse overlap. *Families in Society: The Journal of Contemporary Social Services*, *86*, 483-490.	Population
Reading, R. (2008). Comment on psychological abuse between parents: Associations with child maltreatment from a population-based sample. *Child: Care, Health and Development, 34,* 841-842.	Study design - Commentary paper
Renner, L. M. (2011). The presence of IPV in foster care cases: Examining referrals for services, reunification goals, and system responsibility. *Children & Youth Services Review*, *33*, 980-990.	Population characteristics
Renner, L. M., & Slack, K. S. (2006). Intimate partner violence and child maltreatment: Understanding intra-and intergenerational connections. *Child Abuse & Neglect*, *30*, 599-617.	Poor quality assessment

Rodriguez, C. M. (2006). Emotional functioning, attachment style, and attributions as predictors of child abuse potential in domestic violence victims. *Violence & Victims*, *21*, 199-212.	Poor quality assessment
Romero, V., Donohue, B., & Allen, D. N. (2010). Treatment of concurrent substance dependence, child neglect and domestic violence: a single case examination involving family behaviour therapy. *Journal of Family Violence*, *25*, 287-295.	Study design - Treatment
Ross, S. M. (1996). Risk of physical abuse to children of spouse abusing parents. *Child Abuse & Neglect*, *20*, 589-598.	Poor quality assessment
Rumm, P. D., Cummings, P., Krauss, M. R., Bell, M. A., & Rivara, F. P. (2000). Identified spouse abuse as a risk factor for child abuse. *Child Abuse & Neglect*, *24*, 1375-1381.	Poor quality assessment
Salisbury, E. J., Henning, K., & Holdford, R. (2009). Fathering by partner-abusive men: Attitudes on children's exposure to interparental conflict and risk factors for child abuse. *Child Maltreatment*, *14*, 232-242.	Poor quality assessment
Scott, K. (2011). Integrating knowledge on violence against women and children: A call for innovative, interdisciplinary thinking. *PsycCRITIQUES, 56,* 20.	Book review
Shen, A. C. T. (2009). Long-term effects of interparental violence and child physical maltreatment experiences on PTSD and behaviour problems: A national survey of Taiwanese college students. *Child Abuse & Neglect*, *33*, 148-160.	Poor quality assessment
Shepard, M., & Raschick, M. (1999). How child welfare workers assess and intervene around issues of domestic violence. *Child Maltreatment*, *4*, 148-156.	Population
Shipman, K. L., Rossman, B. R., & West, J. C. (1999). Co-occurrence of spousal violence and child abuse: Conceptual implications. *Child Maltreatment*, *4*, 93-102.	Poor quality assessment
Slep, A. M. S., & Heyman, R. E. (2001). Where do we go from here? Moving toward an integrated approach to family violence. *Aggression & Violent Behaviour*, *6*, 353-356.	Study design - Discussion paper

Slep, A. M. S., & O'Leary, S. G. (2005). Parent and partner violence in families with young children: rates, patterns, and connections. *Journal of Consulting & Clinical Psychology*, *73*, 435.	Poor quality assessment
Slep, A. M. S., & O'Leary, S. G. (2009). Distinguishing risk profiles among parent-only, partner-only, and dually perpetrating physical aggressors. *Journal of Family Psychology*, *23*, 705.	Poor quality assessment
Sternberg, K. J. & Lamb, M. E. (1999). Violent families. In M. E. Lamb (Ed.), *Parenting and child development in "non-traditional" families* (pp. 305-325). Mahwah, NJ: Lawrence Erlbaum Associates Publishers.	Book chapter
Tajima, E. A. (2000). The relative importance of wife abuse as a risk factor for violence against children. *Child Abuse & Neglect*, *24*, 1383-1398.	Poor quality assessment
Tajima, E. A. (2004). Correlates of the co-occurrence of wife abuse and child abuse among a representative sample. *Journal of Family Violence*, *19*, 391-402.	Poor quality assessment
Whitney, P., & Davis, L. (1999). Child abuse and domestic violence in Massachusetts: Can practice be integrated in a public child welfare setting. *Child Maltreatment*, *4*, 158-166.	Population
Widom, C. S., Czaja, S., & Dutton, M. A. (2013). Child abuse and neglect and intimate partner violence victimization and perpetration: A prospective investigation. *Child Abuse & Neglect*.	Population characteristics
Zolotor, A. J., Theodore, A. D., Coyne-Beasley, T., & Runyan, D. K. (2007). Intimate partner violence and child maltreatment: Overlapping risk. *Brief Treatment & Crisis Intervention*, *7*, 305.	Unable to access journal article

APPENDIX 4: QUALITY ASSESSMENT FORM

Question	Y 2	P 1	N 0	U 0	Comments
Is the study addressing the link between child maltreatment and intimate partner violence?					
Has child maltreatment been clearly defined?					
Has intimate partner violence been clearly defined?					
Have different forms of child abuse been compared?					
Are prevalence rates for intimate partner violence discussed?					
Are prevalence rates for child maltreatment discussed?					
Does the study report co-occurrence of child maltreatment and intimate partner violence?					
Did the study identify factors associated with child maltreatment?					
Were parents currently involved in child-care proceedings?					
Were the participants matched at baseline?					
Were the participants comparable in important confounding variables?					
Were the assessment instrument(s) for outcome (psychometrics/questionnaire) standardised, valid and reliable?					
Was child maltreatment/intimate partner violence recorded on the basis of evidence?					
Was statistical analysis used in identifying prevalence?					
Have limitations been discussed?					
Were recommendations for treatment/intervention made?					
Are the participants representative of UK families?					
Can results be applied to families regardless of culture?					

