

CHILD PROTECTION: AN ECOLOGICAL PERSPECTIVE TO ASSESSMENT AND
TREATMENT.

by

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ABSTRACT

The term 'Child Protection' encompasses a complex interplay of factors that must be ecologically considered in managing, assessing and treating children and young people.

Research indicates that those children and young people displaying sexually harmful behaviour are more likely to have been subject to adverse childhood experiences. The ecological model emphasises that it must be considered in the context of the individual child and parent factors, the relationship between child and parent factors, and their relationship with outside pressures and influences. Previous assessment has focused on the historical and individual factors related to risk of re-offending. More recently, the focus has shifted to a dynamic, strength-based perspective that allows for the consideration of the transitional processes that distinguish children and young people from adults who sexually offend.

The current thesis is divided into six chapters that guide the reader through an ecological perspective of early childhood experiences, environmental and contextual experiences, and dynamic and static concerns and strengths in predicting further sexually harmful behaviour. A critique of psychometric assessment focuses on parenting stress from a child, parent and interactional perspective, whilst an empirical research study explores the array of risk and protective factors relating to risk of reoffending, and the use of an actuarial assessment in guiding management and treatment. Finally an individual case study of an adolescent's assessment and therapy following sexually harmful behaviour is presented. In line with international perspectives of assessment and interventions that work with this population, consistent support is found for the use of an ecological model in the assessment, management and treatment of children and young people, and discussed in the context of limitations of the thesis and clinical implications within the United Kingdom.

DEDICATION

This thesis is dedicated to all those affected by the issues raised within this thesis, and to all those who have supported, encouraged, supervised, taught and worked alongside me throughout the course of this degree.

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CHAPTER ONE : Introduction

Child protection is a multifaceted issue and the implications of prevention, assessment and intervention cannot be underestimated. It is unfeasible to take one element of child protection without pulling together the research and exploring the associations and interactions each element has with other domains. At the core of child protection and the prevention of child abuse are the best interests of the child, as set out by the Department For Educations and Skills (2004) that all children should: be healthy; stay safe; enjoy and achieve; make a positive contribution; and achieve economic well-being. This thesis is aimed at exploring how these outcomes can be achieved by taking an ecological perspective of child maltreatment (Belsky, 1980, 1993; Bronfenbrenner, 1972), thus considering the child or young person, the family, and the wider contexts in which the child and family exist. It is argued that in order to do this, one must begin with the child's early experiences, particularly where these have been abusive, and consider what role these experiences play throughout development, particularly where children and young people have later engaged in harmful behaviour.

In doing so, it is hoped that preventative measures will become more apparent, and that an ecological framework that allows professionals to balance the best interests of the child or young person and ensure safety of that individual as well as others within the community will underpin assessment and treatment. Finally it is hoped that by taking an ecological, strengths-based perspective, the study will delineate some of the criminogenic, "untreatability" and other negative attitudes that provide barriers against being able to achieve the outcomes detailed above.

The Ecological Model

An ecological perspective encourages one to consider the holistic environment for an individual. The ecological model draws heavily on Bronfenbrenner's (1979) model of ecology of human development, suggesting that violence is the result of the complex interplay of individual, relationship, social, cultural and environmental factors, and that to understand and treat an individual, these factors must be considered in terms of their existence *at* each level, as well as their interaction *across* each level. The four levels surround the core of the model, that is, the individual. The first level is that of the *microsystem*, incorporating the immediate environments surrounding the individual and those people with whom the individual interacts, for example, family members, school and peers. The second level is named the *mesosystem*, and incorporates the interactions that occur within the microsystem, so for example, relationships between the family and Childrens Services, the family and support networks, or the family and the school. The third system, known as the *exosystem* describes the systems that do not directly affect the individual, but still influence the individual's life, for example, neighbourhoods and school departments. Finally, the *macrosystem* refers to the larger social and cultural environment under which all the systems exist, so for example, social and political norms and the legal system.

Ecological correlates of child maltreatment

Research findings addressing the various factors across the different levels of the ecological model have suggested that there are families considered to be at risk of exposing their children to violence, and that these families can be identified prior to and at the birth of a child (Browne, Hanks, Stratton & Hamilton, 2002; Englander, 1997; WHO 2006; Wolfe & Edwards, 1988). Young parents have been identified as one of these populations who are

predisposed to maltreating (Cawson, Wattam, Brooker & Kelly, 2000; Melton, Petrila, Poythress & Slobogin, 1997; Scher, Forde, McQuaid & Stein, 2004; Sidebotham & Heron, 2006; Tardiff, Marzuk, Leon, Portera & Weiner, 1997, Woodward, Fergusson, Chesney & Horwood, 2007); single parents, poor and unemployed parents (Sariola & Uuetala 1992; Strauss, Hamby, Finkelhor, Moore, & Runyan, 1998); parents who experience stress and isolation which may result from job losses, health problems or other aspects of the family environment such as birth spacing, conflict in the home, ability of family members to access support, and those who lack social support (Hibbard & Desch, 2007; Mersky, Berger, Reynolds & Gromoske, 2009).

Parents who have experienced childhood maltreatment themselves have also been identified to be at further risk of maltreating their own children (Dixon, Browne & Hamilton-Giachritsis, 2005, Lounds, Borkowski & Whitman, 2006; Mersky et al., 2009; Pears & Capaldi, 2001). Research indicates that at birth, premature infants, twins, and disabled children are at increased risk of physical abuse and neglect (Hibbard & Desch, 2007; Mersky et al., 2009). It is believed that low birth weight, prematurity, illness, or physical or mental disabilities in the infant or child may interfere with attachment and bonding which in turn may make the child more vulnerable to abuse (Browne, Douglas, Hamilton-Giachritsis & Hegarty, 2006; WHO, 2002). Other risk factors include a history of violence (Steadman & Robbins, 1998; Wrightsman, Nietzel & Fortune, 1998) and psychotic illness including hallucinations and delusions such as paranoia (Melton, et al., 1997). The number of previous episodes of maltreatment in the child or family has also been identified as a risk factor for further episodes of maltreatment, in addition to neglect (as opposed to other types of treatment); parental conflict and parental mental health problems; families with younger children;

parental history of abuse; and those already in contact with child protection services (Hamilton & Browne, 1999; Hindley, Ramchandani & Jones, 2006).

Alcohol and substance misuse have also been identified as prominent risk factors in child maltreating families (Browne et al., 2006; Dube, 2001; Hindley, Ramchandani & Jones, 2006; Walsh, Macmillon & Jamieson, 2003). Hayden (2004) collected information through questionnaires from social workers employed in an urban area. She found that workers reported substance misuse as causing concern about child welfare in 22% of cases. Parental substance abuse has been suggested to lead to dysfunctional parent-child relationships when a preoccupation with drugs can compromise a parent's ability to be consistent, warm and emotionally responsive (Schuler, Nair & Black, 2002; Wolock & Magura, 1996). Research has also demonstrated associations between parental substance misuse and negative child behaviour such as lack of obedience (Kandel, 1990); anxiety, depression and other psychiatric disorders (Johnson, Boney & Brown, 1991; Weissman, McAvay, Goldsten, Nunes, Verdeli, & Wickramaratne, 1999); attention deficit hyperactivity disorder (Ornoy, Michailevskaya & Lukashov, 1996); erratic school attendance, and under-performance and misbehaviour (Smith 1993). In terms of continuity, there is also evidence of a link between the experience of childhood violence and of later alcohol or drug abuse (Cohen & Densen-Gerber, 1982; Johnson & Leff, 1999; Miller, Maguin & Downs, 1997). Hutton and Whyte (2008) found that in a sample of 343 children and young people referred to services for sexually harmful behaviour, 28% were known to have been exposed to significant parental substance misuse.

More generally, the experience of child maltreatment has been identified to be a major environmental risk factor for future mortality and morbidity (Kaplan, Pelcovitz & Labruna,

1999; Paz, Jones & Byrne, 2005). Children who have been maltreated or exposed to ineffective parenting are likely to experience an impact in vital areas of functioning and development, and may be at risk for various forms of psychopathology (Glaser, 2002; Hildyard & Wolfe, 2002; Macmillan, 2000), and to show levels of subsequent behavioural difficulties (Herronkohl & Herronkohl, 2007; Ireland, Smith & Thornberry, 2002; Mersky & Reynolds, 2007). The impact is predicted to be long term, often infiltrating into adult development and future parenting (Alexander, Teti & Anderson, 2000; Capaldi, Pears, Patterson & Owen, 2003; Mrazek, Mrazek & Klinnert, 1995; Nair & Morrison, 2000; Reder & Lucey, 1995). As well as possible aggressive behaviour in childhood and/or adolescence (Hamilton, Falshaw & Browne, 2002; Ronis & Borduin, 2007; Van Wijk, Loeber, Vermeiren, Pardini, Bullens & Doreleijers, 2005; Woodward et al., 2007), sexually harmful behaviour is reported to be one possible indirect outcome of child maltreatment (Awad & Saunders, 1989; Richardson, Graham, Bhate & Kelly, 1995; Vizard, 2006; Vizard, Hickey, French & McCrory, 2007; Vizard, Monck & Misch, 1995; Winstone, 2009).

Ecological correlates of sexually problematic behaviour

Much research has attempted to explore the characteristics and typologies of children and young people with sexually harmful behaviour, highlighting instead the heterogeneity of this population (Almond, Canter & Salfati, 2006; Beckett, 1999; Calder, 2009; Masson & Hackett, 2003). Research has shown exposure to violence within the home to be a common factor of children and young people who sexually abuse, and this is not surprising considering that theoretical models of adult sex offenders have focused on the importance of intimacy deficits and attachment difficulties (Ward, Hudson, Marshall & Siegert, 1995). These concepts have been expanded into the realm of working with children and adolescents with sexually harmful

behaviour. Growing up in a dysfunctional family has been identified as a common characteristic in children and young people with sexually harmful behaviour (Awad & Saunders, 1989; Redlack, 2003; Richardson et al., 1995; Vizard et al., 1995). Bladon, Vizard, French and Tranah (2005) found a high prevalence of reactive attachment disorder in a sample of sexually harmful children, and Lee, Jackson, Pattison and Ward (2002) found that the trauma associated with family dysfunction combined with emotional abuse, was a common developmental risk factor for paedophilia, exhibitionism, rape, or multiple paraphilias. This idea of trauma-evoked sexual responses in children was put forward by Bentovim (1995) who hypothesised that traumatic responses may provide children and young people with a pathway to facilitate cognitive distortions, denial mechanisms and rationalisations needed for the abuse to occur. French (2004) further explored these pathways and suggested that, untreated, these traumagenic cognitive distortions act as a major risk factor for the development of sexual aggression.

Vizard et al. (2007) explored historical characteristics of a sample of 280 high risk juvenile sexual abusers, and found that 71% had suffered sexual abuse; 66% physical abuse; 74% emotional abuse; 59% physical neglect and 49% domestic violence and that in many cases individuals had suffered more than one type of abuse. Such a phenomenon has been more recently referred to *polyvictimization* (Finkelhor, Ormrod & Turner, 2007), and previously as *recurrent* victimisation (Hamilton & Browne, 1999; Hamilton, Falshaw & Browne, 2002) and *complex trauma* (Cook, Blaustein, Spinazzola & Van Der Kolk, 2003).

Sexual abuse has been consistently found by many researchers to play an important role as a risk factor for later sexually harmful behaviour (Becker, Kaplan, Cunningham-Rathner &

Kavoussi, 1986; Burton, Miller & Shill, 2002; Calder, 2009; Moody & Kim, 1994; Redlack, 2003; Seto & Lalumiere, 2005). Research suggests that inappropriate or aggressive sexual behaviours have been reported more frequently in sexually abused children, and the history of sexual abuse discriminates them from normal, physically abused, and psychiatric child populations (Friedrich, Beilke & Urquiza, 1987; Goldston, Turnquist & Knutson, 1989). Bonner, Walker and Berliner (1999) compared a sample of 201 children with sexually problematic and harmful behaviour with 52 children with no history of sexually harmful and problematic behaviour, and found that the former group had a significantly higher number of children with a history of sexual abuse, and who had witnessed human sexual behaviour. One prospective study by Salter et al. (2003) used a sample of 224 male children who had been sexually abused and found that 26 of them later committed sexual offences as adolescents or as an adult.

From another perspective, sexually harmful behaviour has also been reported as a reliable marker for child sexual abuse (Drach, Wientzen & Ricci, 2001). Whilst the association appears to be strong, one must also acknowledge that only a small portion of males who are sexually abused become sexually abusive (Bentovim & Williams, 1998; Friedrich & Chaffin, 2000; Widom, 1996; Williams, 1995). In addition, sexual abuse should not be considered in isolation as it has been found to covary with other forms of abuse and with a chaotic family environment (Knight & Sims-Knight, 2004), just as Skuse et al. (1998) found that exposure to family violence and trauma was a risk factor for sexually harmful behaviour regardless of whether the child or young person had experienced sexual abuse.

Indeed, as identified above, parenting stress (whether the onset be due to life events or

trauma, and to occur ante-natally, peri-natally or post-natally) is not only strongly associated with child maltreatment, but has also been correlated with sexual behaviour in children (Bonner et al., 1999; Friedrich et al., 2001; Friedrich et al., 1992; Friedrich et al., 2003; Pithers et al., 1998; Silovsky & Niec, 2002), reinforcing the need to take a holistic perspective of the family and the environment in which they live. For example, Bonner, Walker and Berliner (1999) compared a sample of 201 children with sexually problematic and harmful behaviour with 52 children with no history of sexually harmful and problematic behaviour. A number of measures were provided to the parents of the children in assessing their own current symptomatology, family environment, level of stress related to parenting and life in general (using the Parenting Stress Index) and their attitude towards their child. They found no significant differences between the two groups, except in levels of stress such that those parents of children with sexually problematic and harmful behaviour reported significantly more stress. Due to the cross-sectional design of the study, the authors concluded that parenting a child with sexual behaviour difficulties is highly associated with parental stress, with the causative direction of such remaining unclear as to whether parents may be stressed due to the behaviour being present, or whether the parents' levels of stress cause the behaviour. Other studies of cohort and case-control design however, have found parenting stress to be a significant variable in predicting child maltreatment (Belsky, 1980, 1984; Bronfenbrenner, 1979; Haskett, Smith, Grant, Sabourin & Robinson, 2003; Milner, 1993; Wolfe, 1988) and, as discussed above, child maltreatment has strong correlations with sexually harmful behaviour.

Some other factors associated with sexualised behaviour in young people include early exposure to sexual material including parental sex and pornography (Friedrich, et al., 2003),

being in care (Baker, Kurland, Curtis, Alexander & Papa-Lentini, 2007; Farmer & Pollock, 2003; Friedrich, et al., 2005; Smith & Howard, 1994; Tarren-Sweeney, 2008); other family violence (Baker, Tabacoff, Tornusciolo & Eisenstadt, 2003; Harris, Rice, Quinsey, Lahmiere, Boer & Lang, 2003; Hunter, 2004; Kelley, Lewis & Sigal, 2004; Winstone, 2009); mental health difficulties (Righthand & Welch, 2001); ADHD and PTSD (Bladon et al., 2005; Lambie & McCarthey, 2004; Rich 2003); and symptoms associated with psychopathy (Gretten, McBride, Hare, O'Shaugnessy & Kumka, 2001; Långström, 2002; Långström & Grann 2000; Moffit, 1993).

Assessing risk: An ecological perspective

Many models have applied the knowledge base around risk factors to children and young people displaying sexually problematic and harmful behaviour in order to develop a better understanding that will facilitate assessment and treatment. When one considers the number and complexity of risk factors discussed above, it becomes clear that a holistic consideration of the individual concerned is required. Models such as those taking an etiological perspective are important in configuring specific elements of the whole, that is, separate pieces of information that lie within the individual level of the ecology, for example, thinking errors and sexual coercion (Knight & Sims-Knight, 2004).

Therefore, in determining risk of abusive behaviour reoccurring, whether it be by a child, young person, or adult, it is necessary to consider all variables related to the individual and their surrounding environment. In exploring the risk of a parent maltreating their child, one must also consider a parent's employment, financial status, support networks, and factors pertaining to the child itself. Likewise, in exploring the risk of a child or young person

reoffending, one must consider the child's access to education and resources, support network, peer influences, and parent factors, particularly those that are ongoing such as parental substance misuse. Two well-recognised frameworks that have applied this thinking within the UK are the Framework for the Assessment of Children in Need and their Families (DOH, 2000) and ASSET (Youth Justice Board, 2000). These frameworks have been included as *appendix 1*. In considering risks for adolescents, the DOH framework goes one step further than previous frameworks and considers strength-based items for adolescents such as relationships with parents and significant others, capacity to understand and reflect on their own behaviour, positive relationships within the school and community, and the ability to think into the future.

The use of strength based dynamic variables has become more well-accepted in recent literature (Miccio-Fonseca & Rasmussen, 2009), whereas previous risk assessment has focused heavily on deficits in determining risk, and has failed to take into account strengths related to the child or young person's functioning, and to the environment around them (Burman, Armstrong, Batchelor, McNeill & Nicholson, 2007). Gilgun (1999, 2002, 2004) applied a Clinical Assessment Package for Risks and Strengths (CASPARS) as a general assessment of strengths and concerns for children and young people, developed with equal weightings given to strengths and weaknesses. This was followed by her strengths-based assessment tool (4-D), based on traditional values of 'native wisdom' and thus incorporating strengths within the individual, the family, and the community. Gilgun (1990) found that strengths (such as having an emotional confidant and the presence of healthy peer, family and community relationships) were significant in reducing general recidivism. Other researchers have identified specific strengths that have been demonstrated to also have a significant

impact on the likelihood of recidivism; for example, Bremer (2006) found that resilience to childhood trauma acted as a mediator to negative outcomes when risks included individual, family and community factors. In their retrospective study of a large cohort of adults ($n = 1,196$), McGloin and Widom (2001) found that negative adult outcomes were mediated by the presence of resilience factors, illustrating that the impact of child maltreatment is variable, and as such, the risk of a behaviour occurring or not occurring is dynamic and entangled with both risk and strength factors. As such, resilience literature adds much value to understanding what buffers interplay in determining risk, particularly where preventative and therapeutic measures can be put into place.

One risk assessment tool that takes into perspective the ecological risk and strength factors pertaining to risk of young people sexually reoffending, in addition to considering static, stable dynamic, acute dynamic and trigger factors that lead young people to sexually abuse others, is the Assessment, Intervention and Moving On assessment-version 2 (AIM2; Print et al., 2007). The AIM2 Assessment is a guide to structured risk assessment relating to the prediction of sexual violence, level of supervision required, and an analysis of concerns and strengths. To date, no studies have explored the validity or application of the final AIM2 assessment, although a longitudinal study is currently being initiated.

An ecological, strengths-based assessment is not only important in being able to identify risk of further sexually harmful behaviour across different domains, but also allows for treatment goals to be considered holistically. In a quasi-experimental study, Biehal (2006) found that an ecological approach to treatment and intervention was far more successful for children referred to specialist family teams, such that changes in the child's wider environment

sometimes helped to reinforce changes within the home and positive changes in parenting style, child behaviour, the school environment, peer relationships and constructive leisure activities appeared to be mutually reinforcing. As such, being able to consider other elements such as the parent-child relationship allows a professional to target areas of treatment and use appropriate forms of therapy to do so.

This approach is also complimentary to the 'What Works' literature, reference to a body of research that has presented researchers and practitioners with evidence-based, collective analysis of working with those who sexually harm, with an amalgamation of research over three decades conducted primarily within North America and Europe. This initiative was first referred to by McGuire (1995) and nationally introduced by the Crime Reduction Strategy (Home Office 1999) in response to initial ideas of 'Nothing works' (Martinson, 1974) which backed a purely punitive response to violent and sexual offending. As a result, well-designed programs that are considered feasible and successful are guided with a set of three principles (Andrews & Bonta, 2003).

The AIM assessment model, yet to be evaluated and accredited, meets the three principles of Risk, Needs and Responsivity. Risk refers to *Who* to target, such that only high-risk offenders should get the most intensive treatment, and that providing treatment to low-risk offenders may be detrimental. Thus, the AIM2 assessment allows for an identification of low, medium and high level needs, and goes beyond this by identifying domains of concerns and strengths so that those of low to medium risk can have strengths identified and thus maintained, and so that any positive aspects of high risk offenders can be identified and encouraged rather than disrupted. The second principle is that of *Needs*, that is, identifying what risk factors should

be targeted within treatment. The AIM2 model does this by identifying four domains, in line with a multi-systemic approach, as well as allowing practitioners to identify specific treatment needs within each domain. The AIM2 also goes one step further by identifying existing and potential strengths that may be targeted within the systemic environment.

The third principle is that of treatment itself. Outlined in more detail in Chapter five, the most effective evidence-based programs have been found by researchers to be behavioural or cognitive-behavioural in nature (McGrath, Cumming & Burchard, 2003; Saunders, Berliner & Hanson, 2003), particularly where they are multisystemic in nature. Developed in the late 1970's, multisystemic therapy (MST) has received much support in decreasing adolescent offending (Bourduin et al., 1995; Henggeler, Rodick, Borduin, Hanson, Watson & Urey, 1986; Henggeler et al., 1991; Henggeler, Clingempeel, Brondino & Pickrel, 2002; Henggeler, Melton, Brondino, Scherer & Hanley, 1997; Henggeler, Melton & Smith, 1992; Henggeler, Melton, Smith, Schoenwald & Hanley, 1993; Rowland et al., 2005; Schaffer & Bourduin, 2005; Timmons-Mitchell, Bender, Kishna & Mitchell, 2006) and more specifically in addressing sexually harmful behaviour (Bourduin, Henggeler, Blaske & Stein, 1990; Bourduin & Schaeffer, 2001; Bourduin, Schaeffer & Heiblum, 2009; Letourneau et al., 2009).

MST, also an ecologically-embedded treatment approach would benefit from a structured, ecologically-informed actuarial assessment that guides practitioners to identification and prioritisation of risks and strengths, and thus facilitate the nine principles that guide MST (Henggeler, Schoenwald, Borduin, Rowland & Cunningham, 1998). These principles consist of finding the fit; positive and strength focused; increasing responsibility; present-focused, action-oriented and well-defined; targeting sequences; continuous effort; evaluation and

accountability; and generalisation.

The current thesis aims to consider an ecological pathway of child maltreatment, sexually harmful behaviour, the assessment of reoffending and treatment implications. It argues the need for a holistic approach incorporating static and dynamic variables of risks and strengths in achieving the positive child outcomes detailed earlier. Chapters Two and Three focus on parental associations with child maltreatment and sexually harmful behaviour, specifically substance misuse and parenting stress as these have been identified as key features within the literature. In Chapter Two, a literature review taking a systematic approach demonstrates the links between parental substance misuse and child maltreatment, and in doing so highlights the need to take a more integrated and multifarious approach by examining the complex interaction that occurs between different types of maltreatment. Substance misuse has been singled out here due to both its prevalence within society, in child protection cases, its integration with other types of maltreatment, and its dynamic features in terms of use and treatment. Chapter Three examines the psychometric properties of the Parenting Stress Index in measuring levels and types of stress that have been demonstrated in literature to be strongly associated with both child maltreatment and with sexually harmful behaviour. This approach reinforces the ecological approach of assessment and treatment that emphasises the importance of caregiver's roles in both the occurrence, assessment and treatment of children and young people who sexually abuse, as well as the environmental circumstances that contribute stress to family functioning.

In an empirical research study, Chapter Four then moves on to look more widely at ecological risk factors associated with sexually harmful behaviour, and applies these to the AIM2

assessment model in determining the impact of different strengths and concerns on reoffending behaviour. All areas discussed above are integrated into a case study in Chapter Five, where a 15 year old adolescent with a childhood including a substance misusing father and mother with self-reported stress and financial concerns, was assessed for risk and therapeutic needs following allegations that he had sexually abused his younger sister. The AIM2 assessment revealed the need for a focus on family issues in addition to specific work addressing sexually harmful behaviour. A treatment plan was carried out, and the case study clearly demonstrates the role of dynamic factors in assessing and treating adolescents as well as an attachment-informed, ecologically strength-based approach to assessment and treatment.

Finally, Chapter Six presents the findings of the thesis and engages a discussion of the limitations, recommendations and clinical implications of the findings. A model is presented that incorporates the ecological model and the AIM2 assessment model of children and young people with sexually harmful behaviour. The thesis strongly supports the notion of an ecological approach to understanding, assessment and treatment within child protection.

CHAPTER TWO

The ecology of the Microsystem: The links between parental substance misuse and child maltreatment. A literature review following a systematic approach

ABSTRACT

Aim: This systematic review aimed to assess the links between parental substance misuse and child maltreatment.

Method: 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. Inclusion/Exclusion criteria and quality assessment methods were employed. Data was extracted and synthesised from included studies using a qualitative approach.

Results: A total of 196 relevant studies were found, with 139 of these being removed following an inclusion criterion. A further 43 were removed following quality assessment, such that a total of 14 studies were included in the review. All studies supported the notion of an association between parental substance misuse and child maltreatment. A direct association was found by the five studies of lowest quality assessment score, whilst studies of high quality found substance misuse as an important factor amongst a myriad of factors, but reported that as a single factor, substance misuse is not a strong predictor of child maltreatment. Two of these studies found that substance misuse had no association with child maltreatment when it is held independent to other risk factors.

Conclusions: Findings suggest that substance misuse should not be assessed as a sole factor when assessing risk for child maltreatment. Other risk factors, particularly a combination of risk factors were found to have a more direct and stronger association with child maltreatment. The complexity of research in this area is discussed, with reference to methodological considerations. Future research and practical implications are discussed, particularly in relation to negative child outcomes.

Background

Violence against children is a global issue for every individual at some level or another. In the past most interventions have concentrated on providing services for families already experiencing violence. However more recently there has been more focus on providing interventions that prevent violence to children *before* it occurs by identifying the risk factors leading to child maltreatment (Browne, Hanks, Stratton & Hamilton, 2002; Englander, 1997; WHO 2006; Wolfe & Edwards, 1988).

Definition of child maltreatment

The World Health Organisation (WHO, 2002) defines violence as the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community that either results in, or has high likelihood of resulting in injury, death, psychological harm, maldevelopment or deprivation. This definition, unlike some incorporates the recognition that not all violence results in death, but can still be a burden on individuals, families, communities and health care systems. When discussing violence to children, the term ‘child abuse’ is more commonly used. This definition differs slightly in that it includes the *potential* threat as well as threatened or actual violence (WHO, 2002) to children. This term, however, does not incorporate issues of neglect, and hence the term ‘child maltreatment’ is used within this review.

Definition of substance misuse

Definitions of substance misuse have been applied inconsistently among studies, primarily due to the inconsistencies across geographical areas as to the legality of particular substances. Substance misuse includes the abuse of legal drugs (e.g., alcohol, prescription drugs, over-the-

counter drugs) as well as the use of illegal drugs (e.g., cocaine, heroin, marijuana, and methamphetamines). Legal drugs include substances such as alcohol, prescription drugs and over-the-counter drugs and, because incorrect or misuse of these drugs (especially alcohol) are detrimental to parental functioning (Hernandez, 1992) they have been included in this review.

Child maltreatment and substance misuse

Alcohol and substance abusers have been identified as one of the populations that may be identified as being at higher risk of abusing their children (Browne, Douglas, Hamilton-Giachritsis, & Hegarty, 2006; Dube 2001; Walsh, Macmillon & Jamieson, 2003). Other factors associated with risk of child maltreatment include:

- Young parents (Cawson, Wattam, Brooker & Kelly, 2000; Melton, Petrila, Poythress & Slobogin, 1997; Scher, Forde, McQuaid, & Stein, 2004; Tardiff, Marzuk, Leon, Portera & Weiner, 1997, Sidebotham & Heron, 2006, Woodward, Fergusson, Chesney & Horwood, 2007).
- Single parents, poor and unemployed parents (Sariola & Uuetala 1992; Strauss, Hamby, Finkelhor, Moore & Runyan, 1998).
- Parents who experience stress and isolation which may result from job losses, health problems or other aspects of the family environment, birth spacing, conflict in the home, ability of family members to access support, and those who lack social support (Hibbard & Desch, 2007; Mersky, Berger, Reynolds & Gromoske, 2009; Sariola & Uuetala, 1992; Strauss, Hamby, Finkelhor, Moore & Runyan, 1998).

- Premature infants, twins, and handicapped children (Hibbard & Desch, 2007; Mersky et al., 2009).
- Low birth weight, prematurity, illness, or physical or mental handicaps in the infant or child that may interfere with attachment and bonding and may make the child more vulnerable to abuse (Browne et al., 2006; WHO, 2002).

There is now much more of an ecological focus (Belsky, 1980, 1992; Bronfenbrenner, 1979) on parent, environmental factors and interactional processes contributing to child maltreatment, such that although many studies have found significant relationships between parental substance misuse and child maltreatment, few studies have directly explored this relationship (Leonard & Jacob, 1988; Milner & Chilamkurti, 1991). As such, the impact of substance misuse on child maltreatment must be explored independently, as well as in combination of other factors identified to have associations with child maltreatment.

Rates of substance misuse

Estimates for the number of children who are currently living in the UK with an alcohol misusing parent vary, but researchers and commentators agree that there is a considerable number, between 300,000 to 2.5 million (NSPCC, 2003). In the United Kingdom, recent estimates show that 2-3% of all children under the age of 16 have parents with substance abuse problems (Advisory Council on the Misuse of Drugs, 2003). Many studies and reports have recognised that substance misuse is a critical factor amongst families involved in the child welfare system (Blau & Whewell, 1994; Curtis & McCullough, 1993; Dore, Doris & Wright, 1995). Studies from the 1990's to today show prevalence rates of substance misuse among parents in substantiated child maltreatment cases to be of 50% or more (Besinger,

Garland, Litrownik, & Landsverk, 1999; Famularo, Kinscherff & Fenton, 1992; Murphy, Jellinek, Quinn, Smith, Poistrast & Foshko, 1991).

Forrester (2000) examined 50 cases including a total of 95 children on the child protection register in an inner London District. He found that half of the cases (52%) involved substance misuse, with alcohol and heroin being the substances of most concern. Hayden (2004) collected information through questionnaires from social workers employed in an urban area and found that workers reported substance misuse as major cause for concern for child welfare in 22% of cases ($n=412$). In 42% of these cases, substance misuse was considered by the worker to be the 'main' reason for social work involvement. What this study does not highlight are those cases where substance misuse may not be a primary concern, for example, in cases where domestic violence is viewed as primary. The direct and indirect roles that substance misuse plays within child maltreatment must be understood in order for effective prevention and treatment.