Score: /36

APPENDIX 5: DATA EXTRACTION FORM

General information

Date of data extraction:

Author:

Aim of study:

Notes:

Re-verification of study eligibility:

Population	Children aged 0-18 at time of exposure	Y	N	?
	Adult intimate partner violence perpetrators/victims	Y	N	?
Exposure	Intimate partner violence	Y	N	?
Comparator	None-intimate partner violence	Y	N	?
Outcome	Child maltreatment	Y	N	?
	Potential for child maltreatment	Y	N	?
Study design	Cohort	Y	N	?

Continue? **YES** **NO**

Specific Information

Population Characteristics

1. Target population
2. Inclusion criteria
3. Exclusion criteria
4. Recruitment procedure
5. Characteristics of participants
    a. Number of participants:
    b. Age of children:
    c. Ethnicity:
    d. Gender:
    e. Other information:

Exposure

Domestic violence

1. Physical:
2. Psychological:
3. Sexual:
4. Other:

Outcome

1. Type of maltreatment?
2. How was the maltreatment measured?
3. If a tool was used, was it validated?
4. Was the maltreatment substantiated?
5. How was the outcome (intimate partner violence) measured?
6. If a tool was used, was it validated?
7. Was the domestic violence substantiated?
8. Limitations:
9. Other notes:

Analysis

1. What statistical analysis was used?
2. Were confounding variables assessed?
3. Other notes:

APPENDIX 6: FPP DATA INPUT PROFORMA

FPP Data: SPSS Raw **23 May 2007**

Variables: Standard Coding

Nominal	Ordinal	Scale
0 = no/not present	0 = no/not present	0 = no/not present
1 = yes/present	1 = yes/present	1 = yes/present
2 = not applicable	2 = not applicable	2 = not applicable
99 = missing data	99 = missing data	99 = missing data

Case Identifiers

VarName	Label	Measure	Values
name	parent name	Nominal	Name
family	family ID number	Nominal	Number
id	individual ID number	Nominal	Number
child.id	child number	Scale	Number
ethnic	ethnic background	Ordinal	1 White British 2 Asian 3 Afro Caribbean 4 Mixed race 5 African 6 Missing data
date	date on front of report dd.mm.yy	Nominal	Date
region	region of referral	Ordinal	1 West Midlands 2 South Wales 3 Worcester 4 Gloucester 5 Derby 6 Nottinghamshire 7 Shropshire 8 Northamptonshire 9 Black Country 10 Herefordshire 11 Lincolnshire 12 Leicestershire 13 Wiltshire 14 Lincolnshire 15 Cornwall 16 North West 17 Staffordshire 18 Swindon 19 Cumbria 20 Scunthorpe
author	practitioner	Ordinal	String

par.gen	parent gender	Nominal	1 male 2 female
criminal	criminal status	Scale	0 no criminal convictions in house 1 lives with a criminal but has no convictions themselves 2 has criminal convictions but lives with non-criminal 3 has criminal convictions and lives with a criminal 99 missing data
age	age	Scale	Number
punctual	punctuality/first time attendance	Ordinal	Standard coding

Nature of Problem

Name	Label	Measure	
ab.type	abuse type – abuse or neglect	Scale	0 neither abuse/neglect 1 abuse 2 neglect
abuse	child/spouse abuse	Ordinal	0 neither 1 child abuse only 2 child abuse and spouse abuse

Developmental Influences (Parent(s) personal history at home/in their childhood – mother/father/siblings)

Name	Label	Measure	Value
cch1	family status constant for majority of childhood	Ordinal	1 biological mother and father married 2 biological mother and father cohabiting 3 biological mother and father separated 4 biological mother and father divorced 5 biological mother and stepfather married 6 biological mother and stepfather separated 7 biological mother and stepfather divorced 8 biological mother and cohabiter 9 biological father and stepmother married 10 biological father and stepmother separated 11 biological father and

			stepmother divorced 12 biological father and cohabiter 13 adoptive mother and father married 37 single biological father 38 single biological mother 39 single stepfather 40 single stepmother 45 extended family 99 missing data
ech2	siblings present in childhood	Ordinal	Standard coding
ech3	number of siblings	Ordinal	Number
ech4	problems with siblings	Ordinal	Standard coding
ech5	medical problems	Ordinal	Standard coding
ech6	lonely childhood	Ordinal	Standard coding
ech7	lived in foster/care home for period of time in childhood	Ordinal	Standard coding
ech8	lived with extended family for period of time in childhood	Ordinal	Standard coding
ech9	birth complications/separated at birth due to poor health	Ordinal	Standard coding
ech10	premature or weighed under 2.5kg at birth	Ordinal	Standard coding
ech11	developmental delay	Ordinal	Standard coding
ech12	emotional problems – nightmares, enuresis	Ordinal	Standard coding
ech13	temper tantrums	Ordinal	Standard coding
ech14	juvenile substance abuse	Ordinal	Standard coding
ech15	mother or father under 21 at child's birth	Ordinal	Standard coding
ech16	twins or less than 18 months between siblings	Ordinal	Standard coding
ech17	mental or physical disabilities in child	Ordinal	Standard coding
ech18	either parent felt isolated	Ordinal	Standard coding
ech19	family had serious financial problems	Ordinal	Standard coding
ech20	either parent treated for mental illness or depression	Ordinal	Standard coding
ech21	either parent had substance dependence	Ordinal	Standard coding
ech22	either parent suffered physical or sexual abuse as a child	Ordinal	Standard coding
ech23	either parent had indifferent feelings towards the child	Ordinal	Standard coding
ech24	witness to partner/spouse abuse	Ordinal	Standard coding
ech25	tried to intervene in partner/spouse abuse	Ordinal	Standard coding