Impact of substance misusing parents

While not all parents with drug problems have difficulties in caring for their children, the available research indicates an increased likelihood of impaired parenting capacity and poor child outcomes (Barnard & McKeganey, 2004). Parental substance abuse can have many impacts on children including household stability, such that during periods of intensive drug use by parents, and children can be vulnerable to not being properly fed, clothed or cared for (Barnard & McKeganey, 2004). The health of young children in particular may be at risk when a parental focus on drugs leads to lapses in hygiene and where parental inattention translates into an inconsistent regard for child safety and supervision (Kroll & Taylor 2003).

Parental substance misuse may also lead to lack of parent-child relationships when a preoccupation with drugs can compromise a parent's ability to be consistent, warm and emotionally responsive (Schuler, Nair & Black, 2002).

Parental substance misuse can also encourage negative child behaviour such as lack of obedience (Kandel, 1990); anxiety, depression and other psychiatric disorders (Johnson, Boney & Brown, 1991; Weissman, McAvay, Goldsten, Nunes, Verdeli & Wickramaratne, 1999); attention deficit hyperactivity disorder (Ornoy, Michailevskaya & Lukashov, 1996); erratic school attendance, and under-performance and misbehaviour (Smith 1993). Evidence also suggests a link between the experience of childhood violence and of later alcohol or drug abuse (Cohen and Densen-Gerber, 1982; Johnson & Leff, 1999; Miller, Maguin & Downs, 1997). In a sample of 343 children and young people referred to services for sexually harmful behaviour, 28% were found to have been exposed to parental substance misuse (Hutton & Whyte, 2008).

The current review

The current review attempts to provide some understanding of the relationship between parental substance misuse and child maltreatment. This is important because it is not only necessary in providing better assessments of families at risk, but is also helpful in improving intervention and prevention strategies.

The inclusion/exclusion criteria defined allows for a broader scope of literature to be assessed including substantiated and unsubstantiated abuse, self-reported and recorded substance misuse, and a range of different populations from specific samples to families living in

community settings. In attempt to draw the most reliable and valid conclusions, only randomised control trials, cohort and case control studies were included. No randomised control studies were found. Cohort studies refer to methods that can be either prospective or retrospective in nature and involve following a group of people over a period of time. So for example, where a group of parents who are misusing substances are followed up to see whether they go on to maltreat their children. Case-control studies are usually retrospective, where a group of people with a particular outcome are matched with those who do not have that outcome. So, for example, a group of maltreating parents are compared on characteristics to a group parents who have not maltreated their children. Cross-sectional studies involve measuring factors and outcomes at the same time, so for example, using file data to determine the prevalence of the number of maltreating parents who misuse substances. Cross-sectional studies are reported to be more useful in earlier stages of research after which other methods are imposed (Mann, 2003).

Existing review assessment

Preliminary searches for existing systematic reviews and meta-analyses were conducted on 4th and 9th August 2009 in DARE, Cochrane Library, PsychINFO, ASSIA, Medline, ERIC, Social Services Abstracts, National Criminal Justice Reference Abstracts, Web of Science, and Health Sciences. Three were found and are discussed here.

A critical review incorporating a systematic review method, conducted by Connell-Carrick, (2003) was located. The review assessed 24 studies selected on their theoretical approach, research design, sampling, operationalisation of neglect only, and data collection. The study concluded that not enough studies were found which assessed the links between substance

misuse and child neglect in order to draw any affirmative conclusions. Furthermore, the study focused on studies of neglect, examined all possible risk factors and 91% of the included studies were of a cross-sectional study design. The current systematic review differs in that it focuses on substance abuse studies in all types of child maltreatment, focuses on cohort and case-control study designs, and provides a more up to date analysis of studies.

A second study systematically explored the risk factors associated with re-occurrence of child maltreatment (Hindley, Ramchandani & Jones, 2006). The review included studies of substantiated abuse only, and whilst there is much controversy as to the effects of such inclusion (Wood, 1995), there is likely to be an element of bias such that their results reflect risk factors only for those children who pass through Child Protection Services. The current study includes all maltreatment occurrences as not to produce treatment bias that may have occurred as a result of intervention at time of first recording. Furthermore, all the reviewed papers were of cohort design, whereas the current review also takes into account good-quality case control studies. The authors concluded that children subjected to previous maltreatment were six times more likely to experience recurrent maltreatment than those who had not been subject to previous maltreatment. Three other factors consistent with predicting reoccurrence of maltreatment were identified and included experiences of neglect, parental conflict and parental mental health problems.

A third study exploring the links between parental substance abuse and child abuse (Barnard & McKeganey, 2004) was found using a “Google” Search. The study reviewed literature on the impact of parental substance misuse as well as the efficacy of key substance misuse interventions. The authors concluded that based on previous literature, substance misuse can

impede parenting and the provision of a nurturing environment. The study did not include quality review of literature and primarily focuses on studies assessing intervention outcomes for substance misusing mothers.

Taking these three studies into consideration as well as the scoping searches employed prior to initiating this review, it was apparent that the specific links between substance misuse and child maltreatment generally had not been considered in a systematic approach.

Aims:

This systematic review aims to assess the links between parental substance misuse and all forms of child maltreatment.

Objectives:

The objectives of this systematic review are as follows:

1. To determine whether there is an association between parental substance misuse and child maltreatment.
2. To determine the nature of the link between parental substance misuse and child maltreatment within and outside of the context of other risk factors.

METHOD

Sources of literature

A search was conducted on electronic databases including PsychINFO (year 1806 to week one September 2009, completed on the 2nd September 2009, including Journals@Ovid Full

Text), MEDLINE (1950 to week one September 2009, completed on the 2nd September 2009), Web of Science (1900 to current, completed on the 3rd September 2009), ASSIA (1987 to current, completed on 3rd September 2009), ERIC (1966 to current, completed on the 3rd September 2009), Social Services Abstracts (1979 to current, completed on the 3rd September 2009), National Criminal Justice Reference Abstracts (1975 to current, completed on the 3rd September 2009), and Health Sciences (1982 to current, completed on the 3rd September 2009). See *appendix 2* for syntax.

A search of the gateway Cochrane CENTRAL was also employed in order to search for existing reviews (1801-2009, completed 3rd September 2009). Reference lists of the three reviews mentioned earlier exploring links between risk factors and child maltreatment were hand searched for studies matching the current inclusion criteria resulting in an additional ten studies. Meetings were held with two experts in order to gain additional resources, and email contact was attempted with four authors, one was unreachable and three did not reply.

Search strategy

Searches were restricted to articles written in the English language due to both financial and time constraints of translating studies. In databases that allowed it, editorials and comment papers were omitted from the search. Unpublished work was also excluded from this review. Although this may lead to some publication bias it was deemed practical due to time constraints of attaining original articles, as well as lack of peer review. Ideally, hand searching would have been employed on Journals (for example, *Child Maltreatment* and *Child Abuse and Neglect*) due to the high volume of studies on this topic published in these journals, however time constraints did not allow for this.

Search terms

The following terms were entered into the search. Although mapping to subject headings is a more efficient way to search for studies, keywords were also utilised in order to minimise the amount of studies that might be lost due to incorrect coding. Whilst this greatly increased the number of hits and duplicates, it also allowed for consistency across electronic resources due to some databases that did not have the mapping option. Therefore Child Abuse and Child Maltreatment terms were checked for their inclusion of physical abuse, sexual abuse, emotional abuse and neglect (physical and emotional). Similarly substance, drug and alcohol terms were mapped to subject headings to include different types of alcohol and drugs that may not have been coded under ‘substance,’ ‘drug’ or ‘alcohol.’

(Child Abuse) OR (Neglect) OR (Child Maltreatment) OR (Child Protection) OR
(Child Welfare)

AND

(Parent) or (Parental) or (Caregiver) or (Mother) or (Father)

AND

(Substance Abuse) or (Substance Misuse) OR (Alcohol Abuse) or (Alcohol Misuse) or
(Drug Abuse) or (Drug Misuse)

Study selection

Initial scoping searches and a review of previous literature on the databases mentioned above led to the formation of inclusion/exclusion criteria as follows:

Population: Substance misusing adults, parents, pregnant women, and populations identified to be at-risk. Maltreated children under age 18 only.

Exposure: Risk Factor: Alcohol, drug or other substance abuse.

Comparator: None, or non-alcohol, drug or substance abusers

Outcome: Child abuse, neglect or maltreatment, potential child abuse, neglect or maltreatment.

Study Design: Cohort or case-control studies.

Exclusions: Opinion papers, commentaries, editorials, non-English papers, unpublished papers, cross-sectional or case series designs, treatment interventions.

A copy of the Inclusion/Exclusion Criteria utilised to assess all studies at this stage has been included in *appendix 3*. The author applied this criterion to all studies. Those abstracts that did not reveal enough information to apply the criteria were assessed using the full text article accessed in a library, electronically or through inter-library loan. All articles passing the criteria and those that were unclear or of any of potential relevance were downloaded as full text. One article was unable to be retrieved. All studies passing the inclusion/exclusion criteria were assessed for quality. Therefore, studies excluded were those a) that did not meet the inclusion criteria; and b) that met the inclusion criteria but attained quality assessment scores under the cut-off point (70%). Studies excluded due to their cross-sectional design have been shown below in Table 2.1.

Table 2.1: *Quality assessed cross-sectional studies*

Authors/Year	Hypotheses	Sample Size	Comparison Group	Abuse Type	Results
Chaffin, Kelleher & Hollenberg, (1996)	Whether substance abuse disorders and depression, as well as other psychiatric disorders, are risk factors for physical abuse or neglect.	7103	None	Physical, Neglect	Substance abuse disorders strongly associated with the onset of both abuse and neglect
Famularo, Kinscherff & Fenton, (1992)	Whether unique patterns of substance abuse could specifically predict the probability of physical or sexual maltreatment.	190	None	Physical, sexual, neglect	Alcohol abuse is specifically associated with physical maltreatment. Cocaine specifically related to sexual maltreatment.
Lewin & Aabrbo, (2009)	Associations between seriously-mentally-ill mothers and child maltreatment	122	None	Physical, Neglect	Most frequently occurring diagnoses amongst child maltreating sample was polysubstance dependence, followed by dual diagnosis of mental health and substance misuse
Sheridan, (1995)	To explore the relationships among substance abuse, family functioning, and abuse/neglect in a sample of incarcerated substance abusers	81	None	Any	Significant direct and indirect relationships among parental substance abuse, family dynamics, and exposure to both child and adult maltreatment.
Sprang, Clark & Bass, (2003)	That the severity of child maltreatment is a function of adult and child factors.	208	None	Any	Specific adult, child, and relational factors significantly contribute to the level of maltreatment severity.
Wall, Wekerle & Bissonette, (2000)	To investigate whether potential risk factors were associated with reports of abuse in the community. To investigate the combined effects factors as risk for child abuse and neglect	212	Non-alcoholic homes	Any	Family history of alcoholism significantly associated with higher levels of childhood abuse.

The study selection process resulted in 57 studies that both met the inclusion criteria and were therefore quality assessed (see below). This led to the removal of a further 43 studies, resulting in 14 studies being included. Figure 2.1 displays the process of study selection with detail regarding the number of studies excluded at each stage.

Quality assessment

Following the inclusion/exclusion stage, the methodological quality of included studies was assessed. Cohort studies and case control studies were assessed on separate criteria in order to accurately assess the validity of each study. The University of York: Centre for Reviews and Dissemination (CRD, 2007) website was accessed for information regarding quality assessment, assisting with the development of checklist items. The key variables assessed were: aims of the study; study design; sample selection; attrition rates; statistical analysis; clarity of outcome measure; identification and measurement of risk factor; and appraisal of limitations. Each item on the scoring sheets (*see appendix 4*) was assessed on a three-point scale (*Yes* (2), *Partly* (1), and *No* (0)), with an option for '*unknown*', which was not included in the scoring, but given extra attention in a qualitative manner. The total quality score was obtained by adding the scores of each item, providing a total score ranging from 0 to 58 for cohort studies, and 0 to 62 for case-control studies. Furthermore, to assure the variables were being assessed correctly and consistently, a second reviewer also assessed a quarter of these studies and achieved an inter-rater reliability of 0.89. Differences between reviewers were resolved by consensus.

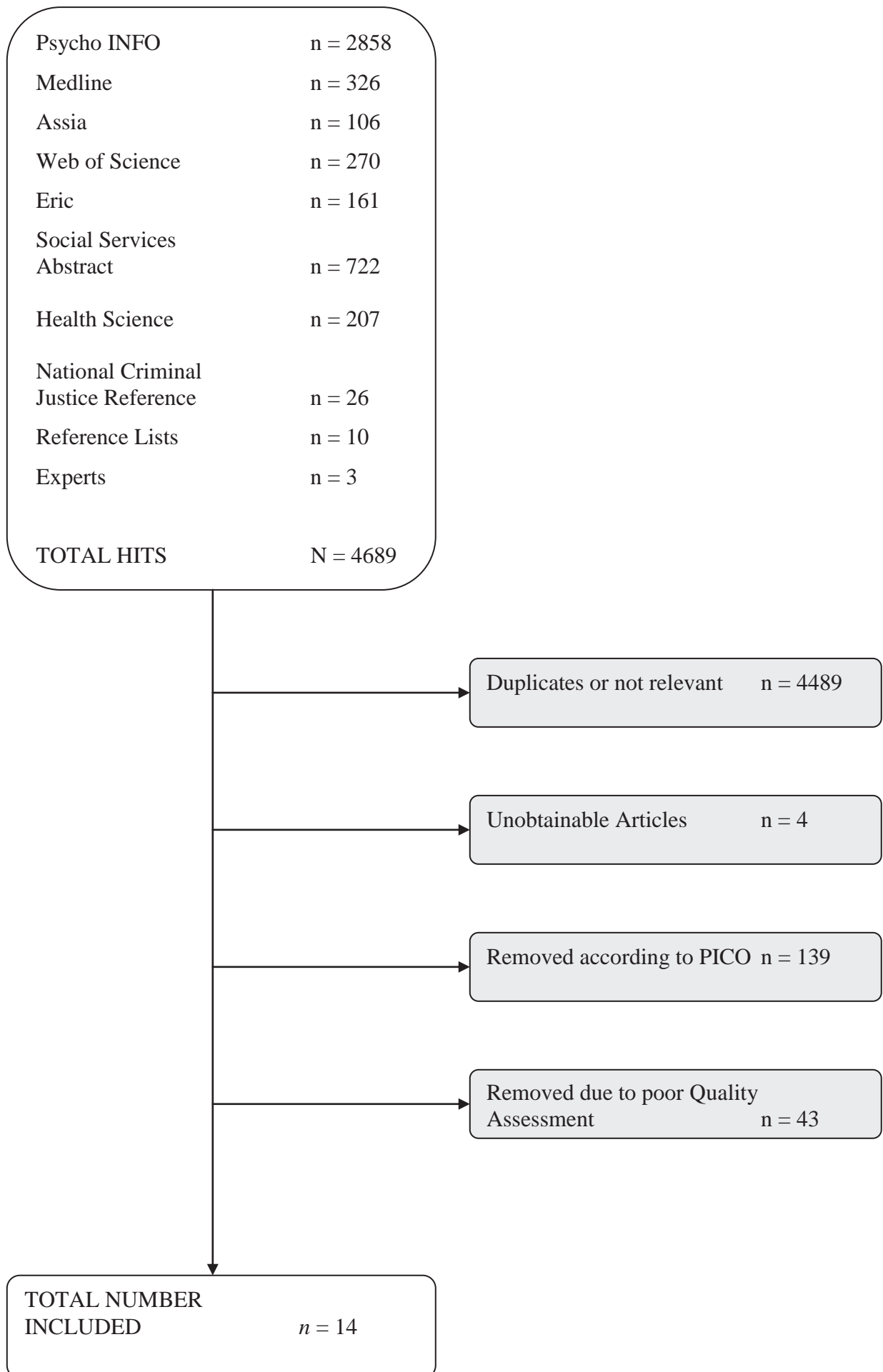


Figure 2.1: Flowchart: Description of Search

Due to the large volume of studies, only those assessed to be of good quality (cut-off point of 70%) were included. Although this may produce some bias, it ensures that the conclusions and recommendations of this review are based only on those studies assessed to be of a high quality, particularly in terms of methodological considerations.

Data extraction

A predefined pro-forma was established in order to extract relevant data from each study. The form (*see appendix 5*) allowed for both general information and more specific details required to make conclusions in this review, and covered the following items:

- Study design
- Characteristics
- Sample information including number of participants in each group
- Specifics of type of exposure
- Measurement of exposure, including validity if tool used.
- Type of maltreatment
- Follow-up period
- Measurement of maltreatment, including validity if tool used.
- Steps taken to improve validity of self-reporting and interviews.
- Attrition rates
- Confounding factors (CF)
- Clarity of study
- Limitations

Information that was indecipherable from studies was recorded as ‘*unknown.*’ Contact with authors was not feasible in the time frame of this review.

RESULTS

Descriptive data synthesis

Findings from studies receiving a quality score of above 70% are discussed here. The results of the included studies were not statistically combined for quantitative data synthesis for two reasons. In addition to strong argument that meta-analyses of observational epidemiological studies can produce spuriously accurate, and so misleading, summary statistics (Egger, Schneider & Smith, 1998), data synthesis in the current study is contra-indicated by the heterogeneity of studies, for example in terms of the settings participants were recruited from, types of maltreatment found, and types and measurement of substance misuse. Therefore, in reaching conclusions, studies were examined in a qualitative manner. Due to the nature of the statistical analyses used, the recommended task of calculating effect sizes (Breakwell, Hammond, Fife-Shaw & Smith, 2006) was not implemented. Collation of data from included studies can be viewed in Tables 2.2 and 2.3.

Table 2.2: Characteristics of Included Case-Control Studies (n=5)

Authors/ Year	Aim/Hypotheses	Sample Size (n) & Methods	Comparison Group	Operalisation of Child Abuse and Measure	Substance Misuse Measure	Attrition Rate	Statistical Analysis	Results	Quality Score
Ammerman Kolco, Kirisci, Blackson & Dawes (1999).	(1) Child abuse potential greater in fathers and mothers with histories of Substance Use Disorder (SUD) (2) parents with past (but not current) histories of SUD would have similar Child Abuse Potential Inventory scores to those with current SUD diagnoses; (3) SUD history in one parent would increase abuse potential in the other, regardless of the partner's SUD history.	290 - Matched, Centre for Drug Abuse and Research	No lifetime diagnosis of substance abuse disorder	As operationalised in CAPI - Child Abuse Potential Inventory	DSM-III-R criteria, Structured Clinical Interview for DSM-III-R, Lifetime Alcohol Use Interview	Not stated	Univariate Analysis (ANCOVA)	History of SUDs in both fathers (F=60.70, p<0.001) and mothers (F=39.91, p<0.001) increases abuse potential. Contributors to abuse potential differed in fathers and mothers.	83.87% Score: (52/62) 2 U/K
Leventhal, Forsyth, Keqin, Johnson, Schroede r & Votto (1997)	To determine the relative risk of either maltreatment or placement outside the home during the first 2 years of life in children born to women who used cocaine during pregnancy	278 - Non-Prob, Cocaine-using mothers	Women who had not used cocaine during pregnancy	Occurrence of physical abuse, sexual abuse, neglect, or abandonment. Children's medical records at 2 hospitals, 2 neighbourhood health centres, and 2 health maintenance organisations.	Prenatal and obstetric records	19.70%	Matched Risk Ratios and Logistic Regression	Children born to women who used cocaine during pregnancy at increased risk of maltreatment or placement outside the home. Mother's use of cocaine is more likely a marker of increased risk rather than a single explanatory variable. 9.3% in exposed group had been maltreated compared to 1.4% in control group.	82.26% Score: (51/62) 4 U/K

Ondersma, (2002)	To explore the relative ability of substance abuse, depression, social support, and negative life events to predict neglect status among low socio-economic-status families with substantiated neglect	205 - Non-Prob Involved with child agency	No prior DFCS neglect reports. Matched Sample	Second National Incidence Study of Child Abuse and Neglect (Sedlak, 1988). Current involvement with DFCS for substantiated neglect;	Caregiver report, standard interview	Unclear	Logistic Regression Analysis	Substance abuse strongest predictor of neglect status as well as of parental disposition and adequacy of home environment (present in 31% of total sample, and 56% of neglect sample ($X^2 = 60.6$, $p < 0.001$).	79.03% Score: (49/62) 3 U/K
Kelley (1992)	To examine the relationship between prenatal exposure to drugs and parenting stress and child maltreatment.	24 - Non-prob. Mothers at a paediatric well child clinic	Mothers of infants with -ve toxin screens for maternal cocaine, matched on age, race, socioeconomic status.	CPS records	Test for positive neonatal urine assay for drug metabolites or if the mother self-reported use of drugs during pregnancy.	2%	Chi-Square	Strong association found between maternal use of drugs and child maltreatment serious enough to necessitate removal of the children by CPS. Maltreatment in 58% of drug-exposed compared to 8% of non-drug-exposed, ($X^2 = 13.5$, $p < 0.001$).	77% Score: (48/62) 4 U/K
Williams-Peterson, Myers, Degen, Knisely, Elswick & Schnoll (1994)	Substance users would score high on child abuse potential, and that those substance users who were also socially isolated would score higher on child abuse potential than other groups	80 - Random selection from prenatal clinic referrals	Pregnant non-drug users	CAPI	Urine toxicology, modified version of the Lincoln Council on Alcoholism and Drugs Health Questionnaire, medical records, involvement in drug program	Unclear	Stepwise Multiple Regression	Drug using women scored significantly higher on CAPI ($M = 213.6$, $p < 0.01$) than non-drug using ($M = 156.5$, $p < 0.01$). More than half scored in clinical criterion for extreme risk. Subgroup of socially isolated drug users scored higher on the CAPI.	73% Score: (45/62) 5 U/K

Table 2.3: Characteristics of Included Cohort Studies (n=9)

Authors/ Year	Aim/Hypotheses	Sample Size (n) & Methods	Comparison Group	Operalisation of Child Abuse and Measure	Substance Misuse Measure	Attrition Rate	Statistical Analysis	Results	Quality Score
Swanston, Parkinson, Oates, O'Toole, Plunkett & Shrimpton (2002)	Family functioning, mother's mental health, and record of previous notifications for abuse or neglect with the NSW Department of Community Services would predict the number of notifications for abuse or neglect after intake to the project.	183 - Sexually abused children aged 5-15 years presenting to Child Protection Units	None	Descriptive. Consistent with national definition. - Presentation to CPU	CPU records	Not stated	Univariate Analysis, Matched Risk Ratios	Risk factors include: history of parental conflict, history of parental mental problems or disorder, parental history of alcohol abuse, having caregiver changes before intake, and social worker's ratings of family functioning (RR=2.67, 95% CI: 1.24 to 5.74)	96.55% Score: (56/58) 1 U/K
Rittner (2002)	Children residing with parents or with relatives would experience the highest rates of recurrences of abuse	447 - Random selection from CPS cases. 200 active, 205 closed, 42 transfere d to foster group.	None	Unclear - CPS case record data collection	Identified at intake by CPS workers and administrators	3%	Chi- Square	Substance abuse most predictive of recurrence of abuse. This relationship not significant when substance abuse independent of other environmental factors, but increased model prediction (F(1,96)=9.203, p>=0.0025)	93.10% Score: (54/58) 2 U/K
Brown, Cohen, Johnson & Salzinger (1998)	To investigate whether potential risk factors were prospectively associated with reports of abuse in the community. To investigate the combined	644 - Prob. sampling. Families part of larger	None	NY state definition of child abuse. - CPS case record, and self-report.	Interviews	21%	Odds Ratios	Risk factors: multiple including substance abuse (OR = 4.91, 95% CI: 2.41-10.01). Risk factors separated into child, familial and	93.10% Score: (54/58) 2 U/K

English, Marshall, Brummel & Orme (1999)	effects of demographic, family, parent, and child characteristics on risk for child abuse and neglect To replicate and extend prior research on the characteristics and correlates of child maltreatment recurrences based on an ecological model of child maltreatment.	sample of children aged 1-10 (1975). 4437 – Non-random. Initial or later referrals, sample of 42000 CPS referrals	None	Specific questions related to incidents. Consistent with WRM matrix - WRM risk measure of 3-5	Unclear - assessed by CPS worker?	0%	Bivariate Association	community. Community factors include protective factors. Likelihood of referral increased with risk factors of history of DV, history of caregiver abuse/neglect, and substance abuse (specific not provided, $p<0.05$)	91.38% Score: (53/58) 2 U/K
Jaudes, Ekwo & Voorhis (1995)	Children born to mothers who use drugs during the index pregnancy are at a higher risk of subsequent abuse or neglect than are infants in the general population.	513 - Non-prob. Illicit drug users at pregnancy	None	Detailed description, consistent with national definitions. - State Records - State Central Registry	Mother's urine tested positive for illicit drug(s), or the mother admitted to chronic use of illicit drugs during the index pregnancy.	Unclear	Logistic Regression Analysis	Infants exposed in-utero to drugs have a higher than expected risk of subsequent abuse compared to children in the general population. 127 cases of child maltreatment per 1000 years exposure.	84.48% Score: (49/58) 4 U/K
Wolock & Magura (1996)	Parental substance abuse would have a negative impact on family functioning, which, in turn, would result in a higher rate of re-reports	239 - Non-probability, Cases referred to CPS	Non-substance abusing mothers	Record reviews. Substantiated and unsubstantiated.	(1) Self reported information provided in one or more of the interviews; and (2) information found in the first and second case record reviews.	11.70%	Chi-Square and multiple regression	Parental substance abuse increases likelihood of poorer family functioning and re-reports for maltreatment to CPS - directly ($r=0.60$, 0.28 , 0.35 for drugs and alcohol, drugs only and alcohol only), and as mediated by family functioning ($r=-0.24$, -0.13 , $p<0.05$).	77.59% Score: (45/58) 4 U/K

Wassermann & Levantthal (1993)	To investigate the relationship between maternal cocaine dependency and child maltreatment	94 - Cocaine-using mothers	Women who had not used cocaine during pregnancy	In previous study - Children's medical records	Unclear	Unclear	Matched Risk Ratios, MANOVA and Logistic Regression	Children born to women who used cocaine during pregnancy at increased risk of maltreatment or changes in primary caretaker during first 24 months. Maltreatment occurred in 23% of cocaine group versus 4% of comparison group (RR=5.5, 95% CI: 1.3 to 23.5).	76% Score: (44/58) 3 U/K
Forrester & Harwin (2006)	To explore British research on parental substance misuse in social work cases.	290 - Non-Random, substance misusing families in CPS case load	Non-substance abusing parents	Unclear - Long term allocation	Social work cases, interviews with social workers.	Unclear	ANOVA	Families involving substance misuse more vulnerable on variety of measures: children were younger, parents had more individual problems, families lived in more difficult social situations. Parental substance misuse (34%) cases at 'heavy end' at point of allocation.	74.14% Score: (43/58) 3 U/K
McGlade, Ware & Crawford (2009)	Will be significant differences will be found in Child Protection rates in infants of substance-using mothers and non-substance-using mothers.	357 - Non-Random, hospital sample, referred to specialist service. Matched control	Infants of non-substance misusing mothers	Unclear - CPS notification records	Maternal disclosure notes in hospital records	0%	Point-estimate Chi-Square; Cox regression	Infants of substance-misusing mothers more likely to suffer substantiated harm. Maltreatment in 52% of substance-using compared to 15% in non-substance-using. (HR=12.3, 95% CI: 6.9 to 21.6). Higher rates for illicit substances.	72.65% Score: (42/58) 3 U/K

Study populations

Eleven of the studies were conducted in the United States, two in Australia, and one in the UK. Eight of the studies included both maternal and paternal substance abuse, and five studies included maternal substance abuse only. Types of substance misuse are discussed later in the review.

The majority of studies dealt with samples of families/children/caregivers living in community settings identified by administrative child protection databases. Three studies identified their study population by assessing women who, at time of giving birth, were identified by the hospital as having exposed themselves and/or their children to illicit substances (Jaudes, Ekwo & Voorhis, 1995; Leventhal, Forsyth, Qi, Johnson, Schroder & Votto, 1997; McGlade, Ware & Crawford, 2009). One study identified a sample from a prenatal clinic (Williams-Peterson, Myers, McFarland, Knisely, Elswick & Schnoll, 1994). One study identified fathers living in the community with substance abuse history recorded by a National Drug Program (Ammerman, Kolko, Kirisci, Blackson & Dawes, 1999).

Type of maltreatment

Two studies specified the type of abuse criteria (Ondersma, 2002, Rittner, 2002). One of these studies used a special sample of children presenting to hospital following sexual assault allegations (Rittner, 2002). Eleven studies included children who had experienced any form of child maltreatment (Ammerman et al., 1999; Brown, Cohen, Johnson & Salzinger, 1998; Forrester & Harwin, 2006; Jaudes et al., 1995; Kelley, 2002; Rittner, 2002; Leventhal et al., 1997; McGlade, Ware & Crawford, 2009; Wasserman & Leventhal, 1993; Williams-Peterson et al., 1994; Wolock & Magura, 1996). One study included any form of maltreatment but

excluded cases where there were multiple forms of maltreatment (English, Marshall, Brummel & Orme, 1999). One study included children who had experienced sexual assault only (Swanston, Parkinson, Oates, O'Toole, Plunkett & Shrimpton, 2002), and another included children who had experienced neglect only (Ondersma, 2002). In terms of frequency, ten of the studies looked at any instance of child abuse, whilst four studies (English et al., 1999; Rittner, 2002; Swanston et al., 2002; Wolock & Magura, 1996) looked at recurrence of child abuse. Those studies which initially defined a specific type of maltreatment, considered any form of subsequent maltreatment as a form of recurrence.