ech26	physically injured/hurt on intervention of spouse/partner abuse	Ordinal	Standard coding
ech27	absconded from home	Ordinal	Standard coding
ech28	parental criminality	Ordinal	Standard coding
ech29	parental death	Ordinal	Standard coding
ech30a	father figure physically abusive	Ordinal	Standard coding
ech31a	father figure emotionally abusive	Ordinal	Standard coding
ech32a	father figure sexually abusive	Ordinal	Standard coding
ech33a	father figure physical neglect	Ordinal	Standard coding
ech34a	father figure emotional neglect	Ordinal	Standard coding
ech35a	mother figure physically abusive	Ordinal	Standard coding
ech36a	mother figure emotionally abusive	Ordinal	Standard coding
ech37a	mother figure sexually abusive	Ordinal	Standard coding
ech38a	mother figure physical neglect	Ordinal	Standard coding
ech39a	mother figure emotional neglect	Ordinal	Standard coding
ech40a	physical abuse by extended family members	Ordinal	Standard coding
ech41a	emotional abuse by extended family members	Ordinal	Standard coding
ech42a	spouse/partner abuse present	Ordinal	Standard coding
ech43a	child witnessed spouse/partner abuse	Ordinal	Standard coding
ech44a	marital discord	Ordinal	Standard coding
ech45a	sexual abuse by extended family members	Ordinal	Standard coding
ech46a	extra-familial physical abuse	Ordinal	Standard coding
ech47a	extra-familial emotional abuse	Ordinal	Standard coding
ech48a	reports few positive childhood memories	Ordinal	Standard coding
ech49a	was on child protection register	Ordinal	Standard coding
ech30b	father figure physically abusive to siblings	Ordinal	Standard coding
ech31b	father figure emotionally abusive to siblings	Ordinal	Standard coding
ech32b	father figure sexually abusive to siblings	Ordinal	Standard coding
ech33b	father figure physical neglect of siblings	Ordinal	Standard coding
ech34b	father figure emotional neglect of siblings	Ordinal	Standard coding
ech35b	mother figure physically abusive to siblings	Ordinal	Standard coding
ech36b	mother figure emotionally abusive to siblings	Ordinal	Standard coding
ech37b	mother figure sexually abusive to siblings	Ordinal	Standard coding
ech38b	mother figure physical neglect of siblings	Ordinal	Standard coding
ech39b	mother figure emotional neglect of siblings	Ordinal	Standard coding

ech40b	siblings physically abused by extended family members	Ordinal	Standard coding
ech41b	siblings emotionally abused by extended family members	Ordinal	Standard coding
ech42b	spouse/partner abuse present for siblings	Ordinal	Standard coding
ech43b	siblings witnessed spouse/partner abuse	Ordinal	Standard coding
ech44b	marital discord present for siblings	Ordinal	Standard coding
ech45b	siblings sexually abused by extended family members	Ordinal	Standard coding
ech46b	extra-familial physical abuse of siblings	Ordinal	Standard coding
ech47b	extra-familial emotional abuse of siblings	Ordinal	Standard coding
ech48b	siblings report few positive childhood memories	Ordinal	Standard coding
ech49b	siblings were on child protection register	Ordinal	Standard coding
sib1	siblings are substance abusers	Ordinal	Standard coding
sib2	siblings have convictions for violent offences	Ordinal	Standard coding
sib3	siblings suffer from depression and/or anxiety	Ordinal	Standard coding
sib4	siblings suffer from psychosis	Ordinal	Standard coding
sib5	siblings have convictions for theft/kindred offences	Ordinal	Standard coding
sib6	siblings have convictions for sex related offences	Ordinal	Standard coding
sib7	siblings have other adjustment problems	Ordinal	Standard coding

Developmental Influences (Parent(s) personal history in their school/employment – mother/father)

Name	Label	Measure	Value
ed.emp1	bullied at school	Ordinal	Standard coding
ed.emp2	bully at school	Ordinal	Standard coding
ed.emp3	fighting at school	Ordinal	Standard coding
ed.emp4	regular truanting at school	Ordinal	Standard coding
ed.emp5	other delinquent behaviour at school	Ordinal	Standard coding
ed.emp6	expelled/suspended from school	Ordinal	Standard coding
ed.emp7	difficulties with teachers	Ordinal	Standard

			coding
ed.emp8	gained qualifications pre 18	Ordinal	Standard coding
ed.emp9	gained qualifications post 18	Ordinal	Standard coding
ed.emp10	employed white collar	Ordinal	Standard coding
ed.emp11	employed blue collar	Ordinal	Standard coding
ed.emp12	frequent jobs (more than 3 in 12 months)	Ordinal	Standard coding
ed.emp13	long periods of unemployment	Ordinal	Standard coding
crimrec	number of criminal convictions	Ordinal	Standard coding
violent	convictions for violent offences	Ordinal	Standard coding
spouseab	convictions for spouse/partner abuse	Ordinal	Standard coding
childab	convictions for child abuse	Ordinal	Standard coding
childneg	convictions for child neglect	Ordinal	Standard coding
alc.drug	convictions for alcohol/drug related offences	Ordinal	Standard coding
sexual	convictions for sexual offences	Ordinal	Standard coding
driving	convictions for driving offences	Ordinal	Standard coding
theft	convictions for theft/kindred offences	Ordinal	Standard coding
fraud	convictions for fraud	Ordinal	Standard coding
arson	convictions for arson	Ordinal	Standard coding
crim.dam	convictions for criminal damage	Ordinal	Standard coding
yoi	sentenced to YOI	Ordinal	Standard coding
hmp	sentenced to HMP	Ordinal	Standard coding
prh1	history of being physically violent to ex partners (unidirectional)	Ordinal	Standard coding
prh2	history of being psychologically violent to ex partners (unidirectional)	Ordinal	Standard coding
prh3	history of being sexually violent to ex partners (unidirectional)	Ordinal	Standard coding
prh4	history of being physically abused by ex partners (unidirectional)	Ordinal	Standard coding