The balance of research suggested that neglect is the type of abuse associated with the highest risk of future maltreatment (English et al., 1999; Jaudes, et al., 1995; Leventhal et al., 1997; Rittner, 2002; Swanston et al., 2002; Wasserman & Leventhal, 1993). On average, eight studies reported that 31% of their sample had been or are at risk of neglect ($range = 6.5-72.6$, $SD=13.45$). On average, the eight studies that reported statistics by type of maltreatment reported that an average of 21% of their sample had been or are at risk of physical abuse ($range = 0.7-30.9$, $SD=14.21$). Three of these studies (Brown et al., 1998; McGlade et al., 2009; Wolock & Magura, 1996) found the risk or reoccurrence of physical abuse to be higher than other forms of maltreatment, but still found very high rates of neglect. For example, Brown et al. (1998) reported that, compared to non substance misusing mothers, maternal substance misuse increased risk of physical abuse by 4.91 times and multiplied risk of neglect by 4.38. Wolock and Magura (1996) reported a rate of 62.80% for physical abuse ($n = 150$) and 51% for neglect ($n = 122$). McGlade et al. (2009) reported a difference of 15.90 in the hazard ratio between physical abuse and neglect, however did not report the number of

participants represented in these categories. The five remaining studies, all falling within the medium level of quality assessment, did not report individual findings of the type of abuse.

There were differences in studies as to whether measurement of the child abuse outcome was necessarily substantiated or not by way of Child Protection Services. Six studies relied on substantiated reports only (English et al., 1999; Jaudes et al., 1995; Kelley, 2002; McGlade, Ware & Crawford, 2009; Ondersma, 2002; Swanston et al., 2002), whereas the remaining eight studies found sufficient the use of self reports, notations in medical records and measurement of child potential in assessing child maltreatment (Ammerman et al., 1999; Brown et al., 1998; Forrester & Harwin, 2006; Leventhal et al., 1997; Rittner, 2002; Wasserman & Leventhal, 1993; Williams-Peterson et al., 1994; Wolock & Magura, 1996)

Follow-up of participants

There was a wide range of follow-up across the studies ranging from 18 months to 17 years. English et al. (1999) and Rittner (2002) both identified a follow up time of 18 months, but performed routine follow-ups every six months. This may have been a contributing factor to the zero percent attrition rates for English et al. (1999) and a 3% attrition rate for Rittner (2002). Both of these studies received high quality scores. Four studies performed two-year follow-ups (Forrester & Harwin, 2006; Jaudes et al., 1995; Wolock & Magura, 1996; Wasserman & Leventhal, 1993). Two of the highest quality-rating studies used lengthier follow-up times, as one followed up their sample after six years (Swanston et al., 2002) and another 17 years (Brown et al., 1998). McGlade et al. (2009) used varied follow-up periods of 26 months to 74 months (*med=49 months*). Many studies failed to provide attrition rates,

affecting their overall quality assessment score. The attrition rate for Brown et al. (1998) was the highest recorded, however this study covered the longest time period.

A national report in the United States found that infants and toddlers are more likely to be victims of abuse, however no effects of age were found in the included studies (United States Department of Health and Human Services, 2002). English et al. (1999) and Jaudes et al. (1995) found that subsequent follow-ups resulted in the finding of additional incidents of abuse to one child.

Types of substance misuse

On balance it was found that cocaine was the most frequently used substance amongst samples (Forrester & Harwin, 2006; Jaudes et al., 1995; Kelley, 2002; Rittner, 2002; Williams-Peterson et al., 1994). Amongst these studies, heroin was found to be the second most frequently used drug. Wolock & Magura (1996) found that the combination of both alcohol and drugs was more likely to be a risk factor than alcohol or drugs alone. This was negated in a study by Forrester and Harwin (2006), however it must be noted that this study scored a much lower quality assessment score. Two studies measured the use of cocaine only (Leventhal et al., 1997; Wasserman & Leventhal, 1993). McGlade et al. 2009 chose to measure opiates and amphetamines only due to high usage of these substances in their geographical region of Brisbane, Australia, and for the same reasons chose to exclude cocaine and marijuana. The five remaining studies did not report specific types of substance misuse.

Substance misuse measures

There was much variation across studies in the measurement of substance misuse. Four studies examined hospital records of mothers who had given birth, obtaining results from toxicology screens (Jaudes et al., 1995; Kelley, 2002; Leventhal et al., 1997; Williams-Peterson et al., 1994). Two of these (Jaudes, et al., 1995; Kelley, 2002) also employed the use of self-reports, and Williams-Peterson et al. (1994) included the use of other sources such as the participant's involvement in a drug program, and a questionnaire. McGlade et al. (2009) utilised hospital records, however substance misuse was identified through self-disclosure and referral of infants to specialist unit. Three studies (Forrester & Harwin, 2006; Ondersma, 2002; Rittner, 2002) utilised information attained from child protection case workers and administrators, along with case records, whereas (Swanston et al., 2002) used case records alone. Wolock and Magura (1996) utilised both information found in social services case records, as well as self-reported information through the use of interviews. Ammerman et al. (1999) utilised a psychometric tool in combination with interview, applying results to the DSM-III-R criteria. Finally, two studies did not clarify their substance misuse measures (English et al., 1999; Wasserman & Leventhal, 1993).

As no studies negated the association between substance misuse and child maltreatment, results were subgrouped into the nature of association found.

i) Substance abuse as a direct factor of child abuse.

Five studies examined the association between substance misuse as a sole risk factor leading to child maltreatment. Kelley (2002) found that nearly 60% of drug-exposed infants were the subject of subsequent substantiated reports of abuse or neglect in contrast to just over 8% of

control children ($\chi^2=13.50$, $df=1$, $p<0.001$). Wolock and Magura, (1996) found that parental substance misuse directly increased the likelihood of re-reports for maltreatment to the CPS agency ($\chi^2=18.32$, $df=3$, $p<0.0003$). Wasserman and Leventhal (1993) used a matched risk ratio analysis, a method that allows for the comparison of odds ratios of two cohorts, taking into consideration the effect of confounding variables. They found that children born to women who used cocaine during pregnancy were at a substantially increased risk of maltreatment or changes in primary caretaker during the first 24 months of life ($RR=5.50$, $CI=1.29, 23.50$). In their bivariate analysis, they found a significant association between mother's race and gravidity, and the newborn's duration of hospital stay with abuse outcome. A multiple regression controlling for these factors suggested substance abuse as a risk factor independent of these variables. McGlade et al. (2009) concluded that substance-misusing mothers were more likely to have substantiated notifications than non-substance-misusing mothers, accounting for gestational age, gender, and maternal age ($HR: 12:30$, $95\% CI: 6.90-21.60$). Williams-Peterson et al. (1994) found that drug-abusing women scored higher on child abuse potential ($p<0.01$). Although all studies in this review have been quality assessed, it must be noted that the five studies which drew conclusions suggesting a direct association between substance misuse and child maltreatment achieved the lowest quality assessment scores (77.42%, 77.59%, 75.86%, 72.65% and 72.58% respectively).

ii) Substance misuse as an indirect factor for child maltreatment

As mentioned above, Wolock and Magura, (1996) found a direct association between substance misuse and re-reports of child maltreatment, however, in addition they found that substance abuse may contribute to poorer family functioning, further associated with re-

reports of child abuse. McGlade et al. (2009) highlighted the absence of other risk factors to be a limitation of their study.

Two studies found that substance misuse is a risk for child abuse, but when examined independently of other risk factors, the direct association between substance misuse and child maltreatment disappeared (Leventhal, et al., 1997; Rittner, 2002). Rittner (2002), amongst the highest quality scoring studies (93%), found in her chi-square analysis that re-abusers differed significantly from non-re-abusers on the substance misuse measure ($\chi^2=5.18, df=1, p<0.02$), however she also found substance misuse to lose its predictive value when entered into a stepwise regression ($F_{(1, 596)}=9.203, p>0.0025$), suggesting it is not amongst the primary factors predicting abuse. Leventhal et al., (1997) found that children born to cocaine-using mothers were 6.5 times more likely to be maltreated, however when controlling for differences in risk factors group members were exposed to, cocaine-using mothers did not differ from the control group in their potential for child abuse. Consistent with this, seven studies initially found direct associations between substance abuse and child abuse, but found this association to cease in the presence of other risk factors (Ammerman et al., 1999; Brown et al., 1998; English et al., 1999; Forrester & Harwin, 2006; Jaudes et al., 1995; Ondersma, 2002; Swanston et al., 2002).

Other risk factors identified by these included studies were: maternal sociopathy, low religious attendance, parental history of abuse (Brown et al, 1998; Jaudes et al., 1995; Rittner, 2002); maternal youth, low maternal education (Brown et al, 1998; Jaudes et al., 1995); maternal low self-esteem (Ammerman et al., 1999; Brown et al., 1998); low income (Brown et al, 1998; Leventhal et al., 1997; Ondersma, 2002; Rittner, 2002); previous planned abortion

(Jaudes et al., 1995), parental convictions (Forrester & Harwin, 2006); violence in the home (English et al., 1999; Forrester & Harwin, 2006; Swanston et al., 2002; Leventhal et al., 1997); employment status, maternal stress (English et al., 1999); social support (English et al., 1999; Ondersma, 2002); changes in caregiver (Swanston et al., 2002); parental mental health (Ondersma, 2002; Rittner, 2002; Swanston et al., 2002); family functioning (Ammerman et al., 1999; Swanston et al., 2002); and exposure to violence during pregnancy (Jaudes et al., 1995).

DISCUSSION

Main findings:

This review had two aims and each is discussed in turn.

- 1. To determine whether there is an association between parental substance misuse and child maltreatment.*

Of the total 14 studies included in this review, all studies found an association between parental substance misuse and child maltreatment. A direct association was found by five studies (Kelley, 2002; McGlade, Ware & Crawford, 2009; Wasserman & Leventhal, 1993; Williams-Peterson et al., 1994; Wolock & Magura, 1996); however the quality of all five of these studies was on the low end of the quality assessment spectrum. If considering clinical rather than statistical significance, consideration should be directed towards one of these studies which identified a causal link between substance abuse, poorer family functioning and child abuse, where results suggest that substance abuse leads to poorer family functioning which in turn leads to increased risk of child maltreatment (Wolock & Magura, 1996). If

considering statistical significance, studies on the higher end of the spectrum suggest that substance misuse is *amongst* other factors that lead to poorer family functioning and in turn risk of child maltreatment, as discussed below.

2. *To determine the nature of the link between parental substance misuse and child maltreatment within and outside of the context of other risk factors.*

A majority of the studies included in this review found that substance misuse, as a single factor, is not a strong predictor of child maltreatment. In fact two studies found that substance misuse had no association with child maltreatment when it is held independent to other risk factors (Leventhal et al., 1997; Rittner, 2002). Therefore the results suggest that substance misuse should not be assessed as a sole factor when assessing risk for child maltreatment. Other risk factors identified by these quality-assessed studies included maternal sociopathy, low religious attendance, parental history of abuse, maternal youth, low maternal education; maternal low self-esteem; low income; previous planned abortion; parental convictions; violence in the home; employment status, maternal stress; social support; changes in caregiver; parental mental health; family functioning and exposure to violence during pregnancy.

Strengths and weaknesses of review

The current review included studies assessing both substantiated and unsubstantiated child maltreatment. Whilst this may have led to an increase of false negatives in findings, its inclusion is likely to have accounted for a higher number of true positives. In their systematic review, Hindley et al. (2006) excluded studies considering unsubstantiated abuse, possibly

introducing an element of bias in that their findings may only relate to families who are or have been involved in the child protection system.

A weakness of the current review is the sampling of studies included. Many of the studies used non-probability sampling or studied a population, a type of sample reported to be frequently unfeasible (Pedhauser & Schmelkin, 1991). However many of the studies used large sample sizes that may have compensated for this weakness, with the exception of Kelley (2002) who used a sample size of only 48 mothers.

The study population assessed in this review is very 'realistic' such that many substance-misusing parents continue to live in the community rather than in inpatient settings. Only one study utilised a specialised sample (Rittner, 2002), with a majority of studies utilising populations living in the community, hence providing a portrait of a "typical" family in which maltreatment occurs. In addition to this, the inclusion of all types of substance misuse, including those which may not be considered as 'illegal' in many countries (especially alcohol abuse) strengthened the applicability of the review findings to a larger and less specific population. Furthermore, the current review allowed for the inclusion of fathers in the study samples, an inclusion absent from both Connell-Carrick (2003) and Hindley et al. (2006). Although Dawe, Harnett, Staiger and Dadds (2000) found high rates of female lone parenthood in risk-populations, a national study found that among parents who lived with one or more children, fathers were more likely than mothers to abuse or be dependent on alcohol or an illicit drug (National Household Survey on Drug Abuse, 2003).

Methodological considerations

The search strategies utilised in this review were very comprehensive and inclusive, however there were feasibility issues which arose such as time and financial constraints impacting hand searching of reference lists and the exclusion of articles in languages other than English.

Although attempts were made in analysing statistical information correctly by utilising statistical literature and contacting statistics tutors, more time would have allowed the author to contact authors of articles to gain a much better understanding of findings, effects and strengths of findings.

Although existing reviews assisted the author (Connell-Carrick, 2003; Hindley et al., 2006), they addressed different angles of child maltreatment and thus were limited in references and statistical information provided. Therefore the inclusion/exclusion criteria utilised by previous studies and the current review differed greatly.

Quality assessment items utilised in this review were aimed at maximising the inclusion of methodologically valid studies. Specific attention was paid to sampling procedures and sizes, comparison groups, follow-up, the control and influence of confounding factors, measures of child maltreatment, and measures of substance misuse. Quality assessment forms were formed separately for the two types of study designs included: cohort and case-control, and were reviewed by a systematic review expert.

The use of a vote counting exercise has been employed in this review, as data were deemed unsuitable for qualitative synthesis due to heterogeneity of methodologies. This involved counting the numbers of studies found in each direction of results. It should be noted that this

method might have influenced the quality assessment process. Grimshaw et al. (2003) highlight the implications of this method such that those studies with a positive direction exclude estimates of effect size and precisions of the estimate such that sample size effect is neglected. Furthermore, those studies reporting *statistically* insignificant results will be excluded despite finding *clinical* significance.

A weakness of this study is that no valid measures could be taken to calculate effect size or provide an overall quantitative analysis due to the heterogeneity of statistical analyses used. Many studies omitted the data required to make such analyses, and would only have been accessible upon contact with the authors.

As with any systematic review, there is a possibility of publication bias (whereby studies with positive results are more likely to be published). A further criticism that may be controversial is that by excluding all but the most methodologically robust studies, important research findings are lost. Conversely, the exclusion of these studies means that the reader can be clear on what basis the studies have been selected, and the review is less prone to other forms of bias, such as attributing too much weight to the findings of studies which are flawed or weaker in design (Hindley et al. 2006).

A final limitation to be noted is that 11 of the studies in this review were conducted in the United States, two in Australia, and only one in the UK. Therefore some caution should be exercised in applying findings to other geographical areas.

Interpretation of the findings

The role of parental substance misuse in child maltreatment is difficult to disentangle from other factors associated with child maltreatment (Brown et al., 1998). Confirmative of suggestions made in other reviews (Barnard & McKeganey, 2004; Connell-Carrack, 2003; Hindley et al., 2006) parental substance misuse was found to play a role in the prediction of child maltreatment, however not as a sole predictor. This review found that substance misuse is linked to an array of individual and social factors. In this regard, teasing out the individual or social contributions of these various factors is a difficult process, and information provided in studies did not allow for concrete conclusions to be drawn regarding the strength of the relationship between parental substance misuse and child maltreatment in the context of other risk factors.

It must be noted that many parents in the samples were financially disadvantaged, socially isolated and mainly of poor levels of education (Brown et al., 1998; English et al., 1999; Jaudes et al., 1995, Leventhal et al., 1997; Ondersma, 2002; Rittner, 2002). The role that these factors play in the 'cause' of child maltreatment remains uncovered in relation to substance misuse, such that substance abuse may be a co-occurring effect caused by some of these underlying factors.

The current review also found that the type of substance abused may be relevant to the type of abuse perpetrated, and that cocaine was the most frequently used substance in child-maltreating families (Brown et al., 1998; Forrester & Harwin, 2006; Jaudes et al., 1995; Rittner, 2002; Williams-Peterson et al., 1994). This is highly relevant to the UK population as although Forrester (2000) in a UK study found that alcohol and heroin use were the most

predominately used substances in cases of child maltreatment, Forrester and Harwin (2006) suggested that consistent with the US, these trends have changed such that cocaine is now the most predominately abused substance identified in cases of child maltreatment.

Conclusions and recommendations: Implications of findings and limitations on practice.

Findings from the current review suggest the need for initiatives to be aimed at providing intervention programs for substance abusers. Although such interventions may be costly, the cost of implementation may outweigh the current expenditure resulting in the response and treatment of child abuse. Effects of substance misuse on the welfare system include staff shortages, limited availability of foster homes, unwieldy caseloads, and a lack of efficient and appropriate services (Barnard & McKeganey, 2004). In a World Health Assembly (2005) it was noted that interventions need not be complex or expensive, and in fact, that their institution after early identification of hazardous or harmful patterns of alcohol consumption is an effective and cost-effective strategy.

Exploring the effectiveness of intervention programs is beyond the scope of this research. Engagement and readiness is a major factor effecting treatment outcomes. In 1994, Finkelstein considered the problems faced by women who are in need of substance misuse treatment where they also have child-rearing responsibilities, stating that the lack of services for mothers and children and the lack of available child care are major obstacles to treatment.

However programs run in the UK have been found to be positive in reducing maltreatment and separation in families where there are substance-misusing parents. In the UK in 2002, the National Society for the Prevention of Cruelty to Children (NSPCC) and the Alcohol

Recovery Project (ARP) launched a pilot Family Alcohol Service (FAS). An independent evaluation of the service made positive conclusions, stating that both parents and children engaged in the process and positive outcomes were gained (NSPCC, 2003). Another program named the “Cardiff Option 2 Project” works with families where childcare professionals are seriously considering the need to remove children from the family home and there is a related parental substance misuse issue. This approach differs from that adopted by the FAS. Very intensive support is given to an at-risk family for four weeks with 24-hour support when necessary. The program has been evaluated very positively, such that 71% of goals had been achieved by the end of the four-week intervention; 12 months after the intervention, 77% of goals had been achieved and 84% of families were still together (Option 2, 2007). Taken together, the evaluations of these interventions suggest that family interventions should be at the core of future prevention of child maltreatment in substance misusing families.

Current structured assessment procedures implemented by child protection agencies do not adequately address risks to children associated with parental substance misuse, and research suggests that caseworkers are insufficiently trained at screening parents (Dore et al., 1995). The current findings also suggest that measures should be taken to assess risks associated with substance misuse before the occurrence of maltreatment. This suggests the need for development of validated, standardised measures to assess substance misuse among caregivers that are more specific for this population as opposed to current, more generalised tools assessing substance misuse or child abuse potential as separate measures. Developing valid and culturally sensitive assessment definitions, data, and tools are essential in future research. In line with this is the need for further research to assess the correlations between

risk factors, allowing for practical assessments of funding, resources and allocation of child maltreatment cases.

From reviewing the published literature on parental substance misuse and child maltreatment, the link between child maltreatment and parental substance misuse is shown to have been identified long ago, however up until this review, no systematic conclusions had been drawn. This is particularly true in terms of identifying studies assessed to be of good quality in relation to the methodologies applied. In doing so, this review clearly demonstrates, through high quality studies have highlighted the importance of the interplay between risk factors in predicting child maltreatment.

Findings from this review suggest that the typical maltreating family include a substance-misusing parent(s), a young mother with historical abuse and low self esteem, low income, lack of employment status, low levels of education, lack of social support, and parental mental health. This is consistent with previous research (Barnard & McKeganey, 2004; Connell-Carrack, 2003; Hindley et al., 2006). The suggestion of interplay between risk factors lends support to the need for future research to examine the relationships between substance misuse and other risk factors in an ecological context, the need to develop valid measures, and the need for clinicians to use multi-modal assessment and intervention approaches that address child, parental factors, and environmental factors and more importantly, the interaction between the two.

One such interaction is that of parenting stress, attributable to child factors and parent factors (within the *microsystem*), the parent-child relationship (*mesosystem*) and the surrounding

environment (*exosystem*). Chapter Three evaluates the use of the Parenting Stress Index in measuring such constructs.

CHAPTER THREE

Parenting stress as a factor of the Mesosystem: Psychometric critique of the Parenting Stress Index.

ABSTRACT

The use of psychometric tools is an important aspect within the field of forensic psychology, particularly where psychologists are being asked to make decisions around a child's welfare. Psychometric tools provide valuable support to actuarial measures and an evidence-based approach is vital especially considering the increased use of psychologists as experts (Ministry of Justice, 2008). It is imperative that psychologists understand the strengths and limitations of the tools they use and evaluate them within the context in which they are used.

The impact of parenting stress within child, family and social environments is well noted in previous literature. This review examines the psychometric tool the Parenting Stress Index (PSI) – Third Edition, (Abidin, 1995). The PSI is among the most common psychometric tools used by psychologists in child protection settings (Heinze & Grisso, 1996). The review provides an overview of the instrument, an outline of its potential uses and a discussion exploring its psychometric properties. The review finds evidence supporting the validity and reliability of the tool in addition to providing precautions regarding some content and the contextual use of the tool. This is followed by a discussion regarding its links to child maltreatment, and issues associated with its application to this area within the context of other available instruments. Implications of the tool are discussed with reference to previous literature.

Purpose and overview of the PSI (3rd edition)

Many integrative models have highlighted parenting stress to be a significant variable in predicting child abuse and neglect (Belsky, 1980, 1984; Bronfenbrenner, 1979; Haskett, Smith Scott, Grant, Sabourin Ward & Robinson, 2003; Milner, 1993; Wolfe, 1988). Studies directly examining the effect of parenting stress have demonstrated that those parents assessed to be at high risk of being abusive or to be abusive experience higher levels of stress than those parents who are assessed to be at low risk of abuse or who are not abusive (DePanfilis & Dubowitz, 2005; Kelley, 2003; McDaniel & Slack, 2005; Nair, Schuler, Black, Kettinger & Harrington, 2003; Rodriguez & Green, 1997; Whipple & Webster-Stratton, 1991). A recent study by Walker (2008) found that following filial therapy, parents had lower scores on the PSI, but that their child abuse potential scores remained the same (as measured by the Child Abuse Potential Inventory, CAP), suggesting that the PSI scores do not predict child abuse potential scores, however the study findings were limited by 85% of pre-test CAP scores showing 'fake good' responding.

Parenting stress has been defined by Abidin (1995) to be the excess anxiety and tension specifically related to the role of a parent and to parent-child interactions. The PSI is a 139-item self-report screening and diagnostic tool, developed as a measure of parenting stress that adopts a particular model of stress associated with parenting. The test is designed for use with parents of children aged one month to twelve years, however it should be noted that normative data for fathers is only available for fathers of children aged six months to six years. The instrument was first developed as a response to the need for a measure that assesses the multifaceted component of the parent-child system, more specifically, sources and levels of parenting stress thought to encompass many factors, including the extent to

which parents perceive themselves as having access to the resources required to carry out the parenting role. Some of these include marital conflict, depression and the behaviour of the child (Webster-Stratton, 1988). Four basic assumptions underlie the development of the PSI, these are a) that it would be based on an existing knowledge base; b) the PSI would integrate theoretical knowledge with clinical identification and diagnosis of individual parent-child systems under stress; c) stressors or sources of stress are additive and d) stressors are multidimensional as to source and kind. Subsequently, the construct of parenting stress was conceptualised by Abidin (1995) to include child characteristics, parent characteristics, family context and life stress events. A sample of items from the PSI are included as *appendix 6*.

Participants are provided with a item booklet, answer sheet and pen or pencil and asked to read each item and respond by circling either SA (*strongly agree*), A (*agree*), NS (*not sure*), D (*disagree*) or SD (*strongly disagree*). Some items are arranged differently such that the respondent is asked to select from items one to five in regards to the questions asked. The questionnaire takes approximately 20 minutes to complete and it is up to the administrator's discretion to administer the items related to Life Stress. If some answers have been omitted scores can still be calculated, although cautiously. Up to three items can be omitted from either the Child Domain or the Parent Domain, no more than one item from a subscale, or up to five items from the questionnaire in total (excluding the Life Stress Scale). There are 16 reverse items and fifteen items make up a Defensive Responding scale.

The PSI is relatively easy to score due to the underlying score sheet. As the PSI is a self-report questionnaire, responses are based on the client's own perceptions of their child, themselves and the environment around them. Therefore, although the PSI offers interpretive

explanations of high and low scores, it is imperative that scores are interpreted within the context of what is known about the adult and the child. When practitioners fail to do so, the tool is limited in its use and may lead to inaccurate conclusions. Scores on the defensive responding scale, indicated by shading, are summed and a score of 24 or less suggests the participant is likely to be responding in a defensive manner. Upon examining items that make up the defensive responding scale, it is noted that the participant must provide extreme responses in order to reach the defensive responding cut-off and therefore the scale is unlikely to pick up those participants with lower levels of defensiveness. As such, one may argue that the defensiveness scale would be better described as a 'lie scale.'

High scores on the child domain are associated with children who display qualities that make it difficult for parents to fulfil their parenting roles. High scores on the parent domain suggest that sources of stress and potential dysfunction of the parent-child system may be related to dimensions of the parent's functioning. In addition to this, a Life Stress Scale is also produced, resulting in an index of the amount of stress outside the parent-child relationship that the parent experiences. Parents who obtain high life stress scores find themselves in stressful situational circumstances that are often beyond their control, for example, bereavement or loss of job.

Psychometric properties

Kline (1986) describes a psychological test to be a good test if it possesses certain characteristics. This includes data based at interval level at a minimum, is reliable, is valid and has appropriate norms. These characteristics are discussed in turn in relation to the PSI.

Reliability

Reliability refers to the extent to which a psychometric tool measures a construct accurately, consistently and with minimal error. Although the use of psychometric tools is to increase the scientific basis of psychology and reduce the level of error, it must be acknowledged that within every psychometric tool is some level of error.

The consistency of a tool can be, and is commonly measured by the statistic Cronbach's alpha (Cronbach, 1951), producing alpha reliability coefficients. This has been referred to as the preferred coefficient in measuring reliability, such that a minimum of 0.7 is required to represent an 'adequate' test. In a study conducted on the PSI by Abidin (1995), coefficient alpha reliability coefficients were calculated based on the normative sample (N=2,633) and were found to range between 0.7 and 0.95. Archer (2006) has commented on the importance of administrators not to over-interpret these in relation to specific clinical profiles, arguing that the large sample size does not apply to all populations, for example, fathers, and considers that 95% of the population were Caucasian, and children were mostly under five years of age.

Test-retest reliability refers to the ability of a test to yield consistent scores when administered on the same population on more than one occasion. Various studies have examined the test-retest reliability of the PSI ranging from time periods of three weeks to one year and found correlation coefficients of 0.55 to 0.96 (N=15-54; Burke, 1978; Hamilton, 1980; Zareski, 1983). This was repeated by Abidin (1990) who found the same range of correlation coefficients in a sample of 54 mothers tested over the period of three weeks, one to three months and one year. Other studies have examined the test-retest reliability and produced the

same results with mothers who have maintained treatment gains over a four to six month time frame (Spaccarelli, Cotler & Penman, 1992). It should be noted that to date, test-retest reliability of the PSI has been tested on mothers only.

Validity

Concurrent validity refers to the degree to which the tool outcomes correlate with other tools measuring the same construct, measured at the same time. A study measuring infant development in relation to group stress levels with a sample of 54 mothers at three months and five months found there to be a significant difference amongst groups (Östberg, Hagekull & Wettergren, 1997). The researchers used a global measure of stress, a psychologist's clinical assessment of stress and a questionnaire about child problems in addition to the PSI and found all uses of assessments to positively correlate with one another, providing evidence that all four tools measure the same construct.

Holden, Foltz and Willis (1989) found correlations of 0.34 to 0.59 ($p < 0.001$) between the PSI and the CAP. They concluded that the PSI and CAP are measuring similar constructs as well as other unique aspects such as the type of maltreatment they are likely to be implicated with and the magnitude to which they are likely to be deceptive to others. In another study of low-income African-American mothers of children with developmental delays, Rodriguez and Murphy (1997) found even higher correlations between the PSI and the CAP ($r = 0.74$, $p \leq 0.001$), however the study was methodologically flawed with a small sample size, a heterogeneous sample of children with a variety of developmental delays, and of a much higher child age range (two to 14 years), outside the norms of one month to twelve years for mothers and six months to six years for fathers as developed by Abidin (1995).

Berry and Jones (1995) administered the PSI and the Parenting Stress Scale (PSS) to 43 parents, and found the two to correlate at 0.75 ($p < 0.01$). However this study should be considered with caution due to the exploratory nature of the PSS, the small sample size used, as well as the number of parents with above average income levels. Östberg, Hagekull and Wettergren (1997) examined parenting stress in three samples of mothers with small children using a Swedish version of the PSI. They calculated Global estimates of parenting stress from both mothers and psychologists, and found significant correlations of 0.38 and 0.53 respectively.

In summary, studies using appropriate methodologies have attested the concurrent validity of the PSI suggesting that as a tool it adequately measures the construct of parenting stress.

Predictive validity refers to how well scores on the tool predict another outcome or measure. Research pertaining to the predictive validity of the PSI is recent. Condie (2003) stated that no studies to date specifically test the predictive validity of the PSI. Others have argued that the predictive validity of the PSI extends to vast populations over and above the normative sample (Abidin, 1990; Archer, 2006; Heinze & Grisso, 1996). The cross-cultural validity of the PSI is a good example of this, as the PSI has been found to have good predictive validity when applied to populations outside of the United States (Abidin, 1990; Beebe, Casey & Pinto-Martin; Black, Schuler & Nair, 1993; Solis & Abidin, 1991). This will be discussed in more detail later.

More recent research has found causative associations between the PSI with termination of or non-compliance with treatment (Gerson, Farth, New & Fivish, 2004; Hipke, Wolchik, Sandler

& Braver, 2002; Mellins, Kang, Leu, Havens & Chesney, 2003), harsh punishment (Burbach, Fox & Nicholson, 2004; Florsheim et al., 2003; Lyons-Ruth, Lyubchik, Wolfe & Bronfman, 2002), depression (Milgrom & McCloud, 1996; Wilner & Goldstein, 2003) and mental health problems (LeCuyer-Maus, 2003).

Content validity involves an examination of the content of the test to determine whether it includes or represents the construct being measured. Abidin (1990) found evidence for the discriminant validity of the PSI with various child characteristics such as mental retardation, physical illness or disabilities, gifted children, children with emotional and behavioural difficulties, and normally developing children. A number of studies examining the various parent and child factors included in the PSI have found that it also discriminates amongst drug-exposed children (Alison, 2000; Kelley, 1992; Kroll, 2004; Sprang, Clark & Bass, 2003; Tomison, 1996; Tunnard 2002) and accounts for differences in severity of the child's disability, including whether the child's disability is projected to be of long term (Beck, Young & Tarnowski, 1990; Goldberg, Morris, Simmons, Fowler & Levison, 1990).

Abidin (1990) also found the PSI to discriminate between various parent characteristics such as depression, emotional unavailability, marital support and dissatisfaction and low levels of social support. This has been supported by earlier and later studies (Adamakos & John, 1986; Beck, Young & Tarnowski, 1990; Hamilton, 1980; Hipke et al., 2002; Holden, Foltz & Willis, 1989, LeCuyer-Maus, 2003; Lyons-Ruth et al., 2002; Milgrom & McCloud, 1996; Östberg, Hagekull & Wettergren, 1997).

Östberg, Hagekull and Wettergren (1997) hypothesised that the content validity of the PSI could be further improved, and as such conducted a second-order factor analysis with socially and economically different samples. They found that only five of the 13 subscales loaded above 0.50 in both child and parent domains. They concluded that the factorial structure of the PSI is unclear, adding eight new items. Results suggest that the only difference between the original PSI and the authors' modified version was the depression dimension, however this was found to be a weak factor. The authors concluded in their study that the PSI in its current form is reliable and valid for use, even when translated into a Swedish version, and therefore can be deemed to have content validity. Other factor analytic studies such as that conducted by Hauenstein, Scarr and Abidin (1987) have also supported the construct validity of the PSI (Abidin, 1995).

Construct validity addresses a tool's ability to test the actual hypothesised aspects of the supposed construct. Kline (1986) has argued that although one cannot systematically test a construct, as it cannot be measured or observed, we can assume that if we carry out a number of studies to test out a number of hypotheses (including tests of other types of validity) and they positively correlate these with the putative construct then we can assume the tool has construct validity.

Conoley and Kramer (1989) have argued that although the PSI has adequate reliability and validity, it does not measure the construct of stress or potential for maltreatment. Other studies, however, have demonstrated the construct validity of the PSI in a number of studies, where the PSI has been administered to participants in addition to other psychometric tools measuring constructs hypothesised to correlate with stress. As such evidence has been

provided in studies examining the correlations between parenting stress and maternal social support (Adamokas, Kathleen & John, 1986), maternal depression (Webster-Stratton & Hammond, 1988; Wilner & Goldstein, 2001), infant attachment (Jarvis & Creasey, 1991; Teti, Nakagawa, Das & Wirth, 1991), child hyperactivity (Mash and Johnston, 1983), and child abuse potential (Holden, Foltz & Willis, 1989) suggesting the tool does in fact measure the construct of stress, and as such is correlated with the potential of maltreatment.

Appropriate norms

The normative sample consisted of 2,633 mothers recruited from paediatric clinics in the United States of America. Mothers ranged from 16 to 61 years of age and were primarily Caucasian. The mean number of children living in the home was 2.10, with a mean age of 4.90 years (Abidin, 1995). Separate norms were attained for 200 fathers, again primarily Caucasian with a mean age of 32.10 years. Abidin (1995) also attained norms for a Hispanic sample of 223 parents using a Spanish translation of the PSI.

Although some studies suggest child's age to be related to parenting stress (Orr, Cameron, Dobson & Day, 1993), other researchers have argued that age of a child is not significantly associated with parenting stress (Beckman, 1991). The PSI does not report norms by the age of the child, or the child's gender. Abidin (1990) reported a significant difference between age groups, but this was explained by a large sample size and a statistical power suggesting that the amount of variance accounted for was insignificant. This suggests the need for research to re-examine child age and gender norms. Additionally, a qualitative exploration of items on the PSI suggest some items to be irrelevant to babies, for example item six states "*My child wanders away much more than I expected*" and item 22 states "*In some area, my child seems*

to have forgotten past learnings and has gone back to doing things characteristic of younger children” and finally, item 46 states “As my child has grown older and become more independent, I find myself more worried that my child will get hurt or into trouble.”

Parent gender is also important to consider. Studies examining the PSI have primarily used female samples despite Abidin’s (1990) caution that fathers respond differently to items on the PSI, such that fathers of six month to six year old babies report less stress than mothers of children in the same age range. This suggests that parents should not be compared to one another through the use of this scale.

The current version of the PSI has been adapted for use with ethnic minorities (Abidin, 1995). Studies on parenting stress in Chinese, French, African-American, Portuguese and Bermudian mothers have found them to respond similarly to the normative sample (Abidin, 1990; Beebe, Casey & Pinto-Martin, 1993; Bigras, Lafreniere & Abidin, 1996; Black, Schuler & Nair, 1993; Hutcheson & Black, 1996; Pearson & Chan, 1993; Santos, 1992). Only Hispanic mothers have been found to obtain higher overall stress scores (Abidin, 1990, Solis & Abidin, 1991). This research suggests that the Parenting Stress Index is transculturally appropriate.

Defensive responding scale

The PSI includes a 15 item defensive responding scale. These scores are summed, and a score of less than 24 should be taken to indicate that the respondent has responded in a defensive (fake good) manner. The author also states that a low Total Stress score may be indicative of defensive responding.

A study by Milner and Crouch (1997) investigated the impact of instructional conditions of lie scales on three parenting measures including the PSI. He found that the PSI defensiveness scale detected less than 50% of participants in the fake good condition, as compared to the CAP where 95% were detected. A limitation of the study was the extent to which participants were able to 'fake good,' such that participants asked to provide false positive responses may have had difficulty in doing so. This finding corresponded with the author's own experiences of administering the PSI, such that participants would need to provide extreme answers in order to come up as defensive, and one would then need to assume that their defensiveness is not related to their own belief about their parenting. This limitation suggests the need for this scale to be further explored.

Conclusions

Collectively, studies have supported the robustness of the PSI in terms of its reliability and validity. Evaluating the research base of the PSI is made difficult by the variations in methods applied by researchers. However, the research exploring parent and child characteristics of participants suggests that those who score high on the PSI are more likely to experience increased stress in parent-child interactions and are at an increased likelihood of the child displaying or developing behaviour problems in their parent's care.

It would be of benefit to establish more up to date norms for the PSI, taking into account the changes endured by society, particularly those pertaining to gender roles. For example, in March 2008, a national survey found that the same number of men and women were in employment and that over 68% of women with dependent children were in paid employment (Office for National Statistics, 2008). Furthermore, the author of the tool has not provided

standard error of measurement or confidence intervals that could affect the precision of interpretation, particularly important to those clinicians who may be placed in the position of defending their use and interpretations of the PSI in court.

Further research is required in relation to these errors of measurement, in establishing the sensitivity of the defensive responding scale, and in providing higher samples of normative values for fathers.

Inexpensive and less time-consuming self-report measures of parenting stress, such as the PSI, are likely to be most widely and frequently used, despite whether they are the most appropriate. Jacobson and Miller (1997) stated that some psychometrics are used just because professionals are trained to use them. The PSI, like any psychometric measure is valid for use only in appropriate populations, and interpretation must be limited to the measure's research base. For example, it would be inappropriate for a professional to use the measure in isolation, or to make inferences that a parent's high scores suggest the parent is abusing or will abuse their child.

Abidin (2006) stated that although the PSI was not intended for use in child protection assessments, it is increasingly being used in forensic contexts, particularly due to its use for evaluation planning and treatment. Further research may find its application relevant to predicting likelihood or reoccurrence of abuse.

Professionals utilising the PSI for forensic purposes should consider the discussed limitations, and take into account client circumstances, for example, the likelihood of parents to present as

defensive in these contexts. Also, the PSI, whilst providing information on parent-child interactions, this is a subjective analysis of the interaction as provided by the parent completing the questionnaire, and as such is not a substitute for observing parent-child behaviour, and neither is it appropriate to make conclusions without applying other methods of assessment.

The following chapter incorporates these findings in applying an ecological framework that again highlights the role that consideration of parent factors, child factors, and the interaction of the two are necessary, in this case, in the assessment, management and treatment of children and young people exhibiting sexually harmful behaviour. The role of parenting stress in historical (static) factors such as child maltreatment is evident as well as later negative child behaviour, and the need to support such constructs as parenting stress in minimising later adverse behaviours.

CHAPTER FOUR

An ecological understanding of children and young people with sexually harmful behaviour and application of the AIM2 Assessment Model: An empirical research study.

ABSTRACT

Recent research exploring children and young people who sexually harm has identified a number of risk factors prevalent in those who go on to sexually reoffend, and this has resulted in the development of a limited number of actuarial risk assessments. More recently, the focus has been on exploring dynamic, strength-based assessment and treatment methods. The current study examined retrospective case files of 152 cases referred for specialist consultation, assessment or treatment following sexually harmful behaviour. Characteristics were discovered to be comparable to previous literature. Ecological risk and strength factors were assessed for each case and conviction and non-reconviction follow-up data was attained. The Assessment Intervention and Moving On – version two was applied to each case file. The study provided a preliminary evaluation of the AIM2 assessment model, an ecologically informed actuarial assessment, in its ability to predict further sexually harmful behaviour and found it to be a good predictor of further sexual reoffending. Modifications to the tool to heighten its predictive ability and expand its use to younger children, females and children and young people with mild to moderate learning disabilities are suggested. Clinical implications are discussed in the context of legislation and safeguarding within the United Kingdom. Finally, the study recommends the use of dynamic strength-based factors in providing multi-agency resources for prevention, case management, assessment and treatment of children and young people who sexually harm.

INTRODUCTION

Definitions

Many terms have been used to describe the instance of children and young people (hereon referred to as CYP) who exhibit sexualised behaviour either towards themselves or others.

The terms ‘sex offenders,’ ‘sexual perpetrators,’ ‘sexually problematic behaviours,’ ‘adolescent paedophiles’ and ‘young sex offenders’ have been used interchangeably throughout literature – some more prone to criticism than others.

Defining sexually harmful behaviour is a difficult task for a number of reasons, particularly due to the fact that children need to develop sexually and, as such, some sexual behaviours fall onto a normal continuum of learning and development. There is an immense need for further research that explores both healthy and unhealthy sexual development in CYP in order for this continuum to be better understood and assist discrimination between normal and harmful behaviour. Whilst the legal system allows for a legal definition to be applied to those CYP over the age of criminal responsibility (age 10 years in England and Wales), it does not facilitate our understanding of sexually harmful behaviour, or implications for treatment.

The term ‘sexually harmful’ behaviour will be used throughout this study, as opposed to ‘sexually problematic’ behaviour. The latter is stated to be more relevant to that sexual behaviour that does not include an element of victimisation, but may interfere with the normal development or understanding of CYP (Hackett, 2004; Taylor, 2003). Taking such issues into consideration, the definition applied to the current study is the act of *touching self or other in a sexual way that is of concern for the child, other child, parent, care-giver or other*. This

definition is applied to take into account the components discussed in previous research such that sexually harmful behaviour can: occur in isolation; include touching one self and touching another; contrary to lay misconception, be pleasure-evoking (to both parties) but still of concern; and be of concern to a variety of people around the CYP.

Prevalence

Official crime statistics collected in 1997, 2002 and 2007 (Home Office, 1998, 2003, 2008) show remarkable consistency over a 10-year period, stating that 23%, 20% and 25% (respectively) of sexual convictions in the United Kingdom were committed by CYP. Notably the age range included has changed from 10-20 years in 2002 to 10 to 24 years in 2007 (Home Office, 1998, 2003, 2008). Thus it is difficult to ascertain whether previous figures have been maintained or increased due to an expansion on the age range provided, however studies suggest that sexually harmful behaviour in pre-adolescents and adolescents is on the increase, with Home Office statistics showing an increase of 5% of all sexual convictions between 2002 and 2007 within the UK to have been perpetrated by adolescents (Home Office, 2003, 2008), an increase supported by trends outside of the UK (Geradin & Thibaut, 2004; Underwood, Robinson, Mosholder & Warren, 2008). These trends are apparent despite the fact that many actual offences go undetected and undocumented due to adolescents not being convicted for crimes, victims not reporting all assaults, and/or due to CYP committing sexually harmful acts below the age threshold of ten years for criminal responsibility.

These statistics are supported by self-report studies conducted with victims of sexual assault, indicating that one third of all allegations of sexual abuse involve an offender of age 17 and under (Glasgow, Horne, Calam & Cox, 1994). In contrast, Grimshaw (2008) found that only

5% of young men referred to the Youth Justice Board in the United Kingdom were categorised as having committed a sexual offence as their index offence. However Grimshaw (2008) further stated that this figure is likely to be an underestimate considering those that do not enter the Youth Justice system, and those whose index offence is more serious than their sexual offence, for example where a sexual offence may have occurred during a burglary but was plea-bargained at time of legal proceedings. Establishing base rates of children and young people who sexually harm is further complicated by whether offences are first-time or later offences. For example, Bullens, Van Wijk and Mali (2006) found that only a small portion of adolescents went on to commit sexual offences, and that many instead 'crossed over' to property offences. A recent meta-analysis (Caldwell, 2009) of 63 data sets containing 11, 219 juveniles followed for a mean of 59.40 months (SD=36.1) found a mean sexual recidivism rate of 7.08% compared to 43.40% for general recidivism and also found that studies that conducted follow-up during adolescence found more than four times more recidivism than those studies relying on adult records. This is similar to other research suggesting that adolescent sex offending differs from adult sex offending in motivational aspects, for example, experimentation and impulsivity (Bullens, Van Wijk and Mali, 2006; Långström & Grann, 2000; Letourneau & Miner, 2005; Miner, 2002; Nisbet, Wilson & Smallbone, 2004).

Vizard (2004) highlighted that sexual offences committed by female adolescents are also underestimated, with services often focusing on the female adolescent's own experiences of abuse. Previous literature focusing on adolescents treated in specialised programs has reported 2-8% of the sample to be female (Feherenbach, Smith, Monastersky & Desiher, 1986; Ryan, Myoshi, Metzner, Krugman & Fryer, 1996). More recent research suggests an increase in females who come to the attention of the criminal justice system for sexually harmful

behaviour, such that the number of females perpetrating forcible rapes has increased by 6% and by 62% for other violent sex offences (Snyder & Sickmund, 2006).

Although those children under the age of criminal responsibility (10 years of age) do not feature in criminal statistics, a review of services suggests the average age of CYP being referred for sexually aggressive and harmful behaviour is decreasing (Lovell, 2002), and a study by Taylor (2003) that reviewed Child Protection Strategy Meetings found that one third of the 227 children in the sample had engaged in behaviour that would be criminalised if the child was above the criminal age of responsibility (in England and Wales) of 10 years. No more recent reviews of prevalence of children below the criminal age of responsibility could be located, highlighting the lack of attention given to this age group.

Despite the involvement or lack of involvement with the criminal system, many of these CYP are at least identified with local services, and many are referred for assessment and treatment. Currently, assessment, referral and legal processes vary across the country resulting in an inconsistency in the management of these individuals. Many examples of inconsistent perceptions of risk, need for supervision and legal outcomes can be identified, along with the major impacts such decision-making has had on the families involved and the young person's wellbeing (Department of Health, 2009). A goal towards consistency requires the understanding of sexually harmful behaviour in terms of its associating factors in order to obtain a holistic view of case prevention, management, assessment, legal implications and treatment.

Ecological factors associated with risk

Much research has focused on the factors predisposing children to exhibiting problematic sexual behaviour. These have been outlined earlier in the thesis. However many of the issues remain controversial and a review of these studies highlights the need to strengthen the empirical basis of this area.

Static factors refer to an appraisal of historical or unchangeable factors, for example, prior experiences of abuse and abusive behaviour. Dynamic factors are those that are subject to change and can depend on the individual's own thoughts and behaviour, or the environment around them, so for example, communication skills and school attendance. A number of historical (static) and current (dynamic) factors have been evidenced in literature to be associated with sexualised behaviour in young people. These include but are not limited to:

Static factors:

- Sexual abuse (Drach, Wientzen & Ricci, 2001; Epperson et al, 2005; Fritz, 2003; Kahn & Chambers, 1991; Rasmussen, 1999; Redlack, 2003; Rubenstein et al., 1993; Tarren-Sweeney, 2008; Underwood, Robinson, Mosholder & Warren, 2008)
- Physical abuse (Becker, 1998; Benoit & Kennedy, 1992; Epperson et. al., 2005; Friedrich, Davies, Feher & Wright, 2003; Gray, Pithers, Busconi & Houchens, 1999; Letourneau, Rombouts, 2005; Schoenwald & Sheidow, 2004; Silovsky & Niec, 2002)
- Exposure to domestic violence between parental figures (Caputo, Frick and Brodsky, 1999; Friedrich et al., 2003; Silovsky & Niec, 2002; Winstone, 2009)
- Early exposure to sexual material including parental sex and pornography (Friedrich, et al., 2003)

- Being in care (Baker, Kurland, Curtis, Alexander & Papa-Lentini, 2007; Farmer & Pollock, 2003; Friedrich et al., 2005; Smith & Howard, 1994)
- Family violence (Baker, Tabacoff, Tornusciolo & Eisenstadt, 2003; Harris, Rice, Quinsey, Lahmiere, Boer & Lang, 2003; Hunter, 2004; Kelley, Lewis & Sigal, 2004)
- Previous sexual offences and multiple victims (Epperson et al., 2005, Långström & Grann, 2000; Rombouts, 2005; Worling & Curwen, 2000)
- Antisocial behavioural history (Parks & Bard, 2006; Waite, Keller, McGarvey, Wieckowski & Brown, 2005)
- A range of mental health and substance abuse disorders (Apsche, Evile & Murphy, 2004; Granello & Hanna, 2003; Lakey, 1992)
- The perpetration of child molestation or rape (Caputo et al., 1999; Harris et al., 2003; Lakey, 1992)

Dynamic factors:

- Impaired social functioning (Kenny, Keogh & Seidler, 2001; Långström & Grann, 2000; Worling, 2001)
- Sexual deviance (Kenny, Keogh & Seidler, 2001; Långström, 2002; Långström & Grann, 2000; Worling & Curwen, 2000)
- Impulsivity (Parks & Bard, 2006; Waite, Keller, McGarvey, Wieckowski & Brown, 2005)
- Participation in bullying and other hostile behaviours (Caputo et al., 1999)
- Lack of attachment to others (Harris et al., 2003)
- Lack of assertiveness and social skills, being immature for their age, having poor impulse control, antisocial behaviours, and minimal general life knowledge and

experiences (Baker et al., 2003; Davis & Leitenberg, 1987; Geradin & Thiabuit, 2004; Lakey, 1992; Ryan, 1997)

- Diminished self-esteem, atypical erotic fantasies, fear of rejection by females, separation anxiety, lack of age appropriate social skills, and lack of coping skills (Baker et al., 2003; Davis & Leitenberg, 1987; Ryan, 1997)

A systematic review of studies predicting recidivism has been recently conducted by Gerhold, Browne and Beckett (2007) and highlighted the need for more empirically sound research exploring risk factors. More so, further research is needed that explores static, dynamic, individual and environmental factors. Gerhold et al. (2007) highlight the difficulties in using previous literature to determine factors associated with risk due to the many inconsistencies in measures, such that researchers have used a variety of first offence, reoccurrence of offence, arrest and/or conviction data as outcome measure of risk.

Risk factors for recidivism or reoffending?

Risk can be defined as the probability of the occurrence of an adverse behaviour or incident. Recidivism refers to repeat offending, often measured by reconviction. Reoffending refers to the reoccurrence of a behaviour. The most common recidivism measure is that of re-arrest and reconviction rates, methods that severely underestimate the true incidence of reoccurrence (Gerhold et al., 2007). No reliable studies on CYP and sexually harmful behaviour could be located where welfare records had been followed up, or where the use of Police records were applied to include cases where the CYP may have come to the attention of the police but not charged for the offence.

This is problematic, as many studies that have explored the predictive accuracy of risk factors for recidivism in young people have been unable to make scientifically sound conclusions due to low rates of recidivism (Caldwell, 2002, 2007; Gretton, McBride, Hare, O'Shaughnessy & Kumka, 2001; Kahn & Chambers, 1991; Långström, 2002; Långström & Grann, 2000; Nisbet, Wilson & Smallbone, 2004; Prentky et al., 2000; Rasmussen, 1999; Reitzel & Carbonell, 2006; Sipe, Jensen & Everett, 1998; Smith & Monastersky, 1986; Worling, 2001; Worling & Curwen, 2000). Taylor (2003) explored the characteristics of children who had sexually abused, and assessed caution and conviction rates two-years after the abuse, finding none of the children had received cautions or convictions and thus concluding that children are not likely to go on to become paedophiles. Such conclusions are not reflective of the changes that take place following the immediate shock and community/service responses to sexually harmful behaviour. As such, empirical support remains minimal, suggesting the need for researchers to employ multiple methods of collecting outcome data and exploring outcomes beyond conviction rates alone.

Nisbet, Wilson and Smallbone (2004) have suggested that those studies with higher sexual recidivism rates have longer follow-up periods and use more stringent methods of recidivism. Barbaree and Marshall (1990) state that using unofficial sources of follow-up disclose 2.40 times more reoffences, and Fortune and Lambie (2006) recommend the use of triangulation methods in follow-up studies, that is, the use of official records, family and self-report. In their review of sexual recidivism studies, Craig, Browne, Stringer & Hogue (2008) found that the rate of sexual reoffence varied from 1.80 times (from PNC data) to 5.30 times (from the Offender Index data) as found by Falshaw, Bates, Patel, Corbett & Friendship (2003). They highlighted the importance of the mechanisms by which recidivism is measured.

In consideration of the above, the current study applies the use of both official reconviction data, file note data, and a central database that includes information about reoffending behaviour that at times, for a variety of reasons, is not brought to the attention of the Police. Along with the need to consider methodologies related to outcome measures, more consideration must also be given to the actual outcome being measured, and more specifically, outcomes distinguishing sexual violence from other forms of violence.

Sexual versus non-sexual reoffending

As pointed out by Zakireh, Ronis and Knight (2008), a common methodological flaw in studies is the absence of a control group (i.e. those that do not go on to reoffend sexually, but do go on to reoffend in a nonsexual manner), such that the factors identified may have as much to do with general delinquency as with sexual offending.

Adolescent sex offenders have been found to be four times more likely to be reconvicted for non-sexual offences than for new sexual offences (Caldwell, 2002, 2007; Kahn & Chambers, 2001; Miner, 2002; Rubenstein et al., 1993; Zimring, 2004). Rubenstein et al. (1993) also found that only 10% of non-sexual offenders have gone on to be convicted of sexual offences.

Milloy (1998) stated that adolescent sex offenders vary from non-offenders, but vary little from nonsexual offenders. She further argues that young people display a versatile range of delinquency, and that those adolescents who offend sexually are more likely to reoffend in a nonsexual way, suggesting that characteristics are non-discriminatory between types of offending. However more recent studies have argued that sexual offending and nonsexual offending in young people share some risk factors, but differ in regard to some demographic

characteristics, problem behaviour, and personality traits (Ronis & Borduin, 2007; Van Wijk, Loeber, Vermeiren, Pardini, Bullens & Doreleijers, 2005), and that the relationship between the two differs depending on the type of further offending, for example, whether it is violent or not (Van Wijk, Horn, Bullens, Bijleveld & Doreleijers, 2005). Other associations between the two include study findings of Nisbet et al. (2004) such that previous nonsexual offending at time of referral for a sexual incident tripled the likelihood of the CYP committing a sexual offence as an adult. This research has demonstrated that whilst there are associations between the two and one may be a factor contributing to prediction of the other, there are vital differences that within assessment and treatment necessitate sensitivity. For example, some actuarial assessments used to measure risk of sexual reoffending have been found to predict nonsexual offending only (Viljoen et al., 2008). These are discussed in more detail below.

Use of actuarial assessments

Unguided clinical judgment is heavily limited by subjectivity, reduced consistency across professionals and services, and a compromise of accuracy, hence the development of actuarial risk assessments. Hart (2001, 2003) described the purpose of actuarial risk assessments as predicting risk solely in terms of future violence, without specifying severity of, duration and frequency of such events occurring. In a further article, Hart, Michie and Cooke (2007) describe actuarial risk assessments to incorporate fixed and complex algorithms, developed on the basis of previous research conducted on known groups of people who reoffend or do not reoffend, in order to estimate the specific probability that the person will engage in abusive or violent behaviour. They go on to describe actuarial risk assessments as being predictive and prognostic, as opposed to psychological tests that are descriptive or diagnostic in nature.

Hart, Michie and Cooke (2007) question the use of actuarial risk assessment, highlighting the 5% margin of error. However their argument does not allow for the consistent recommendation that risk assessment tools should never be used in isolation, but rather in conjunction with professional and clinical judgment (Calder, Hanks & Epps, 2001), particularly where costs of the potential decision are high.

Models of actuarial assessment most commonly available for use within the UK for CYP exhibiting sexually harmful behaviour are the Juveniles Sex Offender Assessment Protocol-II (JSOAP-II; Prentky & Righthand, 2003); The Juvenile Sexual Offence Recidivism Risk Assessment Tool-II (JSORRAT-II, Epperson, Ralston, Fowers & DeWitt, 2006); and the Estimate of Risk of Adolescent Sexual Offence Recidivism (ERASOR, Worling & Curwen, 2001). The Structured Assessment of Violence Risk in Youth (SAVRY, Borum, Bartel & Forth, 2003) is referred to commonly in the literature as being used with this population, however is an assessment of violence rather than sexually harmful behaviour. The Multiplex Empirically Guided Inventory of Ecological Aggregates for Assessing Sexually Abusive Adolescent and Children (MEGA, Miccio-Fonseca, 2006) is an upcoming assessment, but is yet to be validated before being released for use.

The JSORRAT-II is generally inclusive of static concerns only, and little research has supported its use (Miccio-Fonseca & Rasmussen, 2009). The JSOAP-II has been demonstrated to have good concurrent validity and to differentiate between risk for future nonsexual offending and future sexual offending (Righthand et al., 2005). However, this ability has been challenged in a more recent study by Viljoen et al. (2008), who found that both the SAVRY and JSOAP-II significantly predicted nonsexual violence, but that neither of

these tools predicted sexual violence. Both tools were also found to be less effective in predicting any kind of violent reoffending in youth aged 15 years and under. In a recent validation study, the JSOAP-II was found to provide little insight into levels of recidivism due to the absence of weighting or estimates of probability for recidivism (Parks & Bard, 2006). Whilst this limited research does not suggest these tools are invalid for use, assessors need to be cautious in using them to inform decision-making, and make use of them as one aspect of a total assessment.

As the ERASOR was initially developed as a guidance tool as opposed to a psychometric tool, items are rated as present, possibly or partially present, not present and unknown. When numbers have been applied to these scores, Worling (2004) found that the overall risk rating was significantly different between those given Low, Medium and High Scores, providing evidence for its psychometric properties. However Worling (2004) has also noted that the ERASOR is a tool designed to measure short-term risk only (at most one year) and therefore should not be used to address questions related to long-term risk (Worling, 2004), it is also primarily a concerns-based tool. It has been further argued by Fanniff and Becker (2006) that future behaviour, as predicted by the ERASOR does not necessarily reflect the same construct as recidivism, therefore highlighting the need for further research on investigating the predictive validity of the tool.

Existing risk assessments such as the ERASOR and J-SORRAT-II fail to take into account the dynamic, ecological, risk and protective factors that may place CYP at further or at reduced risk of reoffending. In fact the absence of dynamic risk factors from the ERASOR not only exclude younger children, but as mentioned earlier, also limits the assessment itself to specify

the prediction of risk to one year due to the interplay of developing factors present in 12 to 18 year olds.

Dynamic factors

The primary arguments for distinguishing CYP from adult sex offenders are to avoid punitive punishment that does not allow for the CYP to engage in healthy development, and that due to ongoing development of CYP, the use of adult models is likely to hinder any predictions or judgements about further risk. As a result, there has been a move towards assessing dynamic factors (Griffin & Beech, 2004). Dynamic factors are those factors that may be subject to change, and therefore are likely to contribute to increased or reduced risk of the CYP reoffending.

A systematic review carried out by Gerhold et al. (2007) located only four studies of sexual recidivism in adolescents that included dynamic factors of risk such as victim blame, social skills and deficits, sexual knowledge, sexual preference and self-esteem. One of these was a retrospective study conducted by Kahn and Chambers (1991) that failed to identify how dynamic factors were assessed. The remaining three studies included the use of psychometric tests (Prentky, Harris, Frizzell & Righthand, 2000; Worling, 2001; Worling and Curwen, 2000) in measuring dynamic traits. In their review, Gerhold et al. (2007) highlighted the need for further research to consider dynamic variables.

In considering the use of dynamic assessment and an ecological perspective that provides a holistic understanding of developmental, behavioural, dispositional and environmental factors of CYP, factors such as age, gender and intellectual ability should be accounted for. Miccio-

Fonseca and Rasmussen (2009) made a valid point in highlighting that if CYP are considered to be developmentally sensitive to risk assessment, then assessment tools need to reflect this by providing for a full continuum of sexually harmful CYP, irrespective of age, gender and intellectual functioning. The current study includes these populations of younger ages, females and those with learning disabilities in exploring the applicability of an ecological perspective in addressing the additional or reduced risk and strength factors relevant to these populations.

A strengths-based perspective

Previous risk assessment has focused heavily on deficits in determining risk, and failed to take into account strengths related to the functioning of CYP, and to the environment around them. Therefore, Gilgun (1999, 2002) applied a Clinical Assessment Package for Risks and Strengths (CASPARS) as a general assessment of strengths and concerns for CYP, developed with equal weightings given to strengths and weaknesses. This was followed by her strengths-based assessment tool (4-D; Gilgun, 2004). Gilgun (2004) describes this tool to be based on 4000 years of traditional values of “native wisdom” developed within an American Indian Medicine Wheel (Brendtro, Brokenleg & Van Brocken, 1990); contemporary theories of human development, and the practice work of social workers and psychologists; and thus incorporating strengths within the individual, the family, and the community. The tools that make up the 4-D model have been successfully applied to CYP (Gilgun, 2004) however encompass the range of difficulties for CYP due to adverse experiences with no specific attention given to sexually harmful behaviour. Gilgun (2006) has emphasised the importance of considering strengths and resilience research in CYP with sexually harmful behaviour, however this has not yet been evaluated. Other researchers have identified specific strengths

that have been demonstrated to have a significant impact on the likelihood of recidivism. For example, Bremer (2006) found that resilience to childhood trauma acted as a mediator to negative outcomes when risks included individual, family and community factors. Gilgun (1990) found that strengths such as having an emotional confidant, and the presence of healthy peer, family and community relationships were significant in reducing general recidivism.