prh5	history of being psychologically abused by ex partners (unidirectional)	Ordinal	Standard coding
prh6	history of being sexually abused by ex partners (unidirectional)	Ordinal	Standard coding
prh7	history of reciprocal physical violence	Ordinal	Standard coding
prh8	history of reciprocal psychological violence	Ordinal	Standard coding
prh9	frequent relationships/one night stands	Ordinal	Standard coding
firstsex	current relationship is first sexual relationship	Ordinal	Standard coding
arguing	frequent arguing in current relationship	Ordinal	Standard coding
support	feels current partner is not supportive	Ordinal	Standard coding
no.care	feels current partner does not provide enough/care	Ordinal	Standard coding
c.rel.1	physically violent to partner (unidirectional)	Ordinal	Standard coding
c.rel.2	psychologically violent to partner (unidirectional)	Ordinal	Standard coding
c.rel.3	sexually violent to partner (unidirectional)	Ordinal	Standard coding
c.rel.4	physically abused by partner (unidirectional)	Ordinal	Standard coding
c.rel.5	psychologically abused by partner (unidirectional)	Ordinal	Standard coding
c.rel.6	sexually abused by partner (unidirectional)	Ordinal	Standard coding
c.rel.7	reciprocal physical violence	Ordinal	Standard coding
c.rel.8	reciprocal psychological violence	Ordinal	Standard coding
spliff.a	misuse of cannabis as an adult	Ordinal	Standard coding
coke.a	misuse of cocaine as an adult	Ordinal	Standard coding
heroin.a	misuse of heroin as an adult	Ordinal	Standard coding
amphet.a	misuse of amphetamines as an adult	Ordinal	Standard coding
alc.a	misuse of alcohol as an adult	Ordinal	Standard coding
other.a	misuse of other drugs as an adult	Ordinal	Standard coding
many.a	misuse of many, unspecified drugs as an adult	Ordinal	Standard coding
spliff.j	misuse of cannabis as a juvenile	Ordinal	Standard

			coding
coke.j	misuse of cocaine as a juvenile	Ordinal	Standard coding
heroin.j	misuse of heroin as a juvenile	Ordinal	Standard coding
amphet.j	misuse of amphetamines as a juvenile	Ordinal	Standard coding
alc.j	misuse of alcohol as a juvenile	Ordinal	Standard coding
other.j	misuse of other drugs as a juvenile	Ordinal	Standard coding
many.j	misuse of many, unspecified drugs as a juvenile	Ordinal	Standard coding
spliff.i	self report at index offence - misuse of cannabis as an adult	Ordinal	Standard coding
coke.i	self report at index offence - misuse of cocaine as an adult	Ordinal	Standard coding
heroin.i	self report at index offence - misuse of heroin as an adult	Ordinal	Standard coding
amphet.i	misuse of amphetamines as an adult	Ordinal	Standard coding
alc.i	self report at index offence - misuse of alcohol as an adult	Ordinal	Standard coding
other.i	self report at index offence - misuse of other drugs as an adult	Ordinal	Standard coding
many.i	self report at index offence - misuse of many, unspecified drugs as an adult	Ordinal	Standard coding
witness	children subject to proceedings witness spouse/partner abuse	Ordinal	Standard coding
intervene	children subject to proceedings try to intervene in spouse/partner abuse	Ordinal	Standard coding
injured	children subject to proceedings have been injured during spouse abuse	Ordinal	Standard coding
mh1	voluntary admission to secure/psychiatric hospital	Ordinal	Standard coding
mh2	non-voluntary admission to secure/psychiatric hospital	Ordinal	Standard coding
mh3	any medical problems	Ordinal	Standard coding
mh4	prescribed medication	Ordinal	Standard coding
mh5	depression or anxiety	Ordinal	Standard coding
mh6	diagnosis of conduct disorder	Ordinal	Standard coding
mh7	diagnosis of personality disorder	Ordinal	Standard coding
mh8	psychosis	Ordinal	Standard coding

mh9	suicide attempt	Ordinal	Standard coding
mh10	suicidal thoughts	Ordinal	Standard coding
mh11	attempted/actual self-harm	Ordinal	Standard coding
mh12	thoughts of self-harm	Ordinal	Standard coding
mh13	other mental health problems	Ordinal	Standard coding
mh14	at time of index offence - prescribed medication	Ordinal	Standard coding
mh15	at time of index offence - depression or anxiety	Ordinal	Standard coding
mh16	diagnosis of at time of index offence - conduct disorder	Ordinal	Standard coding
mh17	at time of index offence - diagnosis of personality disorder	Ordinal	Standard coding
mh18	at time of index offence - psychosis	Ordinal	Standard coding
mh19	at time of index offence - suicide attempt	Ordinal	Standard coding
mh20	at time of index offence - suicidal thoughts	Ordinal	Standard coding
mh21	at time of index offence - attempted/actual self-harm	Ordinal	Standard coding
mh22	at time of index offence - thoughts of self-harm	Ordinal	Standard coding
mh	at time of index offence - other mental health problems	Ordinal	Standard coding

Assessment of risk to referred children in current matter, arising from personal history of parents

Name	Label	Measure	Value
risk1	complications during birth/separated from baby at birth due to poor health	Ordinal	Standard coding
risk2	under 21 years of age	Ordinal	Standard coding
risk3	not biologically related to the child	Ordinal	Standard coding
risk4	twins, or less than 18 months between births of siblings	Ordinal	Standard coding
risk5	child has mental or physical disabilities	Ordinal	Standard coding
risk6	parent feels isolated with no one to turn to	Ordinal	Standard coding
risk7	parent has serious financial problems	Ordinal	Standard coding

risk8	parent has been treated for mental illness or depression	Ordinal	Standard coding
risk9	parent has dependency on drugs or alcohol	Ordinal	Standard coding
risk10	parent was physically or sexually abused as a child	Ordinal	Standard coding
risk11	infant was seriously ill, premature, or weighed less than 2.5kg at birth	Ordinal	Standard coding
risk12	parent is a single parent	Ordinal	Standard coding
risk13	there is an adult in the house with violent tendencies	Ordinal	Standard coding
risk14	parent has indifferent feelings about the baby	Ordinal	Standard coding

Current situation of family/parents

Name	Label	Measure	Value
fam.comp	family composition at time of index offence	Ordinal	1 biological mother and father married 2 biological mother and father cohabiting 3 biological mother and father separated 4 biological mother and father divorced 5 biological mother and stepfather married 6 biological mother and stepfather separated 7 biological mother and stepfather divorced 8 biological mother and cohabiter 9 biological father and stepmother married 10 biological father and stepmother separated 11 biological father and stepmother divorced 12 biological father and cohabiter 13 adoptive mother and father married 37 single biological father 38 single biological mother 39 single stepfather 40 single stepmother

			45 extended family 99 missing data
no.kids	number of children in family	Scale	Number
removed	children have previously been removed from their care	Scale	Standard coding
abuser	parent suspected of abusing child	Ordinal	0 neither, parents abusing siblings 1 father figure 2 mother figure 3 both mother and father figures 4 neither mother nor father figure
kid.sex	gender of child	Ordinal	1 male 2 female
kid.age	age of child	Scale	Number
relation	relationship between child and adult	Ordinal	1 biological 2 non-biological 3 not applicable
sus.phy	adult suspected of physically abusing the child	Ordinal	0 no 1 yes
sus.emo	adult suspected of emotionally abusing the child	Ordinal	0 no 1 yes
sus.sex	adult suspected of sexually abusing the child	Ordinal	0 no 1 yes
sus.neg	adult suspected of neglecting the child	Ordinal	0 no 1 yes
sus.ftp	adult suspected of failing to protect the child	Ordinal	0 no 1 yes
prev.phy	child previously physically abused by adult	Ordinal	0 no 1 yes
prev.emo	child previously emotionally abused by adult	Ordinal	0 no 1 yes
prev.sex	child previously sexually abused by adult	Ordinal	0 no 1 yes
prev.neg	child previously neglected by adult	Ordinal	0 no 1 yes
prev.ftp	adult previously failed to protect child	Ordinal	0 no 1 yes
sib.abus	child at risk as siblings previously abused by parents	Ordinal	0 no 1 yes
kid.med	child has a medical problem	Ordinal	0 no 1 yes
ex.phy	child physically abused by extra-familial/extended family member	Ordinal	0 no 1 yes
ex.emo	child emotionally abused by extra-familial/extended family member	Ordinal	0 no 1 yes
ex.sex	child sexually abused by extra-familial/extended family member	Ordinal	0 no 1 yes

ex.abuse	frequency of abuse from extra-familial/extended family members	Ordinal	0 never 1 once 2 2 to 5 times 3 6 to 10 times 4 more than 10 times 99 missing
dev.del	child has developmental delay	Ordinal	Standard coding
deny	adult denies abuse of child	Ordinal	Standard coding
empathy	adult lacks empathy	Ordinal	Standard coding
insight	adult lacks insight	Ordinal	Standard coding

Psychometrics

Millon Clinical Multiaxial Inventory-III (MCMI-III)

Name	Label	Measure	Value
mcmi.x	MCMI-III BR score for scale X	Scale	Number
mcmi.y	MCMI-III BR score for scale Y	Scale	Number
mcmi.z	MCMI-III BR score for scale Z	Scale	Number
mcmi.1	MCMI-III BR score for scale 1	Scale	Number
mcmi.2a	MCMI-III BR score for scale 2A	Scale	Number
mcmi.2b	MCMI-III BR score for scale 2B	Scale	Number
mcmi.3	MCMI-III BR score for scale 3	Scale	Number
mcmi.4	MCMI-III BR score for scale 4	Scale	Number
mcmi.5	MCMI-III BR score for scale 5	Scale	Number
mcmi.6a	MCMI-III BR score for scale 6A	Scale	Number
mcmi.6b	MCMI-III BR score for scale 6B	Scale	Number
mcmi.7	MCMI-III BR score for scale 7	Scale	Number
mcmi.8a	MCMI-III BR score for scale 8A	Scale	Number
mcmi.8b	MCMI-III BR score for scale 8B	Scale	Number
mcmi.s	MCMI-III BR score for scale S	Scale	Number
mcmi.c	MCMI-III BR score for scale C	Scale	Number
mcmi.p	MCMI-III BR score for scale P	Scale	Number
mcmi.a	MCMI-III BR score for scale A	Scale	Number
mcmi.h	MCMI-III BR score for scale H	Scale	Number
mcmi.n	MCMI-III BR score for scale N	Scale	Number
mcmi.d	MCMI-III BR score for scale D	Scale	Number
mcmi.b	MCMI-III BR score for scale B	Scale	Number
mcmi.t	MCMI-III BR score for scale T	Scale	Number
mcmi.r	MCMI-III BR score for scale R	Scale	Number
mcmi.ss	MCMI-III BR score for scale SS	Scale	Number
mcmi.cc	MCMI-III BR score for scale CC	Scale	Number
mcmi.pp	MCMI-III BR score for scale PP	Scale	Number

Millon Adolescent Clinical Inventory (MACI)