The Department of Health (DOH, 2000, see *appendix 1*) included the use of strength-based items in their guidance on assessment of adolescents including relationships with parents and significant others, capacity to understand and reflect on their own behaviour, positive relationships within the school and community, and the ability to think into the future. The introduction of this guidance was complimented by the Youth Justice Board ASSET assessment (YJB, 2000; see *appendix 1*), a core assessment profile relying on dynamic factors in producing a Low, Medium and High level of risk. Baker, Jones, Roberts and Merrington (2003) found the ASSET to predict reconviction with 67% accuracy. These structured assessments are currently widely used within the UK, however, when applied to CYP with sexually harmful behaviour, Griffin & Beech (2004) highlight important factors absent from the ASSET assessment, such as attitudes towards victims, use of violence, offence-related issues, issues related to the family, and the young person's own experiences of abuse.

In contrast, the AIM2 model was developed in consideration of the above limitations, incorporating dynamic, ecological, risk and protective factors that may place CYP at risk of further reoffending, static and dynamic factors, as well as employing the use of weighted items associated with the probability of recidivism. In addition to the holistic framework

provided by the AIM2, comparable to the DOH Framework and ASSET core assessment profile, it is also embedded within the child protection framework in the UK.

The ecological framework of the AIM2 assessment model lends support and direction for multisystemic models of treatment (MST). MST programs are reported to rely on evidence-based programs such as behaviour therapy, cognitive therapy, pragmatic family therapies, pharmacological interventions and a community reinforcement approach (Henggeler, Melton & Smith, 1992). Treatment success research remains undeveloped, particularly due to the need for longitudinal studies that include those young people who do not go on to offend. To date, MST has, through the use of randomised control trials, received much empirical support, in reducing sexual recidivism (Bourduin, Henggeler, Blaske & Stein, 1990; Bourduin & Schaeffer, 2001; Bourduin, Schaeffer & Heiblum, 2009; Letourneau et al., 2009). Such an approach would benefit from a structured, ecologically-informed actuarial assessment that guides practitioners to identification and prioritisation of risks and strengths. Whilst MST includes its own assessment process, the resources and training required for MST are much more intensive than those required for an AIM2 assessment, and the service provisions (for example sessions within the home) required for MST are less likely to be met by services within the United Kingdom. Therefore the AIM2 was selected as the primary tool within this study.

The Assessment, Intervention, Moving On – Version2 (AIM2) Model of Assessment

The original AIM framework (Print, Morrison & Henniker, 2001) was designed to integrate the Framework for the Assessment of Children in Need and their Families (DOH et al., 2000) and ASSET (Youth Justice Board, 2001). Following a small-scale evaluation (Griffin &

Beech, 2004), the AIM assessment framework was updated with the adoption of an underpinning risk-aetiology model to the framework (Beech and Ward, 2004) becoming the AIM2. Also, this evaluation concluded the need to insert ‘medium’ outcomes in addition to the already present ‘low’ and ‘high’ outcomes. The underlying model can be viewed in figure 4.1.

The underpinning theoretical framework (Beech and Ward, 2004) takes into consideration the importance of holistic assessment, the need to include an individual’s concerns and strengths, and actuarial methods including static, stable dynamic, acute dynamic and trigger factors that lead young people to sexually harm others. The AIM2 was further modified with the inclusion of additional items and categories, and removal of redundant items following a validation study conducted by Griffin, Beech, Print, Bradshaw and Quayle (2008). In their study, 250 draft assessments were completed by 79 professionals working with CYP who had sexually abused, in addition to collection of qualitative feedback about the assessment items and process. They found that practitioners found the tool to provide a rich platform in guiding interventions and treatment planning. As part of the same study, a further analysis of 70 young people was conducted in a recidivism study, resulting in a 10% rate of recidivism.

Exploration of this data suggested that recidivists and non-recidivists both shared a “high” concerns score, but were differentiated by their ‘strengths’ score such that those who did not reoffend had a high number of common strengths. As a result of this finding, a ‘Level of supervision’ matrix was developed. The Level of Supervision Matrix was incorporated into the AIM2 Assessment in efforts to lessen the likelihood of the CYP being labelled as ‘high’

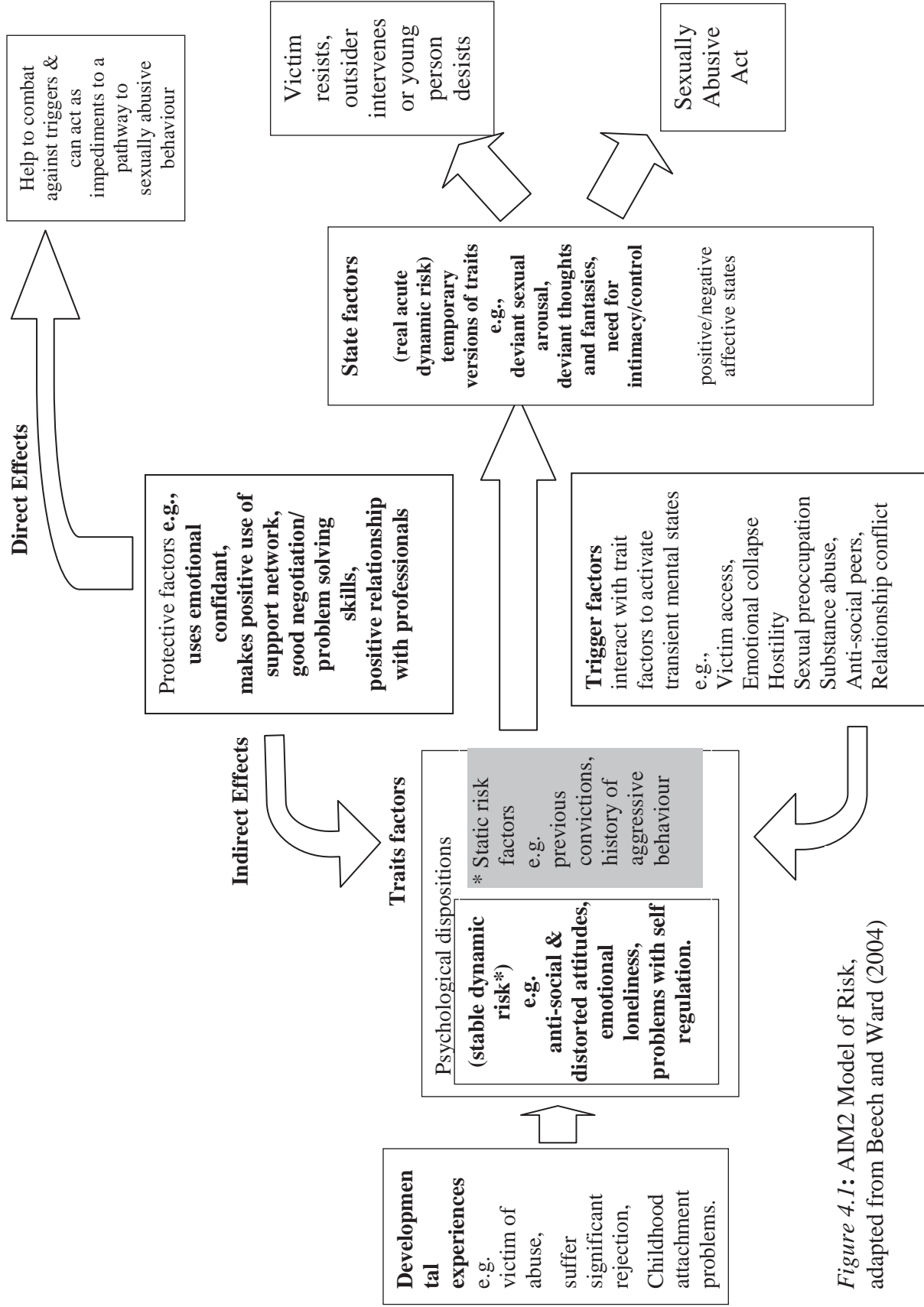


Figure 4.1: AIM2 Model of Risk, adapted from Beech and Ward (2004)

risk, and placing more emphasis on the requirements of the professional system that can provide protective management strategies.

Therefore, the final AIM2 Assessment is a guide to structured risk assessment relating to the prediction of violence, level of supervision required, and an analysis of concerns and strengths. It is ideally completed by two professionals of different disciplines, within a 28-day time frame. The tool has a total of 75 items including 26 items addressing static concerns, 25 items addressing dynamic concerns, six items addressing static strengths and 18 items addressing dynamic strengths. The categories covered by the AIM2 assessment are included in *appendix 7*. To date, no studies have explored the validity or application of the final AIM2 assessment, although a longitudinal study has recently been initiated.

In addition, 18 of the 75 items are ‘evidence based’ items where there are at least two pieces of empirical research; a small research base relating to the risk of recidivism; or where there are links with recidivism in adults, or adolescents who commit serious non-sexual offences. The remaining 57 items are ‘theoretically supported’ where there exists strong consensus in literature that the item is related to recidivism in adolescents who sexually abuse. Finally, the study by Griffin et al. (2008) used follow up data only for those CYP who were cautioned or convicted for their further behaviour, and where the behaviour was a contact offence. As such the current study provides a preliminary basis of evaluation of evidence-based items in addition to assessing the validity of theoretical items within the tool. The AIM2 was originally developed specifically for adolescents, and due to a lack of validation studies, its use has been restricted from being applied to other populations, for example, CYP’s below the 12-18 year age range, females, and those with learning disabilities.

The AIM2 is currently being used by a number of organisations within the UK as an initial and dynamic assessment, and in many organisations has been embedded into the legal framework such that assessment forms part of the legal considerations as to management, rehabilitation and reprimand for the sexually harmful behaviour.

In conclusion, studies to date have been variable in methods used and populations studied. Much of the research has focused on 10-18 year old males, with little attention being given to other populations of CYP who sexually abuse, such as females, younger children, and those with learning disabilities. Furthermore, previous literature fails to place these risk factors into the context of the developing child, thus providing little information about the trajectories of development and dynamic factors contributing to the increase or decrease of risk. Finally, recidivism studies have been limited by the use of reconviction data only.

The current study therefore aims to a) utilise an ecologically-informed assessment model that considers stable and dynamic risks and strengths, and assess its predictability in assessing further *sexually* harmful behaviour; b) assess the applicability of the AIM2 assessment to an ecological model that includes younger ages, females and CYP with learning disabilities c) consider additional ecological correlates of sexually harmful behaviour, and their inclusion within the AIM2 assessment model.

METHOD

Participants

The sample consisted of 152 (134 males, 18 females) CYP aged 2.25 to 17.58 years. This was derived from 515 files referred to a service specialising in consultation, assessment and treatment of sexually harmful behaviour between 1996 and 2008. The service covers one county within the United Kingdom, and referrals include sexualised behaviour along a continuum, however where the behaviour is considered age-appropriate, or where another service is deemed more appropriate (for example, a specialised learning disability or mental health team), the case is usually closed prior to or after consultation. Only those cases that went on to receive the minimum of a therapeutic assessment were included in the study. Every second file was chosen, and included based on closing dates ranging from 1996 to 2008 and a minimum of a therapeutic assessment being conducted. Those cases closed after January 2009 were excluded from the study to allow for a feasible follow up period. Also excluded were files lacking in adequate or multisource information, resulting in the final sample of 152 cases.

Procedure

a) Description of file information

Files varied in terms of the amount of information stored in each, but generally included referral information, initial and core assessments, minutes of Child Protection or Child in Need meetings, Police information, psychiatric and/or psychologist reports, school information, assessment reports, treatment plans, session notes and discharge reports and summaries.

b) Coding procedures

Data collected included demographic variables, ecological risk factors, and items necessary to complete the AIM2 assessment. Each item was coded according to whether the information was diagnosed, self-reported, of professional concern or suspected. Two raters trained together on defining and understanding each item and collected data together from three files in order to ensure correct interpretation of items. Inter-rater reliability was calculated using Cohen's Kappa statistic on a further 10 files assessed separately (80% agreement; $kappa = 0.72, p < 0.05$), such that coders can be said to have a 'good' level of agreement (Fleiss, 1981; Altman, 1991). Intra-rater reliability was assessed on 10 files (94% agreement; $kappa = 0.93, p < 0.05$). Intraclass reliability suggested an excellent level of self-consistency (Fleiss, 1981; Altman, 1991). Data relevant to the AIM2 assessment were extracted from the database and reformulated into scores as described in the AIM2 assessment from which Subtotal, Total, and Level of Supervision Required scores were calculated.

Through the use of postcode of the CYP at time of referral, Local authority and Police statistics were used to obtain information related to ecological factors outside of the individual and family environment. Home office and county statistics were used to look at average family income, proportion of houses with mortgages, housing categories, education levels, primary and secondary school averages, current affairs knowledge, and number of couples with children within that specific postcode area. Police statistics were used to determine crime rates within the specific postcode area. Raters were blind to outcome data at this stage.

c) Follow-up

The length of time of follow-up ranged from 0.58 years to 13.50 years dependent on date of referral of the CYP to the service, and date of file closure. The researcher accessed a central electronic database used by Children's Services to maintain data on all children and young people referred to Children's Services. The database was primarily used to access Police reports made to Children's Services, and Social Worker's routine case notes recorded on each contact, incident, or event regarding the subject CYP. All records were manually searched from time of closure to the service and data was collected on behavioural, legal and other concerns noted. Two files were not able to be located on the database and in these cases, data was entered as missing values.

ID numbers, names, date of birth, and date of referral to the service were provided to a Police representative who then searched the Police National Computer for reconviction data on each case. Data files were also searched for non-conviction data. ID numbers were returned to the researcher with information pertaining to whether a child or young person had received any new convictions since referral to the service, and detailed other incidents which were sexual, violent or intimidating in nature through which the child or young person came to the attention of the Police within the county, regardless of outcome. Incidents were then matched to information collated from the Childrens Services database.

Ethical considerations

The study was approved by Childrens Services Research Governance and by the University of Birmingham Ethics Committee. It was agreed that although participants did not explicitly provide consent for data to be used within the study, a benefits/cost analysis and the

importance of assessing such outcomes was sufficient on the condition that all data and service detail would be anonymised. In addition to this, there are exemptions under the Data Protection Act (1998) that are vital to allow research of this kind to take place. These exceptions apply when using the data for research, historical or statistical purposes and crime prevention.

Treatment of data

The researcher ensured all principles set forward in the Data Protection Act (1998) were followed. The researcher already had access to the data needed due to working within the service from which the data was attained. ID numbers were used to keep a record of cases until follow-up data was provided and stored in a locked archive cabinet at the service from which cases were attained. The researchers and the officer conducting the outcome analysis were the only individuals with access to this list. All data were entered onto a database in an anonymised manner and The Statistical Package for Social Sciences (SPSS) was used to perform analyses.

RESULTS

Demographical characteristics

Age, gender, residence

Of the 152 cases, 134 (88%) of the CYP were male, and 18 (12%) were female. Ages ranged from 2.25 years to 17.58 years ($M = 12.75$, $SD = 3.23$), and are displayed in figure 4.2 below. The population defined by the AIM2 assessment of 12-18 years of age made up 67.8% ($n = 103$) of the sample. Ethnicity was made up primarily of White-British, accounting for 96.7%

($n = 147$) of the sample, followed by 1.4% ($n = 2$) Asian, 1.3% ($n = 2$) Afro-Caribbean, and 0.7% ($n = 1$) mixed race. These ethnicity trends are comparable to those across the county (Office for National Statistics, 2007).

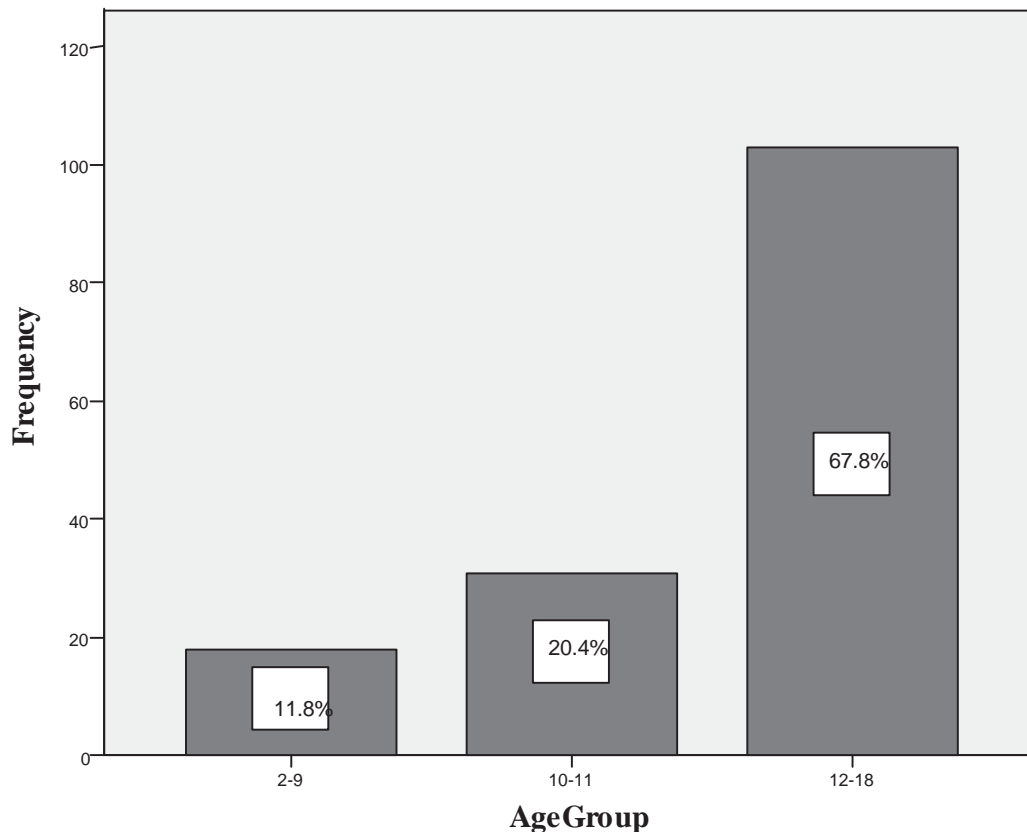


Figure 4.2: Age group of the sample (N=152)

At the time of referral, 23% ($n = 34$) were living with one biological parent and one step-parent or biological parent's partner, 23% ($n = 34$) were living with a single parent, 17% ($n = 25$) were in a foster placement, 15% ($n = 22$) were living with both biological parents, 10.5% ($n = 16$) were living in a group home, 5% ($n = 7$) were living with a kinship carer, 5% ($n = 7$), 3% ($n = 4$) were in an adoptive placement, and 1% ($n = 3$) were living in managed or independent living.

Experiences of Maltreatment

In 120 (78.9%) cases, the CYP was known to have a history of maltreatment but history of Children's Services involvement prior to the referral incident was found in only 90 (59.2%) cases. Notably, there was no maltreatment history reported for nearly one fifth of cases (18.4%). Table 4.1 demonstrates types of maltreatment experienced by each CYP where either enough detail was provided in files to ascertain type of maltreatment or where this was clearly stated in Childrens Services documentation.

Education

At the time of referral, 102 CYP (67.1%) were attending mainstream school education, nine (5.9%) were attending a Pupil Referral Unit, 18 (11.8%) were attending a specialised school, 19 (12.5%) were subject to suspension or expulsion from school, and nine (5.9%) were engaged in some form of employment. In 19 cases (14.2%) CYP were formally diagnosed by a professional to have learning disabilities. No females in the sample were diagnosed with learning disabilities. In 59 cases (38.8%) CYP were seen to have learning difficulties, such as an educational statement for emotional and behavioural learning support, professional observation of special needs, or where reference had been made to learning disability without diagnostic support. A further 20 (13.2%) were either diagnosed, described by a professional, or self-reported to have a physical disability such as a severe asthma, skin condition, or physical developmental disability.

Table 4.1: *Types and combinations of maltreatment experienced by CYP (N=152)**

Type of Maltreatment	<i>n</i>	(%)
Emotional (including exposure to DV)	79	(52%)
Neglect	67	(44.1%)
Physical	64	(42.1%)
Sexual	58	(38.2%)
No maltreatment	28	(18.4%)
Combinations of Maltreatment	<i>n</i>	(%)
Physical, Sexual, Neglect & Emotional	21	(13.8%)
Physical, Neglect & Emotional	14	(9.2%)
Emotional only	13	(8.6%)
Sexual only	13	(8.6%)
Neglect & Emotional	11	(7.2%)
Neglect only	7	(4.6%)
Physical & Emotional	7	(4.6%)
Physical, Sexual & Emotional	7	(4.6%)
Sexual & Emotional	6	(3.9%)
Physical only	5	(3.3%)
Physical & Neglect	5	(3.3%)
Physical & Sexual	4	(2.6%)
Sexual & Neglect	4	(2.6%)
Physical, Sexual & Neglect	4	(2.6%)
Sexual, Neglect & Emotional	3	(2%)

* Total *n* exceeds total number of cases and (%) exceeds 100% due to multiple experiences of abuse.

Incident leading to referral

Children's Services were the primary referrer of cases, accounting for 78.9% (*n* = 120) of the sample. A further 5.9% (*n* = 9) were referred by Police, 5.9% (*n* = 9) by Youth Justice Services, 2% (*n* = 3) by schools and 7.2% (*n* = 11) by other services such as health services,

parents and carers. The referral incident of sexually harmful behaviour was split into five categories shown in Table 4.2 below. A comprehensive list of items included in each category is shown in *appendix 8*. In some cases, more than one type of sexually harmful behaviour was exhibited in the referral incident, and all were included in the analysis.

Table 4.2: *Type of Sexually Harmful Behaviour leading to referral (N=152)**

Type of Harmful Behaviour	<i>n</i>	(%)
Sexualised language	32	(21.1%)
Self-stimulation	29	(19.1%)
Exhibitionism	37	(24.3%)
Non-penetrative touching	102	(67.1%)
Penetration	63	(41.4%)

* Total *n* exceeds total number of cases and (%) exceeds 100% due to multiple behaviours occurring during the referral offence.

Characteristics associated with the sexualised behaviour are shown in Table 4.3 below. Total number of victims was 203. In 109 cases (71.7%) there was one victim of the sexually harmful behaviour. In 38 (25%) cases there were two victims, in two cases (1.3%) there were three victims, and in three (2%) cases there were four or more victims. Age of victims ranged from two years to 40 years of age ($M = 10.0$, $SD = 7.4$) and included 78 (38%) males and 125 (62%) females. Of those cases where the CYP was over the age of criminal responsibility (age 10 years within the UK), Police were involved in 60.3% ($n = 79$) cases. Of those cases with Police involvement, in 31 (20.4%) Police took no further action; in 27 cases (17.8%) the CYP received a Caution, in eight cases (5.3%) the CYP was convicted; in six cases (3.9%) the CYP was given a Warning and in three cases (2%) the CYP plead guilty to the offence. The Police outcome was unknown in six cases.

Table 4.3: *Characteristics associated with sexually harmful behaviour leading to referral (N=152)**

Perceived Characteristic	<i>n</i>	(%)
Heightened sexual interest	86	(56.6%)
Use of verbal threat/intimidation	43	(28.2%)
Play/experimental/explorative/non-abusive (elements of offence described by assessor)	38	(25%)
Jealousy/grievance/vengeance	28	(23.1%)
Peer influenced	10	(6.6%)
Use of phone/mobile/camera	8	(5.3%)
Use of physical threat	8	(5.3%)
Associated with gender identity (e.g. cross-dressing)	7	(4.6%)
Bribery	5	(3.3%)
Use of weapon	2	(1.3%)

* Total *n* exceeds total number of cases and (%) exceeds 100% due to multiple characteristics described per referral offence.

In 66 (43.4%) cases, the referral incident was stated to have followed previous incidents of sexually harmful behaviour. For the 152 cases, in five (3.3%) cases the CYP was found to have completed treatment aimed at sexually harmful behaviour, in a further four (2.6%) cases the CYP were found to have completed treatment aimed at sexually harmful behaviour but shown poor compliance (e.g. poor attendance), and in a further six (3.9%) cases, CYP were found to have previously begun but not completed treatment aimed at sexually harmful behaviour. In nine cases (5.9%) CYP had successfully completed treatment aimed at other behaviours (e.g. anger management). What this highlights is that of the total 66 CYP reported to have engaged in incidents of sexually harmful behaviour, 51 (77.3%) CYP had not received or attended treatment aimed specifically at sexually harmful behaviour following a sexually harmful incident.

Follow-up

Time from case closure to follow-up ranged from 0.58 years to 13.50 years ($M = 6.09$, $SD = 3.58$). Two cases were unable to be followed up due to one CYP having left the country and another having no information available on the database. Of the 150 cases followed up, 42 (27.6%) were found to have committed a sexual offence (regardless of whether there was a legal outcome or if Police were involved). As seen in figure 4.3 below, 20 of these CYP (13.2%) went on to commit only a sexual offence and no other type of offence.

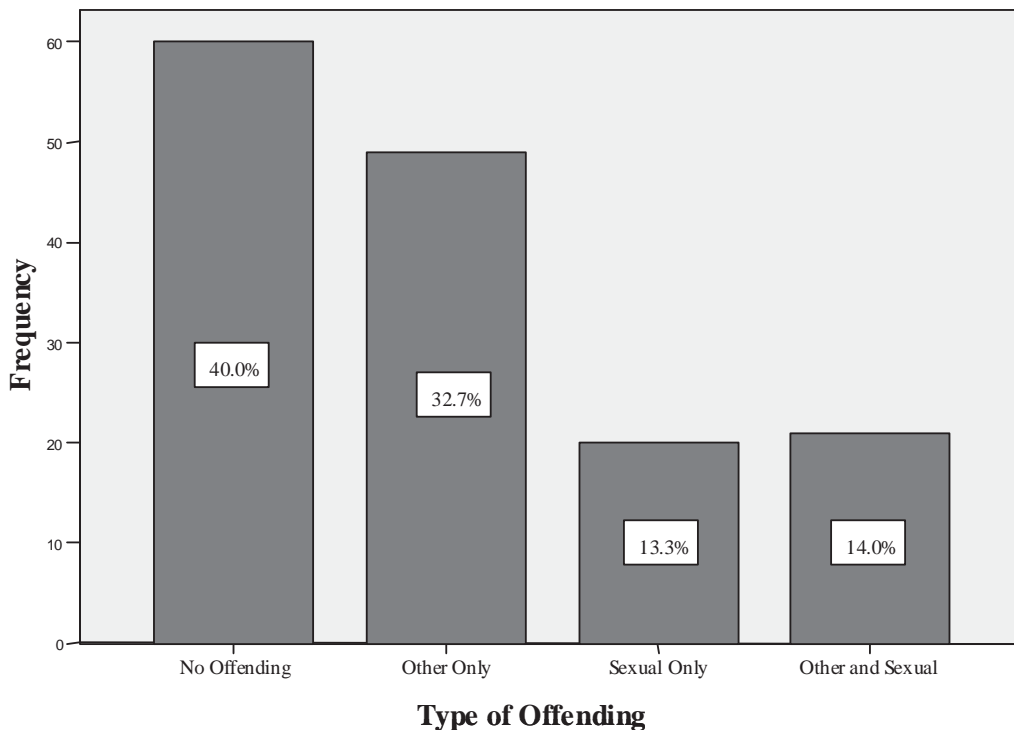


Figure 4.3: Type of Offending Occurring following Index Referral (N=150)

The importance of other outcomes (beyond offending behaviour) has not been overlooked, however detailed analysis of this data is beyond the scope of this research. A table of outcomes discovered during follow-up (for example, housing or financial issues, antisocial behaviour, substance misuse and suicide or self harm) are displayed in *appendix 9* for a total of 151 CYP. One CYP was unable to be located on the Childrens Services database.

Factors associated with sexual reoffending

Initial Chi-square analyses were completed in order to assess the associations between individual risk factors and the outcome of the CYP sexually reoffending. A full list of these is presented in Table 4.4 Below. Those with highest associations to further sexual offending included impulsive/compulsive behaviour ($\chi^2 = 55.95, p = < 0.001$); cold, callous attitude towards offending ($\chi^2 = 31.05, p = < 0.001$); current school attendance ($\chi^2 = 27.71, p = < 0.001$); positive talents ($\chi^2 = 18.50, p = < 0.001$); positive evaluations from work/school ($\chi^2 = 18.85, p = < 0.001$); and positive relationships with professionals ($\chi^2 = 18.13, p = < 0.001$).