Name	Label	Measure	Value
maci.x	MACI BR score for scale X	Scale	Number
maci.y	MACI BR score for scale Y	Scale	Number
maci.z	MACI BR score for scale Z	Scale	Number
maci.1	MACI BR score for scale 1	Scale	Number

maci.2a	MACI BR score for scale 2A	Scale	Number
maci.2b	MACI BR score for scale 2B	Scale	Number
maci.3	MACI BR score for scale 3	Scale	Number
maci.4	MACI BR score for scale 4	Scale	Number
maci.5	MACI BR score for scale 5	Scale	Number
maci.6a	MACI BR score for scale 6A	Scale	Number
maci.6b	MACI BR score for scale 6B	Scale	Number
maci.7	MACI BR score for scale 7	Scale	Number
maci.8a	MACI BR score for scale 8A	Scale	Number
maci.8b	MACI BR score for scale 8B	Scale	Number
maci.9	MACI BR score for scale 9	Scale	Number
maci.a	MACI BR score for scale A	Scale	Number
maci.b	MACI BR score for scale B	Scale	Number
maci.c	MACI BR score for scale C	Scale	Number
maci.d	MACI BR score for scale D	Scale	Number
maci.e	MACI BR score for scale E	Scale	Number
maci.f	MACI BR score for scale F	Scale	Number
maci.g	MACI BR score for scale G	Scale	Number
maci.h	MACI BR score for scale H	Scale	Number
maci.aa	MACI BR score for scale AA	Scale	Number
maci.bb	MACI BR score for scale BB	Scale	Number
maci.cc	MACI BR score for scale CC	Scale	Number
maci.dd	MACI BR score for scale DD	Scale	Number
maci.ee	MACI BR score for scale EE	Scale	Number
maci.ff	MACI BR score for scale FF	Scale	Number
maci.gg	MACI BR score for scale GG	Scale	Number

Inventory of Interpersonal Problems (IIP)

Name	Label	Measure	Value
iip.dom	IIP Domineering/Controlling	Scale	Number
iip.vin	IIP Vindictive/Self-Centred	Scale	Number
iip.cold	IIP Cold/Distant	Scale	Number
iip.soc	IIP Socially Inhibited	Scale	Number
iip.nonas	IIP Non-Assertive	Scale	Number
iip.acc	IIP Overly Accommodating	Scale	Number
iip.sac	IIP Self-Sacrificing	Scale	Number
iip.int	IIP Intrusive/Needy	Scale	Number
iip.tot	IIP Total	Scale	Number

Wechsler Adult Intelligence Scale (WAIS)

Name	Label	Measure	Value
viq	Verbal IQ	Scale	Number
piq	Performance IQ	Scale	Number
fsiq	Full Scale IQ	Scale	Number

Parenting Stress Index (PSI)

Name	Label	Measure	Value
psi.sf.1	PSI-short form scale: defensive responding	Nominal	Number

psi.sf.2	PSI-short form scale: parental distress	Nominal	Number
psi.sf.3	PSI-short form scale: parent-child dysfunctional interaction	Nominal	Number
psi.sf.4	PSI-short form scale: difficult child	Nominal	Number
psi.sf.5	PSI-short form scale: total stress	Nominal	Number
psi.hype	PSI distractibility/hyperactivity	Nominal	Number
psi.adap	PSI adaptability	Nominal	Number
psi.rein	PSI reinforces parent	Nominal	Number
psi.dema	PSI demandingness	Nominal	Number
psi.mood	PSI mood	Nominal	Number
psi.acce	PSI acceptability	Nominal	Number
psi.ctot	PSI child domain total	Nominal	Number
psi.comp	PSI competence	Nominal	Number
psi.isol	PSI isolation	Nominal	Number
psi.atta	PSI attachment	Nominal	Number
psi.heal	PSI health	Nominal	Number
psi.role	PSI role restriction	Nominal	Number
psi.depr	PSI depression	Nominal	Number
psi.spou	PSI spouse	Nominal	Number
psi.ptot	PSI parent domain total	Nominal	Number
psi.tota	PSI total stress	Nominal	Number
psi.life	PSI life stress	Nominal	Number

Stress Index for Parents of Adolescents (SIPA)

Name	Label	Measure	Value
ad.sipa	SIPA Stress Index for Parents of Adolescents	Nominal	Number
mel.sipa	SIPA	Nominal	Number
iso.sipa	SIPA	Nominal	Number
del.sipa	SIPA	Nominal	Number
ach.sipa	SIPA	Nominal	Number
pd.sipa	SIPA	Nominal	Number
lfr.sipa	SIPA	Nominal	Number
rel.sipa	SIPA	Nominal	Number
soc.sipa	SIPA	Nominal	Number
inc.sipa	SIPA	Nominal	Number
aprd.sipa	SIPA	Nominal	Number
ts.sipa	SIPA	Nominal	Number
ls.sipa	SIPA	Nominal	Number

State Trait Anger Expression Inventory (STAXI)

Name	Label	Measure	Value
s.ang	STAXI – state anger	Nominal	Number
t.ang	STAXI – trait anger	Nominal	Number
t.ang.t	STAXI – angry temperament	Nominal	Number
t.ang.r	STAXI – angry reaction	Nominal	Number
ax.in	STAXI – anger expression in	Nominal	Number
ax.out	STAXI – anger expression out	Nominal	Number
ax.con	STAXI – anger control	Nominal	Number

ax.ex	STAXI – anger expression index	Nominal	Number
s.ang.3	STAXI-2 –state anger	Nominal	Number
s.ang.f2	STAXI-2 – state anger – feeling angry	Nominal	Number
s.ang.v2	STAXI-2 – feel like expressing anger verbally	Nominal	Number
s.ang.p2	STAXI-2 - feel like expressing anger physically	Nominal	Number
t.ang.2	STAXI-2 – trait anger	Nominal	Number
t.ang.t2	STAXI-2 – angry temperament	Nominal	Number
t.ang.r2	STAXI-2 – angry reaction	Nominal	Number
ax.o2	STAXI-2 – anger expression out	Nominal	Number
ax.i2	STAXI-2 – anger expression in	Nominal	Number
ac.o2	STAXI-2 – anger control out	Nominal	Number
ac.i2	STAXI-2 – anger control in	Nominal	Number
ac.index	STAXI-2 – anger expression index	Nominal	Number