Table 4.4: Factors associated with sexual reoffence

FACTOR	Presence of item in Sexually-reoffended%	n	Presence of item in no-sexually reoffended %	n	X ²	P-value
<i>Individual (and Microsystem)</i>						
Impulsive/Compulsive	97.6%	41	29.6%	32	55.95	≈0.000
Other difficult behaviour at school	88.6%	31	71.9%	69	3.96	0.035*
Aggressive tendencies	85.7%	36	62%	67	7.88	0.003
Emotional Regulation	85.7%	36	62%	67	7.88	0.006
Pervasive Anger	76.2%	32	58.3%	63	4.15	0.030*
Bullies others at school	74.3%	26	50%	38	5.79	0.023
Fighting at school	71.4%	20	48.1%	38	4.53	0.046
Poor assertiveness	69%	29	49.1%	53	4.87	0.030
Heightened sexual interest	69%	29	51.9%	56	3.65	0.041*
Non-sexual Behavioural Difficulties	66.7%	28	41.7%	45	7.57	0.007
Previous incidents of sexualised behaviour	59.5%	25	36.1%	39	6.78	0.008
Exposure to pornography	54.7%	23	32.4%	35	6.37	0.015
Poor empathy	52.4%	22	29.6%	32	6.79	0.013
Min. thoughts of sexually abusive behaviour	50%	21	32.4%	35	4.00	0.036*
Subject to Police investigation for previous offence	48%	12	20.5%	8	5.36	0.028
Previous warnings/convictions for non-sexual	47.6%	20	23.1%	25	8.623	0.005
Cold/Callous attitude towards offending	40.5%	17	4.6%	5	31.05	≈0.000

ADHD	31%	13	13%	14	6.63	0.012
Good communication skills**	23.8%	10	39.8%	43	3.39	0.047*
Emotional Neglect	27.3%	6	6.4%	3	6.58	0.037
Sexual interest in children	26.2%	11	11.1%	12	5.30	0.041
Substance misuse	26.2%	11	12%	13	4.51	0.046
Learning Disability	23.8%	10	8.3%	9	6.55	0.015
Sexually abused a stranger	7.1%	3	0	0	7.87	0.021
**Positive Talents	16.7%	7	55.6%	60	18.50	≈0.000
**Good problem solving skills	9.5%	4	27.8%	30	5.75	0.011
**Dev. appropriate sexual knowledge	7.1%	3	33.3%	36	10.78	0.001
Family (Microsystem & Mesosystem)						
History of Childrens Services involvement	73.8 %	31	53.7%	58	5.07	0.027
Low family income	59.5%	25	34.6%	36	7.64	0.022
**Sig. People protective factors	11.9%	5	15.2%	38	8.22	0.016
**Emotional confidant	11.9%	5	29.6%	32	5.11	0.034
**All sig. people positive coping strategies	7.1%	3	25%	27	6.39	0.041
**Healthy physical development history	0	0	18.5%	20	9.03	0.029
Community and Other (Mesosystem & Exosystem)						
Previously expelled from school	57.1%	24	30.6%	33	9.07	0.005
**Currently attends school	42.9%	18	85.2%	92	27.71	≈0.000
Hostility from community	38.1%	16	22.2%	24	6.77	0.034
**Positive relationship with professionals	33.4%	14	70.4%	76	18.13	≈0.000
**Positive evaluations from work/school	23.8%	10	62.9%	68	18.85	≈0.000
**Sig. People protective factors	11.9%	5	15.2%	38	8.22	0.016
**Emotional confidant	11.9%	5	29.6%	32	5.11	0.034
**All sig. people positive coping strategies	7.1%	3	25%	27	6.39	0.041

* One-tailed significance

** Strengths (would expect presence in sexually reoffended to be a lower percentage)

Note: Categories that overlap between the systems are shown twice.

Clinical judgement versus actuarial assessment of level of risk

Files were checked for clinician's rating of risk following consultation or assessment of the CYP. In 38 cases, no explicit statement was made about assessment of risk specific to sexual reoffending. Crosstabulation revealed a significant association between clinician's rating of risk and whether the CYP reoffended sexually or not ($\chi^2 = 17.37, p = < 0.001$). Further analysis revealed that clinicians tended to underestimate level of risk, such that 51.9% of CYP

who did not go on to reoffend were correctly estimated by clinicians as low risk, but a further 45.2% of those underestimated as low risk and actually went on to sexually reoffend.

Comparisons of clinical and actuarial estimates are provided in Table 4.5 below.

Table 4.5: *Clinical versus actuarial predictions of sexual reoffending*

	Sex Reoffence	Total
Clinical (n = 112)		
Low	19 (25.3)	75 (67%)
Medium	10 (34.5%)	29 (26%)
High	4 (50%)	8 (7.14%)
Total	33 (29.46)	112
AIM2 (n = 150)		
Low	0 (0%)	44 (29.33%)
Medium	18 (22%)	81 (54%)
High	24 (96%)	25 (16.67%)
Total	42 (28%)	150

Predictive ability of AIM2 Model

Cattell and Kline (1977) argue that validity is supported when items correlate with a criterion, but not necessarily with one another. Kline (1986) further states that no researchers have developed a tool without any item correlation as this would result in low internal-consistency reliability. In light of this, basic correlations were carried out and confirmed that no two items were perfectly correlated. Binary regression procedures were carried out to assess the predictability of the model in relation to further sexual offences. This was followed by ROC analysis, which computes an area under the curve (AUC) by plotting sensitivity of a tool against its specificity (Mossman, 1994), where an AUC of over 0.75 is considered to be of a moderate to large effect size (Daffern, 2006; Dolan & Doyle, 2000). Analysis revealed little difference between results attained from examining only 12-18 year old males with no

learning disability ($n = 79$) compared to the entire sample, including females and those with a learning disability ($n = 152$). Therefore results have been reported on analysis of the entire sample. Results revealed that the Total Concerns score and Total Strengths Score can independently predict whether sexual reoffence will occur better than chance, and that the combination of the two is the best predictor (accounting for 76% of the area under the curve). Whilst the effect of Total Strengths in a combined model is not significant (at 0.05 level of significance) it's contribution to the model should not be underestimated. These figures are summarised in Table 4.6. True positives are those cases where the predicted level of risk was correctly classified in terms of the actual outcome. Note the significantly lower rate of true positives resulting from the use of the Level of Supervision Matrix. This reflects the accuracy of the matrix in predicting “low” and “high” cases, but less so for the large number of cases that fall into the ‘medium’ level of supervision.

Table 4.6: *Total Concerns and Total Strengths as predictors of further sexual reoffending.*

Variable	B (Estimate)	SE (B)	OR	CI (95%)	AUC	% True Positives
Total Concerns¹					0.75*	74.1
Constant	-3.71	0.71				
Total Concerns	0.05**	0.01	1.05	1.03-1.07		
Total Strengths²					0.69*	67.2
Constant	0.63	0.46				
Total Strengths	-0.10**	0.03	0.90	0.85-0.96		
Combination³					0.76*	75.3
Constant	-2.33	0.98				
Total Concerns	0.04**	0.01	1.04	1.02-1.07		
Total Strengths	-0.06	0.03	0.94	0.88-1.00		
Level of Supervision Matrix					0.70*	41
Constant	-5.16	1.10				
LOSMatrix	3.94**	1.04	51.40	6.62-399.9		

Note: 1. $\chi^2=5.96$ (8); 2. $\chi^2=5.06$ (7); 3. $\chi^2=9.189$ (8) (Hosmer & Lemeshow)
* $p<0.05$, ** $p<0.01$.

Effects of age, gender and learning disability

Age, gender and learning disability (diagnosed only) were entered into a logistic regression procedure along with Level of Supervision Matrix outcome to explore whether these variables decreased or enhanced the predictive accuracy of the model. Results suggested that both learning disability and gender had an effect on predictability as shown in Table 4.7 below, such that those with CYP with a learning disability were more likely to have risk underestimated, and females to have risk overestimated. However whilst ROC analysis suggested an improvement of the model's predictive accuracy ($AUC = 0.85, p < 0.05$), the practical effect on the classification rate is low (only improved prediction by one case), suggesting further analysis with a larger sample is required.

Table 4.7: *Effects of Age, Gender and Learning Disability*

Variable	B (Estimate)	SE (B)	OR	CI (95%)	AUC	% True Positives
Effect of					0.85*	84.8
Age, Gender, LD						
Constant	-6.96	2.09				
LOSMatrix	4.71	1.21	111.93	10.45-1198.62		
ChildAge	-0.01	0.01	0.98	0.98-1.00		
LearningDisability	1.29*	0.56	3.64	1.22-10.90		
Gender	2.63*	1.29	13.82	1.10-17.39		

Note: $\chi^2 = 14.10$ (8) (Hosmer & Lemeshow). * $p < 0.05$;

Sexual reoffending versus non-sexual reoffending

A further ROC analysis was conducted to ascertain the ability of the model to predict sexual reoffending better than non-sexual offending. Results suggested that the model predicts non-sexual offending only just above chance rate ($AUC = 0.56, p < 0.05$), compared to its ability to predict sexual reoffending ($AUC = 0.76; P < 0.05$), therefore providing support for the AIM2 model's ability to predict sexual offending over and above nonsexual offending.

Modifications to the model

Effect sizes (Cramers v) were calculated for crosstabulations between factors listed in Table 4.4 and sexual offence outcome. A moderate to high level of effect size (Cohen, 1988, 1992) was used to decide on relevant changes that may improve the AIM2 model of assessment. This resulted in the some variations, such that the score ratings were changed for 12 items to reflect stronger evidence of association with sexual reoffending, one item was replaced, and a further seven items were added. These alterations are shown in Table 4.8.

Table 4.8: *Modifications to AIM2*

Factors Added	Weighting Altered	Items Removed
Bullies others	ADHD diagnosis	Level of intelligence
Exposure to sexualised material/pornography	Attitude towards sexual offending	
Family income	Current life crisis	
Gender	Developmental History	
History of Childrens Services involvement	Escalation aggression/hostility	
Learning disability	Family members support of professional intervention	
School attendance	History aggressive behaviour	
	Sexual knowledge	
	Substance misuse	
	Sig. adults anger/blame victim	
	Sig. adults deny/minimise	

Those with strongest effect sizes were also added to the Level of Supervision Matrix calculation, these included new items increasing scores for learning disability and decreasing scores for females. A comparison of the ROC analysis and percentage of True Positives between the AIM2 assessment model and the modified version are shown in Table 4.9.

Table 4.9: A comparison of AUC and True Positive Classification rates across the AIM2 model and the modified model.

Variable	AUC (AIM2)	AUC (Modified)	% True Positives (AIM2)	% True Positives (Modified)
Total Concerns	0.75*	0.80*	74.1	79.4
Total Strengths	0.69*	0.76*	67.2	73.9
Combination	0.76*	0.82*	75.3	82.3
Level of Supervision Matrix**	0.79*	0.87*	41.0	74.1

* $p < 0.05$; ** difference between these two ROC curves is significant at 0.05 level.

The modified model was also re-tested to ascertain its predictability of sexual offending over non-sexual offending. Comparable to the AIM2 assessment model, a ROC analysis suggested that the modified model generally predicts non-sexual offending at chance rate ($AUC = 0.56$, $p < 0.05$), in comparison to sexual offending ($AUC = 0.87$, $p < 0.05$).

A regression analysis of child age, learning disability and gender conducted on the modified model suggested that learning disability and gender no longer mediated any effects of the model ($p = 0.652$ and $p = 0.431$ respectively). Child age was a significant factor ($b = 0.02$, $SE = 0.01$, $p = 0.021$). Further exploration revealed that the model tends to overestimate risk for older children, and underestimate risk for younger children. Further complex analysis of the relationships between age and factors in the model is necessary to explore the full nature of this effect.

Survival analysis

Kaplan-Meier survival curve analysis was carried out due to the variation in follow up duration and to account for those cases with a short follow up period. Actual time to reoffence ranged from two months to 93 months ($M = 30.41$, $SD = 24.18$). Two survival curves were plotted to examine whether CYP predicted to be of high risk of reoffending were more likely

to be detected for reoffending. Low and medium scores were aggregated to show the maximum difference between the survival curves. The two curves are shown below in figure 4.4. Mean months for time to sexually reoffend for High risk was 33.96 ($SD = 5.81$) but much longer at 138.15 months ($SD = 5.28$) for Low/Medium risk; this was significantly different ($\chi^2 = 83.13, p < 0.001$).

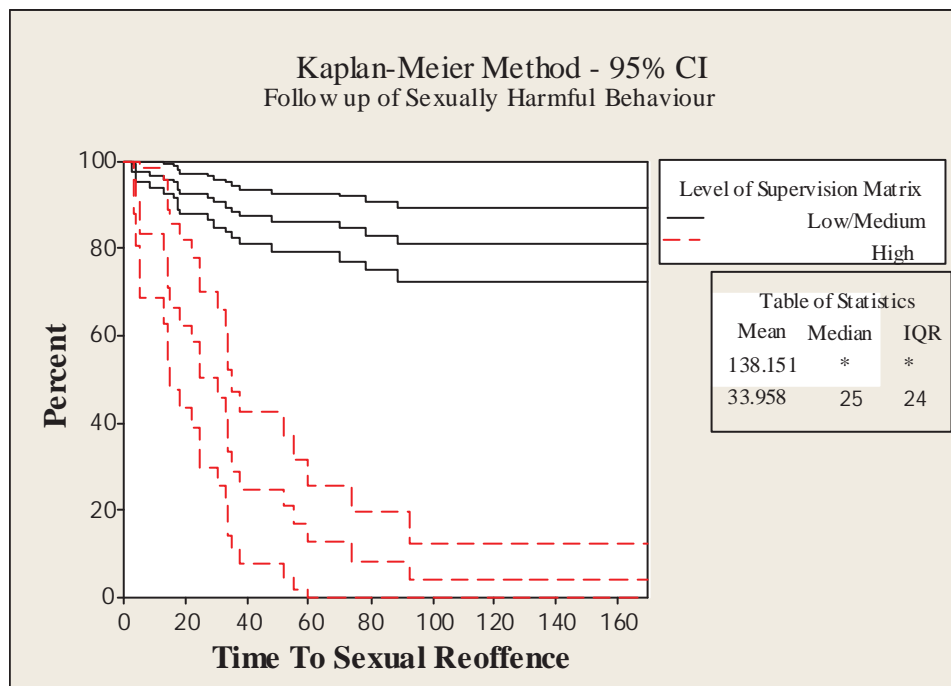


Figure 4.4: Kaplan-Meier Survival Plot for time to sexual reoffence. (Note: Central lines are the survival curve, and outer lines depict confidence barrier).

DISCUSSION

The research collated an array of ecological variables and follow-up re-offence data on 152 CYP referred to a county service following sexually harmful behaviour in an effort to explore the ecological correlates of reoffending behaviour, to provide a preliminary analysis of the AIM2 assessment model and its ability to discriminate from sexual and non-sexual

reoffending. Furthermore, the research aimed to explore the generalisability of the AIM2 to younger, female and learning disability populations and to explore modifications for improvement of the model. Factors previously found in literature to be associated with reoffending were confirmed in the study. Results supported the use of the AIM2 model in identifying concerns and strengths associated with sexual reoffending, however the model was found to be significantly improved by the inclusion of age, gender and learning disability. Using an ecological model, additional factors were included, for example current attendance at school and exposure to pornography, thus improving the accuracy of the AIM2 assessment model. Items addressing the diagnosis of a learning disability and the gender of the CYP were incorporated to increase/decrease of risk associated with gender and learning disability populations, along with modification to the scoring system to reflect factors with stronger associations with sexual reoffending.

Prediction of sexual reoffending

In their review Worling and Långström (2003) found that recidivism rates have varied in the literature from 0% to 30%, and this variation to be a function of the different lengths of follow-up, measurement of recidivism, impact of clinical interventions, and the nature of the population under investigation. In looking at referral incidents in the current study, 39.7% of cases had no Police involvement. Hence it not surprising that 27.3% of CYP in the current study went on to offend sexually, due to this study taking into account sexually harmful behaviour noted by services, but not necessarily brought to the attention of the Police.

Furthermore, the community setting from which the sample was attained suggests the CYP are less likely to require secure or intensive provision, and hence do not fall into a severe and frequent offending population.

There has been an argument made by Kenny, Keogh and Seidler (2001) and Thornton (2002) that risk of recidivism of sexual offending would be better measured by comparing those individuals who are being assessed following sanctions for previous sexual offending (“repeaters”), and those individuals being assessed for a first sexual offence (“non-repeaters”). Worling (2004) has criticised this approach due to the probability that some of the ‘non-repeaters’ may have committed previous sexual offences not known to the assessor and thus actually fit into the ‘repeater’ group. Furthermore, this perspective would not allow for differentiation between those CYP who abuse once only, and those who may go on to abuse again.

Factors specifically related to clinical judgement of risk were unable to be attained without interviewing clinicians regarding their formulation of risk. The result of clinician’s underestimation of risk may reflect dynamic factors that may have been in place at the time of assessment, but not maintained in the long term, but may also reflect the pressure that clinicians face in the reality of resources available to specialised services for sexually harmful behaviour, and thus the expectation that resources are instantly available for medium-high risk CYP. Also, when working directly with an individual, it may be that the professional falls into the trap of wanting to believe the child is of a lower risk, an idea that may be explored in further research.

The AIM2 assessment was found to be effective in accurate risk predictions for CYP that go on to reoffend sexually. This is the first study to validate the use of the AIM2 assessment model since it’s revision from the original model. Results supported the use of concern items, strength items, and the application of the interaction between the two in predicting risk.

Furthermore, providing clinicians with a matrix of supervision provision needed to reflect the likelihood of further offence, although it is argued that cut-off points for this matrix defining categories should be improved further to minimise 'medium' ratings. The findings support research that indicates that there are sets of risk factors that increase the likelihood of sexual reoffending, and sets of risk factors that mediate, or decrease the risk of sexual reoffending. Survival analysis and accuracy of prediction in the current study provides support for the use of the AIM2 model over the use of other actuarial assessments such as the ERASOR, designed to measure risk over a one year period due to the absence of dynamic variables. Despite the variable follow up periods, the model has demonstrated its ability to identify those CYP who are of a high risk of sexual offending, including sexual offending occurring at a later time. Unlike use of the SAVRY and J-SOAP-II (Viljoen et al., 2008), results of the study supported the ability of the AIM2 assessment to predict sexual reoffending rather than non-sexual reoffending, and thus support the notion that sexual offending includes elements that discriminate from those found in non-sexual offenders (Ronis & Borduin, 2007; Van Wijk et al., 2005).

Modifying the ecology to enhance prediction

Modifications were made to the AIM2 assessment to account for strong associations found between new variables not included in the AIM2 assessment. These factors have been supported in previous literature in relation to their association with sexually harmful behaviour, for example, bullying others (Caputo et al., 1999); exposure to pornography (Friedrich et al., 2003); and current school attendance (Biehal, 2006). Weighting of factors already in the model, which had not been evidence-based to warrant high scores, were also increased where high associations were found. This produced a model with higher accuracy of

risk prediction, less reliance on the 'medium' category of level of supervision, and applicability for use with females and CYP with mild to moderate learning disabilities. These modifications are discussed with reference to existing literature.

Females

Limited comparative studies have been conducted on males and females CYP's with sexually harmful behaviour, and many have been limited by small sample sizes and non-randomised sampling procedures (Robinson, 2009; Worling & Långström, 2003). Some argue that female CYP who sexually abuse differ from male CYP who sexually abuse in their mother-child relationships (Johnson, 1989; Turner & Turner 1994), are more likely to abuse victims known to them (Fehrenbach & Monastersky, 1998; Matthews, Hunter & Vuz, 1997) and include less use of violence or force (Ray & English, 1995). Other research suggests that female CYP are likely to have experienced greater rates of sexual abuse than their male counterparts (Hickey et al., 2008, Miccio-Fonseca, 2000; Ray & English, 1995), and as such experience higher levels of psychiatric co-morbidity, including substance misuse and post traumatic stress disorder (Kubik, Hecker & Righthand, 2002). The number of female CYP included in the current study was insufficient to allow for specific characteristics to be compared across gender.

Hickey et al. (2008) have suggested that female CYP follow a different pathway towards sexually harmful behaviour due to their own experiences of abuse. For example, in their study using a sample of 255 males and 25 females, they found that 59.1% of girls as compared with 26.4% of boys were diagnosed with DSM-IV PTSD. In addition, 95.5% of the females had been sexually abused as compared with 69.9% of boys. The AIM2 assessment model already

accommodates these factors, however further exploration into types, frequencies, and offender characteristics of child maltreatment experiences are warranted, both within and outside of gender differences. For example, Hamilton, Falshaw and Browne (2002), in their review of 79 young people in a secure institution discovered that those more likely to commit sexual crimes had been victims of *recurrent extrafamilial* maltreatment, such that they were likely to have experienced maltreatment on more than one occasion and by someone outside the family (although many of these had also experienced recurrent intrafamilial maltreatment).

In an early study focusing on characteristics and reoffending rates of female CYP who sexually abuse, Fehrenbach and Monastersky (1988) found that none of their 28 participants went on to reoffend, suggesting that female sexual abusers do not go on to repeat their behaviour. Of course such a finding would have huge implications, as it would suggest that female sexual abusers do not require treatment for their behaviour, however the study is criticised for its small sample size. Hirschberg and Riskin (1994) studied a population of 20 inpatient female CYP with sexual behaviours, and found that 55% of them went on to show repetitive patterns of sexual aggression during a follow-up period of four years. Unfortunately the authors did not go on to explore significant differences in characteristics between those that exhibited repeated behaviour and those that did not.

More consistently, research suggests that female CYP share similar risk factors to male CYP, and as such, share similar elements of assessment. This was confirmed in the current study, supporting that differences exist moreso in relation to the questioning and interviewing of females (Robinson, 2009). Studies that have found similar factors between males and female CYP include experiences of maltreatment prior to age five (Howley, 2001; Hunter, Lexier,

Goodwin, Browne & Dennis, 1993; Matthews, Hunter & Vuz, 1997), substance misuse, low self-esteem, emotional dysregulation (Bumby & Bumby, 1997), and other delinquent behaviour (Hickey et al., 2008; Miccio-Fonseca, 2000; Ray & English, 1995). Again, factors accounted for within the AIM2 assessment model.

Learning disability

The current study included 17 (11.2%) of CYP with learning disabilities, although those with severe disabilities were not represented in the sample, as upon referral they were likely to have been redirected to a more specialist service. Those with learning disabilities are reported to be over-represented in the CYP population (Cawson et al., 2000; Erooga & Masson, 2006; Fyson, 2008), however, findings have been variable, with studies finding between 19 and 80% of CYP who sexually abuse to have been diagnosed with a learning disability (Boswell & Wedge, 2002; Dolan, Holloway, Bailey & Kroll, 1996; Manocha & Mezey, 1998; O'Callaghan, 1998). CYP with learning disabilities may be less able to hide their harmful behaviour and thus be subject to a higher likelihood of being caught.

In terms of the behaviour itself, Fyson (2008) has noted that there are significantly more similarities between CYP with and without learning disabilities than there are differences, and this notion has been supported by other studies (Barbaree et al., 1998; Smallbone, 2005; Sternac & Sheridan, 1993). Research has suggested three consistent findings that distinguish CYP with and without learning disabilities. The first in relation to choice of victim, such that those with learning disabilities are less likely to be discriminative in choice of victim gender (Balogh, 2001; Thompson & Brown, 1997; Tudiver & Griffin, 1992). The second is the finding that sexually harmful CYP with learning disabilities are more likely to have engaged

in non-contact behaviours such as exposure and public masturbation (Fyson, 2007; Gilbey, Wolf & Goldberg, 1989). However researchers have also noted that the index offence in these cases was equally as serious as those CYP without learning disabilities, suggesting that those with learning disabilities may be less likely to receive punitive or serious consequences of their behaviour than their non-learning disability counterparts. Finally, sexually harmful CYP with learning disabilities have been found to be more frequently impulsive and less inhibited than those without learning disabilities (Hackett, 2004, Sternac & Sheridan, 1993; Timms & Goreczny, 2002).

Again, underlying characteristics remain similar between non-learning disabled CYP and learning disabled CYP, and as such are accounted for within the AIM2 model of assessment. The addition of a score reflecting literature that suggests a higher prevalence of learning disabled CYP who go on to sexually reoffend, and the lower level of legal sanction applied to learning-disabled CYP, added value to the modified version of the model.

Age

Chaffin, Letournou and Silovsky (2002) state that children with sexually harmful behaviour should be considered distinct from adolescents with sexually harmful behaviour. However, when one considers the individual and family characteristics of children with sexually harmful behaviour in comparison to adolescents, the only difference noted is the increased emphasis on parental involvement, supervision and attitudes. These are characteristics that should be included in dynamic factors of assessment. Bonner, Walker and Berliner (1999) compared a sample of 201 children with sexually problematic and harmful behaviour with 52 children with no history of sexually harmful and problematic behaviour, and found significant

differences between the two groups on the same static factors, both child and parental, as identified by researchers of adolescent sexually harmful behaviour.

A review conducted by Kambouropoulos, Mitchell, Staiger and Tucci (2005) found that compared to adolescent studies, not many researchers had concentrated on children under 12 years of age. Kanbouropoulos et al. (2005) located only nine studies that reported on psychological characteristics of children engaging in sexually harmful behaviour, all suggesting that children experience the same risk factors as adolescents. Studies reported psychological problems such as lack of empathy, inadequate social skills, problematic affect, high levels of anxiety, anger, obsessional thoughts, and depression (Friedrich & Luecke, 1988; Hall, Matthews & Pearce, 1998,2002), difficult peer relationships, poor social skills, inappropriate knowledge of their own sexuality, hyperactivity and substance use (Ray & English, 1995), conduct disorder (Gray et al., 1999, Pithers et al., 1998) ADHD (Gray et al., 1999, Hall et al., 2002) and high rates of fighting, aggression, property damage and disobedience (Pithers et al., 1998; Ray & English, 1995).

Kanbouropoulos et al. (2005) noted that although many of these factors may not have been 'diagnosed' due to age, symptoms were evident. For example, Gray et al., (1999) found that in their sample of 127 children who had displayed sexually harmful behaviours, 123 (96.8%) met the diagnostic criteria for at least one DSM-IV disorder related to problem behaviour.

The current study found that child age significantly effected the model. Further exploration revealed that the model tends to overestimate risk for older children, and underestimate risk for younger children. As literature suggests similar risk factors for younger and older children,

the effect of age could be illusional in that younger children may be less likely to have their behaviours reported, or to be considered as normal or exploratory than older children, and the fact that older children have had more time to experience some of the risk factors that younger children may not as yet have experienced but may be present by the time they reach their adolescent years. It is recommended that, in making the AIM2 applicable across ages, the Level of Supervision Matrix included in the model be revised to reflect these age variations, such that younger CYP have lower thresholds of risk determination than older CYP.

Neighbourhood characteristics

A number of variables were collected based on the residential area at time of referral. Although these items associated with one another (for example, lower education levels, higher crime levels and lower family income), only family income was independently found to be a significant predictor of further reoffending, such that CYP referred from a neighbourhood with an average lower income were more likely to reoffend than those CYP who were referred from a neighbourhood with higher family income. This finding is consistent with literature that suggests strong associations between child experiences of adversity and negative child outcomes (Cicchetti, Toth & Maughan, 2000). Ecologically, this represents the effect of family income on parent factors, for example, availability to the CYP, resources available within the community and parenting stress, and thus the interplay of factors across the ecological domains.

School attendance

Over half of the CYP in the sample attended school, with school attendance being a significant factor differentiating those CYP who did or did not go on to sexually reoffend, as

found by Biehal (2006). Considered in an ecological perspective, this result highlights the role that schools play in providing a managed structure for CYP, and the networking, extracurricular activities and resources provided for CYP and parents (Cicchetti, Toth & Maughan, 2000; Thompson, 1994). This result is present despite the fact that the reoffending behaviour of CYP is more likely to be known to services due to input of school. Association between current attendance at school and attaining reasonable educational level could also be an explanation for the strength of this factor, as research suggests that a reasonable education level can be protective in enabling adaptive coping (Wilcox et al., 2004).

Ecological assessment and treatment considerations

The assessment process is vital in justifying the provision of treatment as well as formulating treatment goals. An ecological consideration of the variables considered within the AIM2 and the proposed model of improvement provide the assessor with information pertinent to managing the risks at hand as well as the planning of treatment. Treatment efficacy is beyond the scope of this research, particularly as specifics regarding previous treatments were unknown. However the implications that assessment has for treatment planning should not be ignored.

Only a minority of CYP ($n = 5$) in the current study had received and completed treatment focused on sexually harmful behaviour, and therefore no specific analysis was completed. Furthermore, it was not known whether some of the CYP went on to receive further treatment following case closure. The effects of such could only be well-measured in a longitudinal study. A growing body of research suggests that providing CYP with treatment following sexually harmful behaviour is effective (Bentovim, 2002; Edwards, 2007; Vizard, 2006;

Worling & Curwen, 2000). Vizard et al. (2006) conducted a review of 21 treatment outcome studies of adolescent sex offenders. They concluded that all studies showed relatively short follow-up periods of one to six years (where this data was provided), with main outcome measures being sexual reoffending rates and nonsexual reoffending rates.

The current findings support the use of an ecologically-based model and as such, demonstrate a method of assessment that provides a preliminary guide towards treatment. Studies examining types of effective treatment have generally concluded that treatment must take a multi-agency and holistic approach, and that such an approach reduces not only sexually reoffending, but also other antisocial and criminal behaviour (Hickey, Vizard, McCrory & French, 2006; Righthand & Welch 2001; Veneziano & Veneziano, 2002). For example, multisystemic therapy with adolescent sex offenders has been investigated in a randomised control study by Borduin and Schaeffer (2002), using measures beyond reoffending, such as behavioural outcomes. Positive results were found suggesting MST to be a cost effective and successful treatment for adolescents with sexually harmful behaviour. A study also exploring behavioural outcomes and further sexual behaviour was conducted by Amand, Bard and Silovsky (2008), concluding that treatment must incorporate families and communities in addition to variable therapy techniques such as play therapy or cognitive behaviour therapy, in contrast to treatment based specifically and individually on sex-offending behaviour.

Therefore, the results of the current study support the ability for the AIM2, as an ecologically-based assessment tool to be collinear with the effectiveness of ecologically based treatment, and to thus provide clinicians with initial guidance as to treatment aims. Implications of these

results suggest the need for resources to be directed towards multi-agency support and treatment networks.

Clinical implications of assessment within the UK

In 2007, the Government nationally emphasised the importance of meeting the needs of CYP who sexually harm (HM Government, 2007). However the need to employ a more national approach to assessment and understanding of the behaviour itself is an ongoing process (DOH, 2009).

A particular advantage of the AIM2 Assessment is the extent to which it is embedded within local authority policies and procedures, such that in addition to risk, management and treatment planning, the assessment can be used to inform decision-making around legal pathways within the criminal justice system. Therefore, it is hoped that CYP who would benefit from being treated within the community without being criminalised will be, and that those with medium to high risks of reoffending/needs for supervision can be dealt with appropriately and allow for streamlining of services from an early stage in the process. Such processes support the best interests of the child, balance this with the task of protecting others and in the long term, produce a more cost-effective service.

The AIM2 assessment acknowledges that where this may be limited is in instances where the investigation is incomplete, the CYP denies the offence and intends to plead not guilty. In these instances, it is recommended the AIM2 assessment should be completed as a paper exercise only, thus limiting the amount of information available in addition to the assessor's

ability to assess other elements necessary through interview such as attitudes and levels of empathy.

Empirical support of the positive effects of dynamic variables provides support for sexually harmful behaviour to be ‘treatable’ and ‘manageable,’ but only where systems are collaborative with this process. Of course there are always resource implications, and what is highlighted through the use of the AIM2 assessment is the effect of dynamic strengths on reducing level of risk – a task demanding of resources. What must be recognised is that when a CYP is perceived to be of ‘low’ risk, this does not mean that services and resources are no longer needed, but rather that those dynamic strength variables need to be maintained in order to reinforce the buffers against further sexually harmful behaviour.

It is important to acknowledge that this topic has the tendency to make adults (those in the environment of CYP as well as professionals) anxious and uncomfortable. The use of a thorough assessment exploring all ecological variables is hoped to reduce this anxiety and improve the response from all professionals and significant others associated with the CYP.

Limitations and recommendations

Due to availability and access to data, the sample was primarily of White-British ethnicity (almost 97%) thus not allowing for analysis of ethnic differences or validity of data across ethnicity. This being said, no recent recidivism studies could be found that identified an effect of ethnicity on risk of sexual reoffending.

Research indicates that a significant number of CYP come from multi-problem families, for example where parents may engage in criminal behaviour, have learning disabilities, substance misuse, or have childhood histories of trauma (Matthews et al., 1997; Miccio-Fonseca, 1996, 2000). Whilst the AIM2 includes a factor pertaining to the parents having addressed their own difficulties, it does not account for the existence of the difficulties themselves, except where the difficulty extends to known maltreatment of the CYP. Due to the current study's retrospective nature, the extent of parental difficulties was unable to be assessed and should be considered in future work.

The ecological model includes a number of factors pertaining to the macrosystem that were not within the scope of this study. For example, a comprehensive inclusion of macrosystem factors might include analysis of local and national media that promotes or condemns child maltreatment, sexuality or sexual abuse, particularly in light of recent media attention such as the fatal Child Protection case of 'Baby P.' Also, considering the changing perceptions of 'appropriate' sexual behaviour (Durham, 2009) alongside societal norms, issues such as gender norms, sexuality in music and television, and existence and access to new technologies or pornography should be factored in to the ecological framework, as well as their impact on sexual deviation. Furthermore, whilst effort was taken to include factors such as local crime rates and education levels, it was not possible to check how long the CYP had lived in that particular area.

The use of retrospective file data is not the most ideal form of data collection and is likely to have resulted in a higher amount of missing data than a prospective study. However the use of retrospective data allowed for a longer follow-up period. Multiple sources of case information

were used in addition to Children's Services electronic data in order to reduce the level of missing data. A large number of variables were found to significantly contribute to sexual reoffending. In such cases there is the possibility of an 'overfitting' of the data, such that the research would benefit from a further study that expands upon the current sample size.

Finally, there may have been mediating factors between first offence and re-offence that remain unknown, for example, whether the CYP was exposed to further, or reduced dynamic risk factors; or deprived of or introduced to new dynamic strengths that further influenced the occurrence or absence of reoffending behaviour.

Despite these limitations, this preliminary study has added much value to the thinking and implementation of the AIM2 assessment model, and suggestions for improvement based on an ecological model. As with any assessment model, and as emphasised by Calder (2001), it is necessary to have comprehensive assessments incorporating relevant research and theory, but this should never be perceived as independent of the specific skills, training and experience of professionals interviewing, assessing and working therapeutically with children and young people. The following chapter demonstrates a case example of the enhancement of assessment and treatment of an adolescent referred for sexually harmful behaviour, following the use of an ecologically informed model.

CHAPTER FIVE

Interactional processes of ecology, transition and attachment of the assessment and treatment of an adolescent with sexually harmful behaviour

ABSTRACT

The following material documents a period of assessment and projected intervention with a fifteen-year old adolescent Caucasian male, referred by Children's Services following concerns of sexualised behaviour towards his female sibling, two years his junior. Pressures from the Police who maintained the case status as 'undetected' further complicated the case. A thorough assessment with a cognitive-behavioural focus was undertaken using a detailed file search, interview, psychometric assessment, functional analysis and formulation. Assessment recommendations included the need for therapeutic intervention. Sessions Themes of power, dominance and manipulation were through the use of verbal and activity-based sessions. Application of the AIM2 Assessment supported the need to employ *medium* levels of supervision and the need to target intervention around family and offence-specific concerns. Ongoing evaluation of treatment progress resulted in a change in formulation and treatment plans such that an ecological attachment-informed approach, with an emphasis on the centrality of therapeutic alliance was employed. This treatment approach was met by increased levels of engagement, and although level of risk remained the same at the point of writing up this case study, the therapy to date allowed for the alliance required for sex-offence specific work to be conducted within the context of addressing other identified concerns and strengths. A growing, but limited body of evidence is presented. Difficulties with engaging adolescents in assessment and treatment are discussed, in addition to the difficulties of assessing outcome in cases where issues are broader than dealing with a specific behaviour or particular set of cognitive distortions. An appraisal of a multidisciplinary approach with multiple supervision sources is provided within the context of a reflective practice process. As work is ongoing, a projection of future session work and post-psychometrics is provided.

This chapter is not available in the digital version of this thesis.

CHAPTER SIX: Discussion

Multifactorial configurations of complex processes and interactions that occur within the context of Child Protection have been investigated through the use of an ecological perspective. Factors associated with sexually harmful behaviour by children and young people (CYP) have been grounded in an ecological-transitional approach that considers early childhood experiences, environmental and contextual experiences, and dynamic and static concerns and strengths in predicting further sexually harmful behaviour.

Findings and contribution to current literature

The aim of this thesis was not to provide a causal explanation for child maltreatment or for sexually harmful behaviour, but rather an ecological understanding of one to inform the other in thinking about the array and interplay of factors. Chapter one initially extracts parental substance abuse, a risk factor identified in many studies to be strongly associated with child maltreatment, and provides a comprehensive review that supports the need to consider risk factors within the ecological framework that accounts for individual risk factors (of the child and parent) as well as the interactions that occur between the two, and within the family environment. Chapter two provides further support of the need to consider these individual factors and the interplay of the two in attributing to parenting stress, and as such critiques the Parenting Stress Index, a psychometric tool that evaluates how these factors can be measured to inform the thinking of professionals working within the Child Protection framework. The positively evaluated tool and the research supporting its use has found parenting stress, amongst other child and parent factors, to be a mediator of both the occurrence of child maltreatment and negative child outcomes.

Chapter three explored the under-researched area of sexually harmful behaviour, as an adverse outcome of previous and sometimes ongoing risk factors. The occurrences of child maltreatment, parental substance misuse and parental stress can be seen, amongst other static and dynamic variables, to impact significantly on children and young people who sexually harm, and in mediating the reoccurrence of this behaviour. The AIM2 assessment model, which incorporates the above in providing a model that interplays static and dynamic factors with concerns and strengths across individual, family and environmental contexts was validated and expanded upon to further support an ecological perspective of Child Protection. The integration of the above has been demonstrated in the assessment and treatment of a 15-year old adolescent referred for sexually harmful behaviour, and whose childhood included exposure to a substance-misusing father and a highly stressful family environment. Application of the AIM2 assessment revealed little change in reducing risk of reoffending and the need to address issues specific to sexually harmful behaviour, in addition to working with family issues.

This thesis has provided further support to literature identifying the effects of various risk and protective factors that contribute to child protection issues, and in doing so has reinforced the applicability of the need for all professionals involved in Child Protection to take an ecologically-informed approach to prevention, assessment, case management and treatment. The evaluation of the AIM2 assessment and the application of strength-based work with a case study have further supported the recent move towards dynamic strength-based assessment, as results clearly demonstrated the significance of dynamic strengths such as school attendance and support/positive attitudes of significant others as contributing to a buffer against further sexually harmful behaviour. Such evaluation has further supported the

alignment of the AIM2 assessment with the What Works literature by providing support for its empirical base and encouraging its accreditation as an assessment tool to be applied by clinicians throughout the UK.

A visual demonstration of the ecological model supported by the thesis is demonstrated in figure 6.1. The model is named the *EcoAssessment* and is an adaptation of the ecological model presented by Belsky (1980, 1992) and Bronfenbrenner (1979); and the AIM2 Model of Risk (Griifin & Beech, 2004). The model consists of the four ecological systems, the interplay of factors *within* and *between* these systems, *across* the development of the CYP's life. Each level is represented as having infiltrating effects on one another, and represent the elements and pressures of the system that influence the individual child or young person. Possible pathways of sexually harmful behaviour are demonstrated and support the findings of the interaction of concerns and strengths that ameliorate risk of further sexually harmful behaviour. The EcoAssessment incorporates additional factors identified in the current research to significantly increase or decrease risk of further sexual reoffending, for example, bullying others, exposure to pornography, family income, gender, history of childrens services involvement, learning disability and school attendance. It also highlights where factors are a result of a relationship between people and systems.

Results have demonstrated that when these factors are considered in this holistic framework, a further sexual reoffence, or lack of further sexual reoffence can be understood by knowledge of the concerns and strengths present for a CYP, and thus a clearer understanding of treatment aims. For example, parental stress, as shown to be adequately assessed by the Parenting Stress Index sits between the microsystem and mesosystem. Causes may be impacted by factors

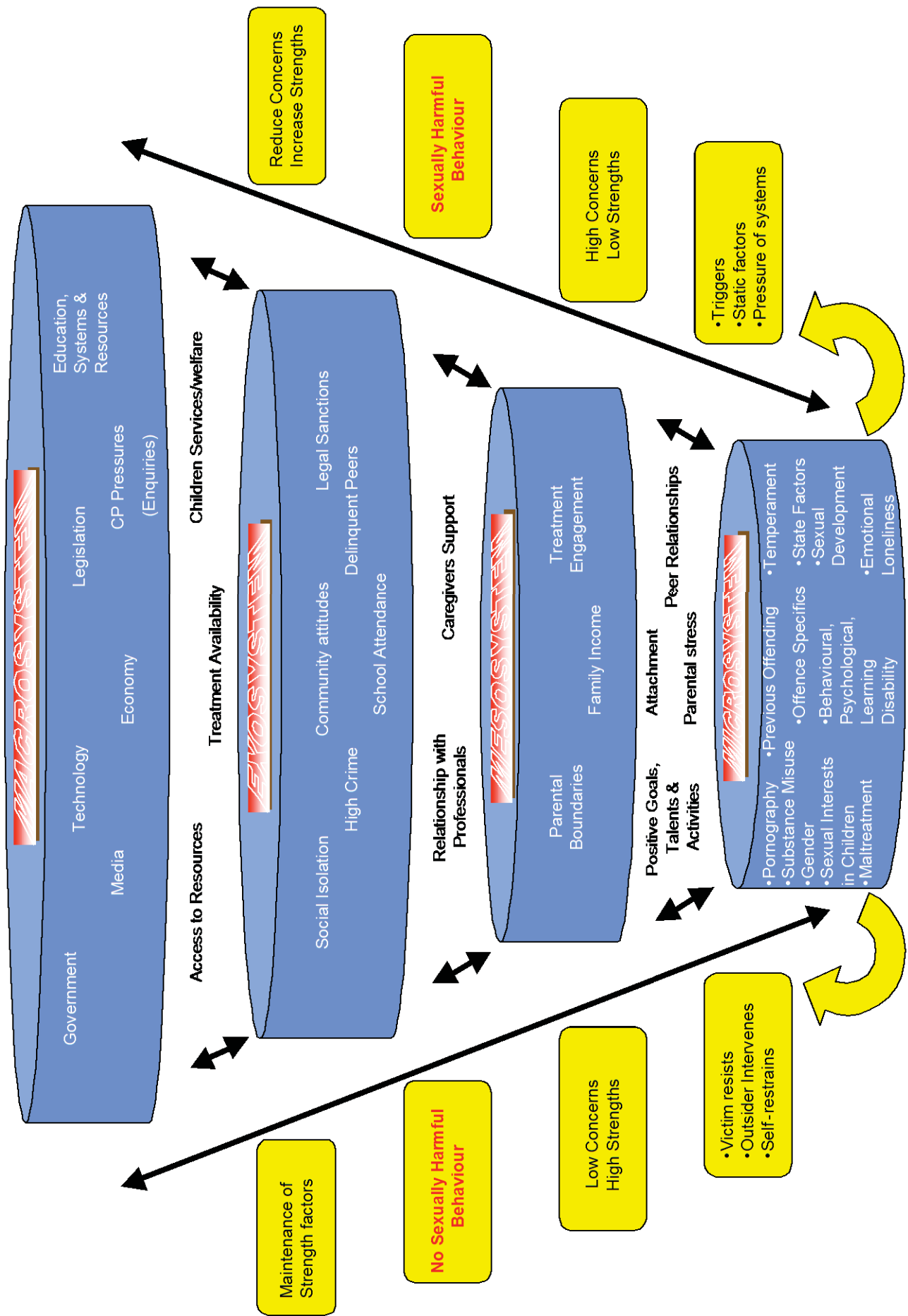


Figure 6.1: EcoAssessment of children and young people with sexually harmful behaviour

within the macrosystem and likely to be impacted by factors within the exosystem. Regardless of cause, its effect is likely to have some effect on most of the factors listed within the microsystem, such as substance misuse, maltreatment and temperament and most of the factors listed within the macrosystem, such as parental boundaries, family income and treatment engagement. Therefore a new pressure such as a parent losing their job is likely to exacerbate concerns. In this scenario, buffers to prevent the CYP from going on to reoffend will be dependant primarily on the existence of strength factors such as individual characteristic, relationships with professionals, access to resources and the CYP continuing in education.

The case study clearly demonstrates a similar scenario where individual factors, particularly those pertaining to specific sexual offending were heavily impacted by caregiver support, parental boundaries and relationships with professionals, and the increase in treatment efficacy followed application of an ecological model that allowed for the interaction between individuals and systems.

Limitations of thesis

A major limitation of the research was the lack of opportunity to directly measure parent factors within the piece of empirical research, particularly due to the vast literature that supports the effect of the interaction of parent factors on the parent-child interaction. Whilst parent information was included in data collection, much information was missing or unavailable. What this does highlight however is the need for professionals to place more emphasis on attaining this information in informing case assessment, formulation and treatment.

There is a new and necessary trend towards longitudinal studies of CYP with sexually harmful behaviour, and these are hoped to shed light on those issues that cannot be addressed in the current study, for example, the effects of dynamic factors that may occur between first and reoffence that alter initial risk evaluations. Although there has been opportunity to directly work with a young person who has experienced maltreatment, a stressful family environment, and gone on to exhibit sexually harmful behaviour, the long term effectiveness can only be hypothesised.

Clinical implications

A number of Government initiatives have now begun to acknowledge the strong links between CYP who sexually harm and other child protection issues in terms of prevention and need for resources, in addition to taking on the ‘best interests of the child’ as a primary consideration (UN Convention of the Rights of the Child). In reality, however, this is not always the case and the division between victim and abuser, and the lack of understanding around the issues of CYP who sexually harm usually result in inequitable treatment.

In 2007, the Government nationally emphasised the importance of meeting the needs of children and young people who sexually abuse (HM Government, 2007) in their document “*Working Together to Safeguard Children.*” Complimentary to this, the Youth Justice Board released a guide to the current state of Youth Justice interventions and management specifically addressing the needs of CYP who sexually harm (Grimshaw, 2008). The Department of Health (2009) only recently held a consultation to begin the formulation of a more national approach to this issue. However other recent government initiatives such as The Youth Crime Action Plan (Home Office, 2008b), the Staying Safe Action Plan (DCSF, 2008);

and Healthy Lives, Brighter Futures (DCSF, 2009) continue to centre around the needs of victims, particularly around management and prevention of adult-child sex offences, and fail to consider the specific needs of CYP with sexually harmful behaviour. What they do recognise however is that improving children's safety means tackling a wide range of issues amongst a variety of contexts that need to include schools, neighbourhoods and the home environment, yet further pressures are needed on funding ecological assessment and treatment to ensure that systems can compliment the EcoAssessment Model. Professionals across systems and services need to be encouraged to communicate with one another in order to avoid potential downfalls in the Child protection system.

The heterogeneity of CYP with sexually harmful behaviours leads to a dismissal of what research has informed us about risk factors and protective factors, increasing anxiety amongst professionals who face this issue, and further aligning CYP with adult sex offenders. Finally, factors related to the macrosystem will undoubtedly effect the system response to child protection, for example, recent cases such as 'Baby P' have caused anxiety across services, such that higher level cases may be *overestimated* as high risk, whilst lower-level cases may be *underestimated*. Providing an ecological understanding of child protection in terms of the interplay of child maltreatment, static and dynamic parent and environmental factors to professionals working with children can facilitate a more positive and confident approach. The AIM2 assessment, incorporating the above has been evaluated as a positive avenue through which this can occur.

Conclusions and recommendations

Pathways to abuse and negative child outcomes are wrought with complexity at all levels, particularly in forensic environments, where prevention, assessment and intervention is merged with sanctions and accountability, such that professionals need to balance the best interests of the child in all cases with the task of protecting the public and preventing additional victims of abuse. This is particularly true in cases of children and young people who sexually harm, where anxious and often over-reactive responses to protecting victims ignore the static, dynamic, individual, family and environmental factors associated with a child or young person harming another that are vital to understanding the behaviour itself, as well as how it needs to be managed and addressed in the future. This is particularly important considering the high-costs (financial and emotional) of abusive behaviour, and if the outcomes defined by the Childrens Act (2004) are to be achieved.

Reinforcing an ecological approach to this issue will allow practitioners to take a holistic perspective to all elements of child protection, whether the child be a victim to abusive behaviour, be exhibiting harmful behaviour, or as is often the case, both, and in doing so apply resources as relevant prior to the escalation or repeat of such behaviours. It is imperative that such ecological considerations are extended to a national level so that equitable and consistent approaches can be made towards protecting our children.

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APPENDIX 1: ASSET and DOH Frameworks

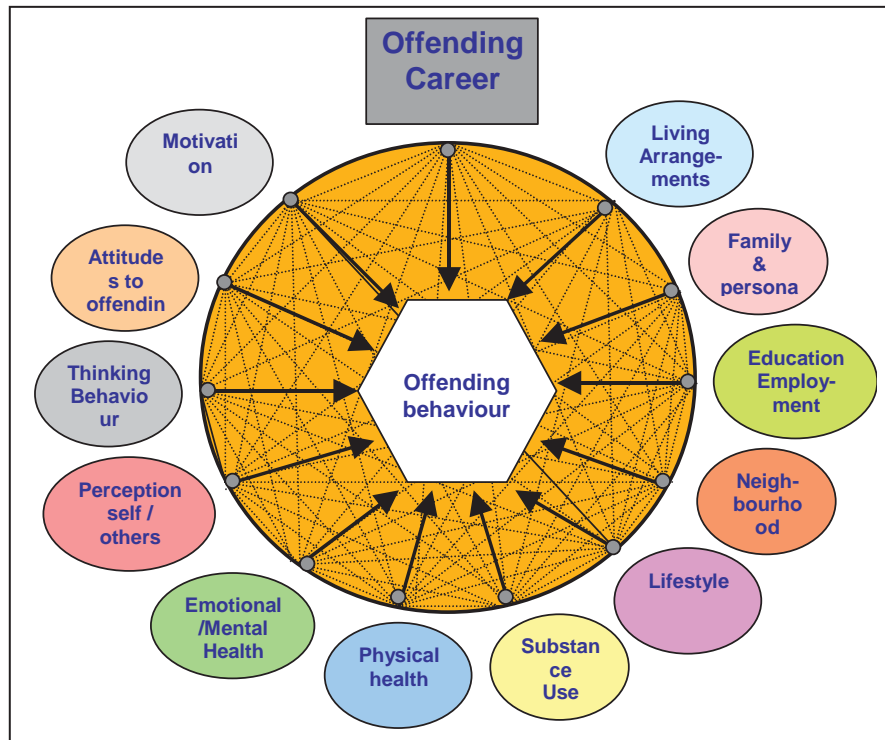


Figure: Components of ASSET Core Profile, Youth Justice Board for England and Wales

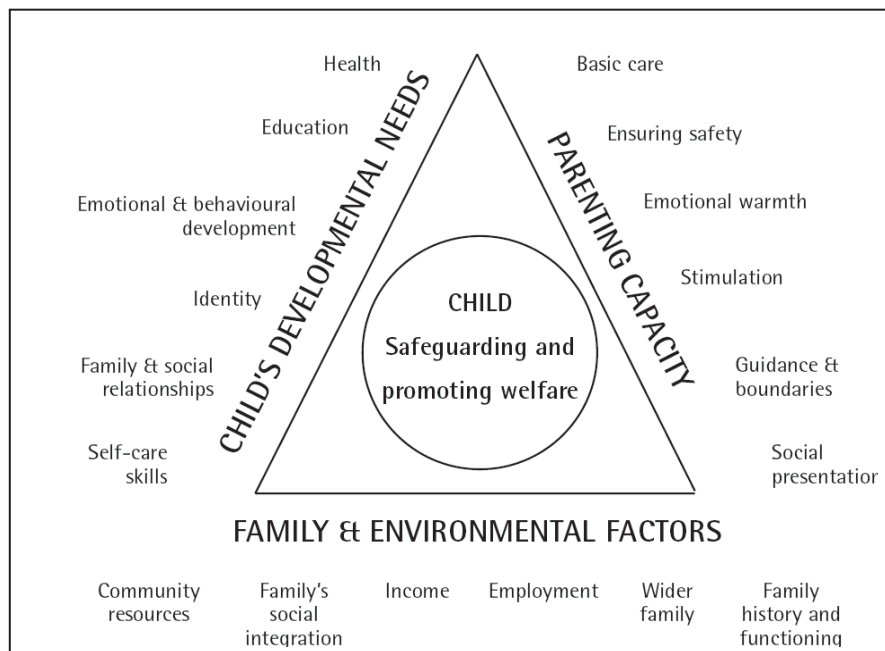


Figure: The Framework for the Assessment of Children in Need (Department of Health, Department for Education and Employment & Home Office, 2000). Crown Copyright 2000. Reprinted with permission from the Office of Public Sector Information.

APPENDIX 2: Search Terms and Syntax

PsycINFO (including Journals@OVID full text)

1. (child adj abuse).mp. [mp=ti, ab, tx, ct, hw, tc, id]
2. (child adj maltreatment).mp. [mp=ti, ab, tx, ct, hw, tc, id]
3. (child adj protection).mp. [mp=ti, ab, tx, ct, hw, tc, id]
4. (child adj welfare).mp. [mp=ti, ab, tx, ct, hw, tc, id]
5. 1 or 2 or 3 or 4
6. parent\$.mp. [mp=ti, ab, tx, ct, hw, tc, id]
7. caregiver.mp. [mp=ti, ab, tx, ct, hw, tc, id]
8. mother.mp. [mp=ti, ab, tx, ct, hw, tc, id]
9. father.mp. [mp=ti, ab, tx, ct, hw, tc, id]
10. 6 or 7 or 8 or 9
11. (substance adj abuse).mp. [mp=ti, ab, tx, ct, hw, tc, id]
12. (substance adj misuse).mp. [mp=ti, ab, tx, ct, hw, tc, id]
13. (alcohol adj abuse).mp. [mp=ti, ab, tx, ct, hw, tc, id]
14. (alcohol adj misuse).mp. [mp=ti, ab, tx, ct, hw, tc, id]
15. (drug adj abuse).mp. [mp=ti, ab, tx, ct, hw, tc, id]
16. (drug adj misuse).mp. [mp=ti, ab, tx, ct, hw, tc, id]
17. 11 or 12 or 13 or 14 or 15 or 16
18. 5 and 10 and 17
19. remove duplicates from 18

MEDLINE

1. (child adj abuse).mp. [mp=ti, ab, tx, ct, hw, tc, id]
2. (child adj maltreatment).mp. [mp=ti, ab, tx, ct, hw, tc, id]
3. (child adj protection).mp. [mp=ti, ab, tx, ct, hw, tc, id]
4. (child adj welfare).mp. [mp=ti, ab, tx, ct, hw, tc, id]
5. 1 or 2 or 3 or 4
6. parent\$.mp. [mp=ti, ab, tx, ct, hw, tc, id]
7. caregiver.mp. [mp=ti, ab, tx, ct, hw, tc, id]
8. mother.mp. [mp=ti, ab, tx, ct, hw, tc, id]
9. father.mp. [mp=ti, ab, tx, ct, hw, tc, id]
10. 6 or 7 or 8 or 9
11. (substance adj abuse).mp. [mp=ti, ab, tx, ct, hw, tc, id]
12. (substance adj misuse).mp. [mp=ti, ab, tx, ct, hw, tc, id]
13. (alcohol adj abuse).mp. [mp=ti, ab, tx, ct, hw, tc, id]
14. (alcohol adj misuse).mp. [mp=ti, ab, tx, ct, hw, tc, id]
15. (drug adj abuse).mp. [mp=ti, ab, tx, ct, hw, tc, id]
16. (drug adj misuse).mp. [mp=ti, ab, tx, ct, hw, tc, id]
17. 11 or 12 or 13 or 14 or 15 or 16
18. 5 and 10 and 17
19. remove duplicates from 18

ASSIA

((Child abuse) OR (child maltreatment) OR (child protection) OR (child welfare)) AND ((parent*) OR (caregiver) OR (mother) OR (father)) AND ((substance abuse) OR (substance misuse) OR (alcohol abuse) OR (alcohol misuse) OR (drug abuse) OR (drug misuse))

Web Of Science

#17 AND #16 AND #15

DocType=All document types; Language=All languages; Databases=SCI-EXPANDED, SSCI, A&HCI;

#14 OR #13 OR #12 OR #11 OR #10 OR #9

DocType=All document types; Language=All languages; Databases=SCI-EXPANDED, SSCI, A&HCI; Timespan=1900-2009

#8 OR #7 OR #6 OR #5

DocType=All document types; Language=All languages; Databases=SCI-EXPANDED, SSCI, A&HCI; Timespan=1900-2009

#4 OR #3 OR #2 OR #1

DocType=All document types; Language=All languages; Databases=SCI-EXPANDED, SSCI, A&HCI; Timespan=1900-2009

TS=("drug misuse")

DocType=All document types; Language=All languages; Databases=SCI-EXPANDED, SSCI, A&HCI; Timespan=1900-2009

TS=("drug abuse")
DocType=All document types; Language=All languages; Databases=SCI-EXPANDED, SSCI, A&HCI; Timespan=1900-2009

TS=("alcohol misuse")
DocType=All document types; Language=All languages; Databases=SCI-EXPANDED, SSCI, A&HCI; Timespan=1900-2009

TS=("alcohol abuse")
DocType=All document types; Language=All languages; Databases=SCI-EXPANDED, SSCI, A&HCI; Timespan=1900-2009

TS=("substance misuse")
DocType=All document types; Language=All languages; Databases=SCI-EXPANDED, SSCI, A&HCI; Timespan=1900-2009

TS=("substance abuse")
DocType=All document types; Language=All languages; Databases=SCI-EXPANDED, SSCI, A&HCI; Timespan=1900-2009

TS=(father)
DocType=All document types; Language=All languages; Databases=SCI-EXPANDED, SSCI, A&HCI; Timespan=1900-2009

TS=(mother)
DocType=All document types; Language=All languages; Databases=SCI-EXPANDED, SSCI, A&HCI; Timespan=1900-2009

TS=(caregiver)
DocType=All document types; Language=All languages; Databases=SCI-EXPANDED, SSCI, A&HCI; Timespan=1900-2009

TS=(parent*)
DocType=All document types; Language=All languages; Databases=SCI-EXPANDED, SSCI, A&HCI; Timespan=1900-2009

TS=("child welfare")
DocType=All document types; Language=All languages; Databases=SCI-EXPANDED, SSCI, A&HCI; Timespan=1900-2009

TS=("child protection")
DocType=All document types; Language=All languages; Databases=SCI-EXPANDED, SSCI, A&HCI; Timespan=1900-2009

TS=("child maltreatment")
DocType=All document types; Language=All languages; Databases=SCI-EXPANDED, SSCI, A&HCI; Timespan=1900-2009

TS=("child abuse")
DocType=All document types; Language=All languages; Databases=SCI-EXPANDED, SSCI, A&HCI; Timespan=1900-2009

ERIC

((Child abuse) OR (child maltreatment) OR (child protection) OR (child welfare)) AND ((parent*) OR (caregiver) OR (mother) OR (father)) AND ((substance abuse) OR (substance misuse) OR (alcohol abuse) OR (alcohol misuse) OR (drug abuse) OR (drug misuse))

Social Services Abstracts

((child abuse) or (child maltreatment) or (child protection) or (child welfare)) AND ((parent* or caregiver or mother) or father) AND (((substance abuse) or (substance misuse) or (alcohol abuse)) or ((alcohol misuse) or (drug abuse) or (drug misuse)))

Health Sciences

((Child abuse) OR (child maltreatment) OR (child protection) OR (child welfare)) AND ((parent*) OR (caregiver) OR (mother) OR (father)) AND ((substance abuse) OR (substance misuse) OR (alcohol abuse) OR (alcohol misuse) OR (drug abuse) OR (drug misuse))

National Criminal Justice Reference Abstracts

((child abuse) or (child maltreatment) or (child protection) or (child welfare)) AND ((parent* or caregiver or mother) or father) AND (((substance abuse) or (substance misuse) or (alcohol abuse)) or ((alcohol misuse) or (drug abuse) or (drug misuse)))

APPENDIX 3: Inclusion/Exclusion Criteria

	Inclusion	Exclusion
Population	Substance abusing adults, Parents, Pregnant women, Populations identified to be at-risk. Maltreated children under age 18.	Adolescents
Exposure	Risk Factor: Alcohol, drug or other substance abuse.	Other risk factors associated or not associated with child abuse.
Comparator	No risk factors OR Different risk factors OR Different levels of exposure to risk factor.	N/A
Outcomes	Child abuse or maltreatment Potential child abuse or maltreatment	N/A
Study design	Cohort, case control	Reviews, cross-sectional, opinion papers

APPENDIX 4: Quality Assessment Forms

a) Case control studies

QUESTION	Y	P	N	U	COMMENTS
INITIAL SCREENING					
Has the study addressed a clearly focused issue?					
Is the study addressing risk factors of potential child abuse?					
STUDY DESIGN					
Is a case control study an appropriate way of answering the question under the circumstances?					
Has the study addressed the question being asked?					
SELECTION BIAS					
Were the cases representative of the defined population?					
Has the classification of cases been reliably assessed and validated?					
Were there a sufficient number of cases selected?					
Were the controls representative of the defined population?					
Were the controls selected in a manner reducing bias?					
Were there a sufficient number of controls selected?					
Are the cases and controls comparable with respect to demographic/potential confounding factors?					
Were potential confounding variables controlled for (by matching or through stats)?					
PERFORMANCE AND DETECTION BIAS					
Were the participants blind to the measure of exposure?					
Were the assessor(s) blind to participants' outcome?					
Has child abuse/potential for child abuse been clearly defined and measured?					
Has substance/alcohol abuse been clearly defined and measured?					
Was blinding incorporated where feasible?					
ATTRITION BIAS					
Were dropout rates and reasons for drop-out similar across groups?					
OUTCOME BIAS					
Was outcome measured in a correct way?					
Were the measures valid and reliable for the defined population?					
CONFOUNDING FACTORS					
Were confounding variables considered?					
STATISTICS					
Was the statistical analysis used correct?					
ARE THE RESULTS BELIEVABLE?					
Are results unbiased?					