Coping Responses Inventory (CRI)

Name	Label	Measure	Value
cri.la	CRI – logical analysis	Scale	Number
cri.pa	CRI – positive re-appraisal	Scale	Number
cri.ss	CRI – seeking support	Scale	Number
cri.ps	CRI – problem solving	Scale	Number
cri.ca	CRI – cognitive avoidance	Scale	Number
cri.a	CRI – acceptance	Scale	Number
cri.ar	CRI – alternative rewards	Scale	Number
cri.ed	CRI – emotional discharge	Scale	Number

Substance Abuse Subtle Screening Inventory (SASSI)

Name	Label	Measure	Value
fva	SASSI – fva	Nominal	Number
fvod	SASSI – fvod	Nominal	Number
sym	SASSI – sym	Nominal	Number
oat	SASSI – oat	Nominal	Number
sat	SASSI – sat	Nominal	Number
def	SASSI – def	Nominal	Number
sam	SASSI – sam	Nominal	Number
fam	SASSI – fam	Nominal	Number
cor	SASSI – cor	Nominal	Number
probable	SASSI – probability of having a substance dependence disorder	Scale	Number

Golombok-Rust Inventory of Marital State (GRIMS)

Name	Label	Measure	Value
grims	GRIMS total	Scale	Number

Parenting Alliance Measure (PAM)

Name	Label	Measure	Value
pam	Parenting Alliance Measure	Scale	Number

Hospital Anxiety and Depression Scale (HADS)

Name	Label	Measure	Value
hads	Hospital Anxiety and Depression Scale	Scale	Number

Hurt-Insult-Threaten-Scream: Domestic Violence Screening Tool (HITS)

Name	Label	Measure	Value
hits	HITS: A short domestic violence tool	Scale	Number

Alcohol Use Disorders Identification Test (AUDIT)

Name	Label	Measure	Value
audit	Alcohol Use Disorders Identification Test	Scale	Number

General Health Questionnaire (GHQ)

Name	Label	Measure	Value
ghq.a	GHQ section A	Scale	Number
ghq.b	GHQ section B	Scale	Number
ghq.c	GHQ section C	Scale	Number
ghq.d	GHQ section D	Scale	Number
ghq.tot	GHQ total		

APPENDIX 7: PSI (ABIDIN, 1995) SCALE DESCRIPTIONS

PSI scale	Description
Child Domain	
Distractibility/Hyperactivity (DI)	High scores appear to be associated with children who display many of the behaviours associated with Attention Deficit Hyperactivity Disorder
Adaptability (AD)	High scores are associated with characteristics that make the parenting task more difficult by virtue of the child's inability to adjust to changes in his or her physical or social environment
Reinforces Parent (RE)	High scores are associated with a parent not experiencing his or her child as a source of positive reinforcement
Demandingness (DE)	High scores are associated with a parent experiencing the child as placing too many demands upon him or her
Mood (MO)	High scores are associated with children whose affective functioning shows evidence of dysfunction
Acceptability (AC)	High scores are produced when the child possesses physical, intellectual, and emotional characteristics that do not match the expectations the parents had for their child
Parent Domain	
Competence (CO)	High scores are associated with a range of factors, including a lack of practical child development knowledge or a limited range of child management skills
Isolation (IS)	High scores are common in parents who are often socially isolated from their peers, relatives and other social support systems
Attachment (AT)	High scores are achieved when the parent does not feel a sense of emotional closeness to the child, or when the parent had a real or perceived inability to observe and understand the child's feelings and/or needs accurately
Health (HE)	High scores are suggestive of deterioration in parental health that may be the result of either parenting stress or an additional independent stress in the parent-child system

Role Restriction (RO)	High scores suggest that the parent experiences the parental role as restricting their freedom and frustrating them in their attempts to maintain their own identity
Depression (DP)	High scores are suggestive of the presence of significant depression in the parent
Spouse (SP)	High scores are associated with a lack of emotional and active support of the other parent in the area of child management
Life Stress	Amount of stress outside the parent-child relationship
Total Stress	High scores indicate that the parent-child system is under stress and at risk for the development od dysfunctional parenting behaviours or behaviour problems in the child involved

APPENDIX 8: STAXI-2 (SPEILBERGER, 1999) SCALE DESCRIPTIONS

STAXI-2 scale/subscale	Description of scale/subscale
State Anger *(S-Ang)*	Measures the intensity of angry feelings and the extent to which a person feels like expressing anger at a particular time
Feeling Angry *(S-Ang/F)*	Measures the intensity of the angry feelings the person is currently experiencing
Feel Like Expressing Anger Verbally *(S-Ang/V)*	Measures the intensity of current feelings related to the verbal expression of anger
Feel Like Expressing Anger Physically *(S-Ang/P)*	Measures the intensity of current feelings related to the physical expression of anger
Trait Anger *(T-Ang)*	Measures how often angry feelings are experienced over time
Angry Temperament *(T-Ang/T)*	Measures the disposition to experience anger without specific provocation
Angry Reaction *(T-Ang/R)*	Measures the frequency that angry feelings are experienced in situations that involve frustration and/or negative evaluations
Anger Expression-Out *(AX-O)*	Measures how often angry feelings are expressed in verbally or physically aggressive behaviour
Anger Expression-In *(AX-I)*	Measures how often angry feelings are experienced but not expressed (suppressed)
Anger Control-Out *(AC-O)*	Measures how often a person controls the outward expression of angry feelings
Anger Control-In *(AC-I)*	Measures how often a person attempts to control angry feelings by calming down or cooling off
Anger Expression Index *(AX Index)*	Provides a general index of anger expression based on responses to the *AX-O*, *AX-I*, *AC-O*, and *AC-I* items