Are the results significant?					
Is the size of effect reasonable?					
Are methods and design reliable?					
Have limitations been discussed?					
APPLICABILITY OF FINDINGS					
Are the participants representative of UK families?					
Can results be applied to families regardless of culture and size?					
Can the results be applied to the UK population?					

b) Cohort studies

QUESTION	Y	P	N	U	COMMENTS
INITIAL SCREENING					
Has the study addressed a clearly focused issue?					
Is the study addressing risk factors of potential child abuse?					
STUDY DESIGN					
Is a cohort study an appropriate way of answering the question under the circumstances?					
Has the study addressed the question being asked?					
SELECTION BIAS					
Was the cohort representative of the defined population?					
Was a sufficient sample size used?					
Were the groups (victims of child abuse and non-victims of child abuse; substance users and non-substance users similar at base line such as demographics and background factors (age, ethnicity, etc.)?)					
Were the groups comparable in all important confounding variables (e.g. parental substance abuse)?					
Were any potential confounding variables controlled for?					
MEASUREMENT AND DETECTION BIAS					
Has child abuse/potential for child abuse been clearly defined and measured?					
Has substance/alcohol abuse been clearly defined and measured?					
Were the measurements for outcome objective?					
Was the outcome measure validated?					
Were the assessment instrument(s) for outcome (psychometrics/questionnaire) standardised?					
Was the outcome assessed in the same way across groups?					
Were the participants blind to the research?					
Were the assessor(s) blind to the exposure?					
ATTRITION BIAS					
Were dropout rates and reasons for drop-out similar across groups?					

OUTCOME BIAS					
Was outcome measured in a correct way?					
Were the measures valid and reliable for the defined population?					
STATISTICS					
Was the statistical analysis used correct?					
ARE THE RESULTS BELIEVABLE?					
Are results unbiased?					
Are the results significant?					
Is the size of effect reasonable?					
Are methods and design reliable?					
Have limitations been discussed?					
APPLICABILITY OF FINDINGS					
Are the participants representative of UK families?					
Can results be applied to families regardless of culture and size?					
Can the results be applied to the UK population?					

APPENDIX 5: Data Extraction Form

General Information

Date of data extraction

Author

Identification of the reviewer

Notes

Re-verification of study eligibility

Population:	Children aged 0-18 at time of exposure	Y	N	?
	Substance abusing adults	Y	N	?
Exposure:	Alcohol Abuse	Y	N	?
	Drug Abuse	Y	N	?
	Other Substance Abuse	Y	N	?
Comparator:	Non-substance abusing population	Y	N	?
Outcome:	Child abuse/maltreatment	Y	N	?
	Potential for Child abuse/maltreatment	Y	N	?

Study Design Cohort Case Control

Continue? Yes NO

Specific Information

Population Characteristics

1. Target population (describe)
2. Inclusion criteria
3. Exclusion criteria
4. Recruitment procedures used (participation rates in available)
5. Characteristics of participants:

Substance Abusers Non-substance abusers

No. of participants enrolled :

No. of participants completed :

Age :

Ethnicity :

Gender :

Other information :

Exposure

Additional Notes

- a) Alcohol Abuse ()
- b) Drug Abuse ()
- c) Other Substance abuse ()
- d) Aggressive tendencies ()

Outcome

- 1) What was measured at baseline? (also, was abuse unsubstantiated or substantiated?)
 - a.
 - b.
 - c.
- 2) What was measured after the exposure (or at follow-up?)
 - a.
 - b.
 - c.

- 3) Type of maltreatment?
- 4) Who carried out the measurement? Was the assessor blinded?
- 5) How was outcome measured?
- 6) If a tool was used, was it validated? If so, how?
- 7) How was the validity of the self reported behaviour maximised?
- 8) What were the follow-up intervals? (where applicable)
- 9) Drop out rates (plus proportion of those who did not agree to participate if stated) and reason for drop out:
- 10) Limitations:
- 11) Notes:

Analysis

1. Stats technique used
2. Were confounding variables assessed?
3. Attrition rate (overall rates)
4. Was attrition (missing data) adequately dealt with?
5. Number (or %) followed up from each condition
 - a) Condition A
 - b) Condition B
6. Overall study quality good reasonable poor
7. Number of 'unclear' or unanswered assessment items:
8. Notes

APPENDIX 6: PSI Sample Items

My child wanders away much more than I expected.

My child can be easily distracted from wanting something.

Sometimes I feel my child doesn't like me and doesn't want to be close to me.

I feel that my child is very moody and easily upset.

In some areas, my child seems to have forgotten past learnings and has gone back to doing things characteristic of younger children.

Think carefully and count the number of things which your child does that bothers you. For example: dawdles, refuses to listen, overactive, cries, interrupts, fights, whines, etc. Please circles the number which includes the number of things you counted.

1. 1-3
2. 4-5
3. 6-7
4. 8-9
5. 10+

As my child has grown older and become more independent, I find myself more worried that my child will get hurt or into trouble.

Sometimes my child does things that bother me just to be mean.

Since having a child, I feel that I am almost never able to do things that I like.

I feel every time my child does something wrong, it is really my fault.

Since having my child, my spouse (or male/female friend) has not given me as much help and support as I expected.

I am not as interested in people as I used to be.

During the past six months, I have been sicker than usual or have had more aches and pains than I normally do.

During the last 12 months, have any of the following events occurred in your immediate family? (Yes/No)

- Went deeply into debt*
- Legal problems*

APPENDIX 7: AIM2 Item Categories

	CONCERNS	STRENGTHS
STATIC	Sexual & non-sexual harmful behaviours	Sexual & non-sexual harmful behaviours
	Developmental Issues	Developmental Issues
	Family Issues	Family Issues
	Environmental Issues	
DYNAMIC	Sexual & non-sexual harmful behaviours	Sexual & non-sexual harmful behaviours
	Developmental Issues	Developmental Issues
	Family Issues	Family Issues
	Environmental Issues	Environmental Issues

APPENDIX 8: Data Collection: Items Describing Sexually Harmful Behaviour

1. Sexualised Language	
A	Uses words that describe sex acts.
B	Makes sexual sounds (sighing, moaning, heavy breathing, etc.)
C	Talks about sexual acts.
2. Self-stimulation	
A	Touches own private parts when in public places.
B	Masturbates with hand.
C	Masturbates with object.
D	Touches own private parts when at home.
E	Rubs body against people or furniture.
3. Heightened Sexual Interest	
A	Imitates the act of sexual intercourse.
B	Asks others to engage in sexual acts with him or her (including communication over the phone, written notes, drawings etc.)
C	Acts sexually forward (provocatively) with children
D	Acts sexually forward (provocatively) with adults
E	Tries to look at people when they are nude or undressing.
F	Imitates sexual behaviour with dolls or stuffed animals.
G	Tries to view pictures of nude or partially dressed people (may include catalogues and printed material).
H	Talks about sexual acts.
I	Interested in/ asks to view nude or sexually explicit TV shows or films
J	Seems very interested in the opposite sex.
K	Asks or tries to view nude or sexually explicit material over the Internet.
L	Collects intimate apparel.
4. Exhibitionism	
A	Shows private parts to children.
B	Shows private parts to adults.
C	Undresses self in front of others.
D	Sits with crotch or underwear exposed.
5. Non-penetrative touching	
A	Touches other people's private parts.
B	Puts mouth on another child's or adult's sex parts.
C	Tries to undress other children or adults against their will (opening shirts, pants etc)
D	Touches animals sexually or tries to masturbate animals.
E	Uses genitals to touch other
6. Penetration	
A	Inserts or tries to insert objects in his/her own vagina or anus.
B	Inserts or tries to insert objects into someone else's vagina or anus.
C	Asks others to insert objects into his/her own vagina or anus
D	Inserts penis into someone else's mouth.
E	Inserts another's penis into own mouth
F	When kissing, tries to put tongue in other person's mouth.
G	Tries to penetrate an animal or tries to have the animal penetrate him/her.

H	Inserts or tries to insert objects in his/her own vagina or anus.
7. Occurring within sexual incident	
A	Dresses like the opposite sex
B	Talks about wanting to be the opposite sex.
C	Pretends to be the opposite sex when playing
D	Play
E	Described as experimental/non-abusive (tick and SS if not all agree)
F	Use of phone/mobile/camera
G	Bribery
H	Use of verbal threat
I	Use of intimidation
J	Use of physical threat
K	Use of physical violence
L	Use of weapon
M	Cease of behaviour immediately when victim demonstrated non-compliance/distress
N	Cease of behaviour soon after victim demonstrated non-compliance/distress
O	Peer influence
8. Intent/Motivation	
A	Jealousy
B	Grievance and/or revenge
C	Exploration
9. Attitude	
A	Regret/ remorse (genuine)
B	Regret/ remorse (non-emotional)
D	Cold/ callous
E	Accepts full responsibility
F	Accepts some responsibility

APPENDIX 9: Other Outcomes Following Referral Closure

Outcomes prevalent in CYP at follow-up period (N=151)

Follow-up Behaviours/Concerns	<i>n</i>	(%)
Continued Childrens Services Intervention	56	(36.8%)
Disclosure of <i>previous</i> * physical abuse	3	(2%)
Disclosure of <i>previous</i> * sexual abuse	3	13 (8.6%)
Victim of physical abuse**	6	(3.9%)
Victim of neglect**	6	(3.9%)
Victim of emotional abuse**	23	(15.1)
Exposure to DV**	18	(11.8%)
Victim of actual DV	2	(1.3%)
Victim of violent assault	26	(17.1%)
Victim of sexual assault	7	(4.6%)
Young parent	10	(6.6%)
Placement issues	13	(8.6%)
Kicked out of parental home	13	(8.6%)
Housing/Financial issues	24	(15.8%)
School/work exclusion	17	(11.2%)
Aggressive behaviour	45	(29.6)
Perpetrator of DV	12	(7.9%)
Physical abuse of parents/siblings	9	(5.9%)
Hurt/Killed animal	3	(2%)
Antisocial Behaviour Order	8	(5.3%)
Other delinquent behaviour	29	(19.1%)
Substance misuse	22	(14.5%)
Mental health issues***	13	(8.6%)
Frequent absconding behaviour	16	(10.5%)
Sexually vulnerable behaviour	15	(9.9%)
Suicide and/or self-harm	20	(13.2%)
Parents criminalised	4	(2.6%)
Supervision under MAPPA****	5	(3.3%)

* Not known at time of assessment/referral

** Continued or initiated after time of assessment/referral

*** Suspected or diagnosed after time of assessment/referral

**** Multi-Agency Public Protection Arrangements

APPENDIX 10: Familial Sex Offending
(From Sexual Offences Act 2003)

25 Sexual activity with a child family member

- (1) A person (A) commits an offence if—
- (a) he intentionally touches another person (B),
 - (b) the touching is sexual,
 - (c) the relation of A to B is within section 27,
 - (d) A knows or could reasonably be expected to know that his relation to B is of a description falling within that section, and
 - (e) either—
 - (i) B is under 18 and A does not reasonably believe that B is 18 or over, or
 - (ii) B is under 13.
- (2) Where in proceedings for an offence under this section it is proved that the other person was under 18, the defendant is to be taken not to have reasonably believed that that person was 18 or over unless sufficient evidence is adduced to raise an issue as to whether he reasonably believed it.
- (3) Where in proceedings for an offence under this section it is proved that the relation of the defendant to the other person was of a description falling within section 27, it is to be taken that the defendant knew or could reasonably have been expected to know that his relation to the other person was of that description unless sufficient evidence is adduced to raise an issue as to whether he knew or could reasonably have been expected to know that it was.
- (4) A person guilty of an offence under this section, if aged 18 or over at the time of the offence, is liable—
- (a) where subsection (6) applies, on conviction on indictment to imprisonment for a term not exceeding 14 years;
 - (b) in any other case—
 - (i) on summary conviction, to imprisonment for a term not exceeding 6 months or a fine not exceeding the statutory maximum or both;
 - (ii) on conviction on indictment, to imprisonment for a term not exceeding 14 years.
- (5) Unless subsection (4) applies, a person guilty of an offence under this section is liable—
- (a) on summary conviction, to imprisonment for a term not exceeding 6 months or a fine not exceeding the statutory maximum or both;
 - (b) on conviction on indictment, to imprisonment for a term not exceeding 5 years.
- (6) This subsection applies where the touching involved—
- (a) penetration of B's anus or vagina with a part of A's body or anything else,
 - (b) penetration of B's mouth with A's penis,
 - (c) penetration of A's anus or vagina with a part of B's body, or
 - (d) penetration of A's mouth with B's penis.

27 Family relationships

- (1) The relation of one person (A) to another (B) is within this section if—
 - (a) it is within any of subsections (2) to (4), or
 - (b) it would be within one of those subsections but for section 67 of the Adoption and Children Act 2002 (c. 38) (status conferred by adoption).

- (2) The relation of A to B is within this subsection if—
 - (a) one of them is the other's parent, grandparent, brother, sister, half-brother, half-sister, aunt or uncle, or
 - (b) A is or has been B's foster parent.

- (3) The relation of A to B is within this subsection if A and B live or have lived in the same household, or A is or has been regularly involved in caring for, training, supervising or being in sole charge of B, and—
 - (a) one of them is or has been the other's step-parent,
 - (b) A and B are cousins,
 - (c) one of them is or has been the other's stepbrother or stepsister, or
 - (d) the parent or present or former foster parent of one of them is or has been the other's foster parent.

- (4) The relation of A to B is within this subsection if—
 - (a) A and B live in the same household, and
 - (b) A is regularly involved in caring for, training, supervising or being in sole charge of B.

- (5) For the purposes of this section—
 - (a) "aunt" means the sister or half-sister of a person's parent, and "uncle" has a corresponding meaning;
 - (b) "cousin" means the child of an aunt or uncle;
 - (c) a person is a child's foster parent if—
 - (i) he is a person with whom the child has been placed under section 23(2)(a) or 59(1)(a) of the Children Act 1989 (c. 41) (fostering for local authority or voluntary organisation), or
 - (ii) he fosters the child privately, within the meaning given by section 66(1)(b) of that Act;
 - (d) a person is another's partner (whether they are of different sexes or the same sex) if they live together as partners in an enduring family relationship;
 - (e) "step-parent" includes a parent's partner and "stepbrother" and "stepsister" include the child of a parent's partner.

APPENDIX 11: Agreement Between Author and Jack*

This agreement is in recognition that in order to proceed at a faster pace towards the goals of:

1. *Addressing sexualised behaviour*
2. *Allowing Jack to have a space for discussing feelings.*

Following the completion of a therapeutic assessment, it was decided that agreed session work would commence between Ms Sanjit Saraw and Jack. The agreement is as follows:

1. Jack and Sanjit will arrange to meet once a week as scheduled until sessions have been completed. Where possible this will be on set days and times. Jack and Sanjit are to take responsibility for ensuring that they allocate time in their respective diaries to ensure that these sessions take place. In the event of a cancellation Jack and Sanjit should make reasonable attempts to notify the other of the cancellation.
2. Sanjit is aware that participating in the sessions may prove difficult for Jack, and will endeavour to support Jack in order to carry out the work. Should Jack have difficulty in completing a session he will communicate this and efforts will be made to address this or end the session.
3. A 'support' individual will be identified in the case that Jack finds it difficult after a session has ended.
4. Sessions will be aimed to last between 45 and 60 minutes however this may vary depending on circumstances and content being discussed.
5. A review of sessions will take place upon the completion of six sessions.
6. Sanjit will be available to discuss any issues arising from the sessions if and when required by Jack.
7. Sanjit may present session outcomes in a Case Study format for her academic requirements, and will maintain the anonymity of Jack at all times.

Signed: (Jack) (Mrs X)*

..... (Sanjit)

..... (A, Supervisor and Team Manager)

* Pseudonyms used to conceal the identity of clients.

APPENDIX 12: Estimate of Risk of Adolescent Sexual Offense Recidivism (ERASOR)

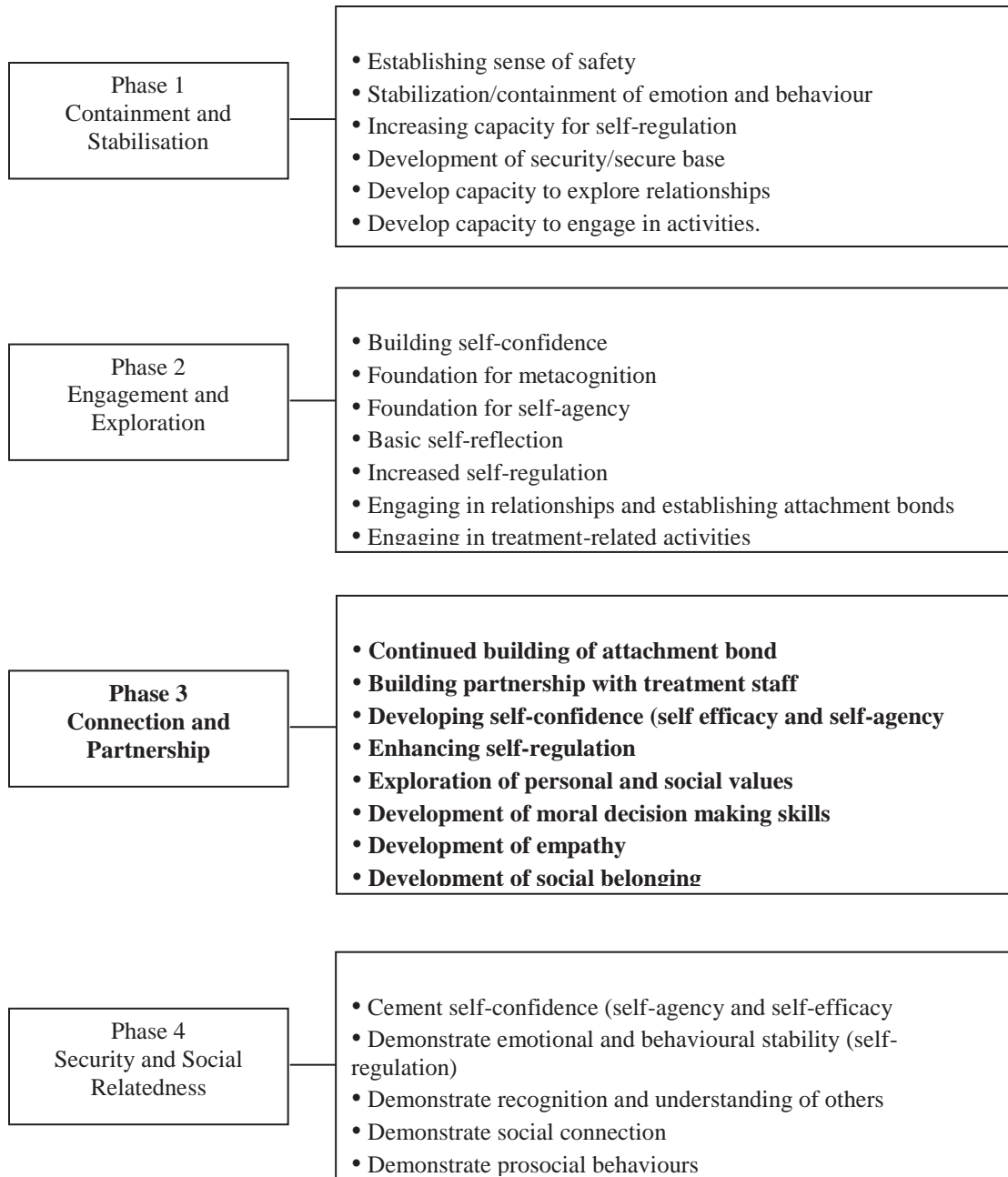
1	Deviant sexual interests (children, violence or both).	Not present
The allegations, whilst including the possible use of bribery do not include any detail regarding the use of physical threat, violence or use of weapons, consistent with that reported by Jack*.		
2	Obsessive sexual interests/ Preoccupation with sexual thoughts.	Not present
Jack has not expressed any obsessive sexual interests or preoccupation with sexual thoughts. He reported having accessed still-picture pornography from age 11, when an 11 th grade peer suggested he look at a specific link. Jack reported that this increased his curiosity and he went on to view pornography occasionally, approximately once or twice a month, although some months he would not access any pornography. Jack reported that on one occasion his school had spoken to him as the websites he had accessed were logged on the school server. Jack reported that the school's intolerance of access to these sites further increased his curiosity.		
Jack denies currently experiencing any obsessive sexual thoughts, and has recognised that as he is currently living with his grandparents he does not have access to the internet.		
3	Attitudes supportive of sexual offending.	Present
Jack has expressed the view that sexual interactions with a child under the age of 12 are appropriate in circumstances where the child has been provided with sex education and is therefore aware of the activity in which they are engaging. Jack's current understanding of a child's participation in activities including those of a sexual nature is that the child is willing to engage in this behaviour if they have not verbally refused and physically walked away from the situation.		
4	Unwillingness to alter deviant sexual interests/attitudes.	Possibly/partially present
Jack has communicated his view that the past should remain within the past and at this time he is unable to conceive the possible advantages of continued therapeutic input into addressing the alleged offence and other emotional needs. This has not been assessed to the full extent due to the circumstances noted within the limitations of the assessment.		
Although Jack has expressed his views that he considers the therapeutic assessment and any further work to be a 'waste of time' it should be noted that he has co-operated throughout the assessment process.		
5	Ever sexually assaulted two or more victims.	Not present.
Despite the absence of Police conviction or an admittance to the allegations to the Police by Jack, the occurrence of sexualised behaviour between Jack and his sister Molly* has been accepted by all parties involved. There has been some suggestion that Molly's friend Penny* has disclosed an incident of sexual assault perpetrated by Jack, however this remains unsubstantiated and Penny has, upon questioning by the Police, refused to refer to this allegation. For the purposes of this item, Jack warrants a scoring of <i>Not Present</i> , such that there has been intentional sexual assault of one victim.		
6	Ever sexually assaulted the same victim 2 or more times	Present
The disclosures made by Molly suggest that incidents have occurred on more than two occasions. The number of disclosures made by Molly was responded to by Jack as involving fabrication and exaggeration of events.		
7	Prior adult sanctions for sexual assault(s).	Not Present
There is no evidence to suggest that Jack has committed any sexual acts prior to the most recent allegations.		
8	Threats of, or use of, excessive violence, weapons during sexual offence.	Not Present
There is no evidence to suggest the use of excessive physical restraint or aggression, use of or threatened use of a weapon, or use of or threatened use of physical violence against Molly or others important to her. It should be noted that Molly has disclosed the use of bribery.		
9	Ever sexually assaulted a child.	Not present
There is no evidence to suggest the sexual assault of a child under the age of 12 years and at least four years younger than Jack. The assessment limitations have not allowed for Molly to be involved within the assessment, and therefore her level of functioning, maturity and comparative physical size to Jack is unknown.		
10	Ever sexually assaulted a stranger.	Not present

There is no evidence to suggest the assault of a stranger in regards to both disclosures by Molly and the disclosure by Penny.		
11	Indiscriminate choice of victims.	Possibly/partially present
This item is coded as present when the adolescent is supposed to have assaulted both a related and unrelated victim. Jack's biological sister Molly made the allegations of sexual assault. In the course of disclosures to Children's Service, allegations were also made by Penny, a friend of Molly (unrelated to the family), although Penny made no disclosure in subsequent Police interviews. Therefore this item has been coded as possibly or partially present.		
12	Ever sexually assaulted a male victim.	Not present
There is no evidence to suggest the sexual victimisation of a male.		
13	Diverse sexual-assault behaviours.	Present
This item is limited to the detail provided by Molly within her disclosure to the Police. Jack has made comment as to the fabrication and exaggeration of Molly's disclosure to the Police and therefore lie inconsistencies in the understanding of detail regarding the actual sexualised behaviour. Information provided within Children's Services documentation suggested the occurrence of exposure, 'humping' behaviour, bribery, and requests by Jack for receipt of oral sex.		
14	Antisocial interpersonal orientation.	Present
Jack has expressed some degree of denial and lack of responsibility regarding the alleged assaults. There is no suggestion from Jack's family or Children's Services that Jack displays antisocial traits or behaviours. Recently, the school nurse at Jack's school suggested that Jack appears to show no emotional or social response. Jack has disputed this, and stated that he has met with the school nurse on a couple of occasions only, related to medical needs. A lack of social or emotional response was somewhat apparent in the first couple of sessions with Jack, although he became more observably emotionally responsive as the sessions progressed. Despite this, Jack was unable to recall any occasions when he might have felt sad or upset in the past, stating that he has never felt this way. Throughout sessions, Jack demonstrated many impassive remarks regarding the allegations and Molly's experience, suggesting she 'move on,' and feeling unjustified that he was having to attend a service and she was not. He was able to hypothesise thoughts and feelings that may have been related to Molly's exposure to incidents and her disclosure. The presence of antisocial traits is also apparent in Jack's responses on the MACI.		
15	Lack of intimate peer relationships/Social isolation.	Possibly/partially present
Jack has reported belonging to a peer group of approximately 15 people with whom he associates at school. He has also reported socialising with some of his peers outside of school to go to the cinema, to eat, or to play computer games (which is also done remotely). Jack has identified four members of his larger peer group with whom he socialises more frequently, but reported the lack of emotional content. Jack did report feeling as though he had close relationships with some family members, although he was unable to elaborate upon this.		
16	Negative peer associations and influences.	Not present
Jack described his peer group to be well-behaved and denied that they engage in delinquent behaviour. There is no evidence to the contrary.		
17	Interpersonal aggression.	Not present
There is no evidence to suggest a pattern of interpersonal aggression. Jack reported that as a child he was difficult to manage due to his level of anger, but that since this behaviour receded a long time ago, he has remained a calm individual.		
18	Recent escalation in anger or negative affect.	Not present.
Jack reported experiencing an increase in both levels of boredom and frustration, however, he reported these to have occurred following Jack's removal from the home and therefore likely to be a direct consequence of the current circumstances as opposed to the sexualised behaviour.		
19	Poor self-regulation of affect and behaviour (Impulsivity).	Not Present
Throughout the assessment, Jack's presentation suggests he is an individual who considers his responses carefully. He participated in turn-taking conversation and remained polite and respectful. Responses from Jack's school as attained by Children's Services suggest he is a well-behaved and obedient student. Reports from his mother and grandmother suggest this behaviour extends to the home environment.		
20	High-stress family environment.	Present

Factors influencing the family environment are discussed within the body of this report and will not be repeated here. For the purposes of scoring this item, this is coded as present due to the ongoing influence of previous characteristics of dysfunctional relationships within the household.		
21	Problematic parent-offender relationships/Parental rejection.	Present
As discussed within the body of the report, Jack has described a poor relationship with his father. According to Jack and Mrs X*, Mr X* has been unsupportive of Jack throughout these current circumstances and Jack has described this to be consistent with previous years. This item has been coded as during the sessions Jack stated that he did not feel his father would care if he never saw him again.		
There is a need for further exploration regarding Jack's relationship with his father and the subsequent feelings of rejection or feeling unwanted.		
22	Parent(s) not supporting sexual-offence-specific assessment/treatment.	Present
Mrs X has acknowledged that some sexualised behaviour has occurred. However, there have been clear attempts of minimisation of the allegations, distribution of responsibility to Jack's sister Molly, and a lack of understanding regarding further treatment needs. Although Mrs X has attended and cooperated within all assessment sessions, in addition to allowing Jack to attend his sessions, she has expressed her disapproval of the assessment and does not appear to understand the purposes of the assessment. Jack has expressed the recognition of his mother's perception of the allegations, and both have expressed ambivalence over the possibility of further risk of re-offending.		
23	Environment supporting opportunities to re-offend sexually.	Possibly/partially present.
At the current time, Jack is residing with his maternal grandparents. However it should be noted that during this time he has had continued contact with Molly due to their attendance at the same school, and being transported back to the family home after school. Mrs X is the responsible supervisor for the children, and there is no evidence to suggest they are left unattended, however it should be noted that Mrs X has attributed equal responsibility for the alleged incidents on her daughter Molly and therefore her ability to objectively supervise the children may be limited. As noted in the previous item, Mrs X and Jack have both expressed idealistic views of the absence of risk of re-offending. However, both Jack and Mrs X have identified practical changes that can reduce risk as it is perceived by others, for example, by changing the room allocation within the house so that Jack and Molly sleep on different floors.		
24	No development or practice of realistic prevention plans/strategies	Present
Since the disclosures made by Molly, no member of the family has been provided with any intervention X to the current assessment with the service. As discussed above, Jack and Mrs X have made some changes to the practical arrangements within the house, such as sleeping arrangements. Jack has stated that he would ensure that he and Molly were not alone, however in addition to this he also suggested unrealistic plans and strategies to facilitate this, for example, moving out to his own flat when he turns 16, and installing CCTV cameras throughout the house and the external surroundings. This suggestion was accompanied by reasoning suggesting Jack felt the need to protect himself from further false allegations, suggesting that plans and strategies developed may be based around protecting Jack rather than Molly. This is in need of further exploration.		
25	Incomplete sexual-offence-specific treatment.	Unknown.
This item refers to the completion of treatment as recommended within an assessment. As this tool is being used within the assessment process, this item has been scored as unknown.		

* Pseudonyms used to conceal the identity of clients.

APPENDIX 13: Phase-Related Treatment Activities
(Rich, 2003)



END