APPENDIX 9: CRI (MOOS, 1992) SCALE DESCRIPTIONS

CRI scale	Description
Approach coping responses	
1. Logical Analysis	Cognitive attempts to understand and prepare mentally for a stressor and its consequences
2. Positive Reappraisal	Cognitive attempts to construe and restructure a problem in a positive way while still accepting the reality of the situation
3. Seeking Guidance and Support	Behavioural attempts to seek information, guidance, or support
4. Problem Solving	Behavioural attempts to take action to deal directly with the problem
Avoidance coping responses	
5. Cognitive Avoidance	Cognitive attempts to avoid thinking realistically about a problem
6. Acceptance or Resignation	Cognitive attempts to react to the problem by accepting it
7. Seeking Alternative Rewards	Behavioural attempts to get involved in substitute activities and create new sources of satisfaction
8. Emotional Discharge	Behavioural attempts to reduce tension by expressing negative feelings

APPENDIX 10: MCMI-III (MILLON ET AL., 2009) SCALE DESCRIPTIONS

MCMI-III		Description
Validity Index		Two items measure highly improbable events designed to detect random responding and confusion
Modifying Indexes		
X	Disclosure	Measures the amount of self-disclosure and willingness to admit to symptoms and problems
Y	Desirability	Measures examinee's tendency to answer items that make one look very favourable and without problems
Z	Debasement	Assesses examinee's tendency to answer items by accentuating, highlighting, and exaggerating problems and symptoms
Clinical Personality Pattern Scales		
1	Schizoid	Individuals are socially detached; prefer solitary activities; seem aloof, apathetic, and distant with difficulties in forming and maintaining relationships
2A	Avoidant	Individuals are socially anxious due to perceive expectations of rejection
2B	Depressive	Individuals are downcast and gloomy, even in the absence of a clinical depression
3	Dependent	Individuals are passive, submissive, and feel inadequate. They generally lack autonomy and initiative
4	Histrionic	Individuals are gregarious, with a strong need to be at the centre of attention. They can be highly manipulative
5	Narcissistic	Individuals are self-centred, exploitive, arrogant, and egotistical
6A	Antisocial	Individuals are irresponsible, vengeful, engage in criminal behaviour, and are strongly independent
6B	Sadistic	Individuals are controlling and abusive; they enjoy humiliating others
7	Compulsive	Individuals are orderly, organised, efficient, and perfectionistic. They engage in these behaviours to avoid chastisement from authority

8A	Negativistic (Passive-Aggressive)	Individuals are disgruntled, argumentative, petulant, oppositional, negativistic; they keep others on edge
8B	Masochistic (Self-Defeating)	Individuals seem to engage in behaviours that result in people taking advantage of and abusing them. They act like a martyr and are self-sacrificing

Severe Personality Pathology Scales

S	Schizotypal	Individuals seem "spacey", self-absorbed, idiosyncratic, eccentric, and cognitively confused
C	Borderline	Individuals display a labile affect and erratic behaviour. They are emotionally intense, often dissatisfied and depressed, and may become self-destructive
P	Paranoid	Individuals are rigid and defensive. They hold delusions of influence and persecution. They are mistrusting and may become angry and belligerent

Clinical Syndrome Scales (Axis 1 Symptom Scales)

A	Anxiety Disorder	Individuals are anxious, tense, apprehensive, and physiologically over-aroused
H	Somatoform	Individuals are preoccupied with vague physical problems with no known organic cause. They tend to be hypochondriacal and somatising
N	Bipolar: Manic Disorder	Individuals have excessive energy and are overactive, impulsive, unable to sleep, and are manic
D	Dysthymic Disorder	Individuals are able to maintain day-to-day functions but are depressed, pessimistic, and dysphoric. They have low self-esteem and feel inadequate
B	Alcohol Dependence	Individuals admit to serious problems with alcohol and/or endorse personality traits often associated with abusing alcohol
T	Drug Dependence	Individuals admit to serious problems with drugs and/or endorse personality traits often associated with abusing drugs
R	Posttraumatic Stress Disorder	Individuals report unwanted and intrusive memories and/or nightmares of a disturbing, traumatic event; they may have flashbacks

Severe Syndrome Scales

SS	Thought Disorder	Individuals experience thought disorder of psychotic proportions; they often report hallucinations and delusions
CC	Major Depression	Individuals are severely depressed to the extent that they are unable to function in day-to-day activities. They have vegetative signs of clinical depression (poor appetite and sleep, low energy, loss of interests) and feel hopeless and helpless
PP	Delusional Disorder	Individuals are acutely paranoid with delusions and irrational thinking. They may become belligerent and act out their delusions

APPENDIX 11: GRIMS (RUST ET AL., 1986) SCALE DESCRIPTIONS

The GRIMS is a 28-item questionnaire that assesses the quality of the relationship between a married or cohabiting couple. It has been particularly designed to be sensitive to change in a relationship over time.

In constructing GRIMS the views of experts were collated, reviewed and structured to produce a two-dimensional test specification for the following areas:

- Interests shared
- Communication
- Warmth, love and hostility
- Trust and respect
- Roles, expectations and goals
- Decision making
- Coping with problems and crises
- Insight into the nature of relationships
- Behaviour within the relationship
- Attitudes and feelings about the relationship
- Motivation for change
- Extent of agreement between partners