Trauma Experiences of Children with Sexual Behaviour Problems:

The Relationship to How They View Themselves and Their Relationships

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Abstract

This study examined the prevalence of adverse childhood experiences (ACE) in a sample of children who had sexual behaviour problems. Using a self-report measure of resiliency, it also investigated how these children viewed themselves and their relationships.

The study was an analysis of historical data collected from 88 children aged between 9 and 12 years ($\bar{x}$ = 10.8; *SD* = 1.1), who were referred to WellStop for an assessment of their problematic sexual behaviour. At assessment the children completed the Resiliency Scales for Children and Adolescents and information was collected about their trauma experiences. Parental consent was obtained to use assessment data for research purposes.

The results indicated that children in the sample were exposed to multiple adverse childhood experiences, such as abuse, neglect and dysfunctional family environments, with a mean ACE score of 5.55. In this sample, 71.6% of children had been exposed to four or more ACEs, the most common ACE being loss of a parent by separation or divorce (83%), followed by witnessing or living in a home with domestic violence (65.9%), and experiencing physical abuse (61.4%).

Children in the sample perceived themselves as being less competent, less able to solve problems and having less of a sense of belonging in comparison to their peers. While initially it seemed that these children perceived themselves as no more emotionally reactive than their peers, further analysis showed that a significant number (30.7%) reported high levels of emotionally reactivity. Implications are discussed in this report with regards to how these children can be further supported.

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List of acronyms and abbreviations

PSB   Problematic sexual behaviour

HSB   Harmful sexual behaviour

SBP   Sexual behaviour problems

RSCA   Resiliency Scales for Children and Adolescents

ACE   Adverse childhood experiences

Introduction

Over the last two decades, there has been a growing awareness of the need for effective treatment programmes for children who engage in sexual behaviour problems (SBP) (Silovsky & Niec, 2002). According to Hutton and Whyte (2006), young people aged under 18 years commit up to a quarter of child sexual abuse crimes. Furthermore, 12% of young people who commit sexual abuse are aged 11 to 12 years old, with at least half having a history of SBP before age 10 years (Ryan & Lane, 1991).

In 2002, WellStop[1] received their first allocation of funding from the Ministry of Social Development to address the assessment and treatment needs of children with SBP aged 10 to 12 years. Since then, the New Zealand Harmful Sexual Behaviour (HSB) Sector comprising of specialist community-based treatment providers WellStop, SAFE Network[2] and STOP Trust[3] has secured baseline funding for children aged 4 to 12 years with SBP, and their families.

In spite of a growing acknowledgement of the harm caused by children with SBP, the development of empirical knowledge to support appropriate responses to these children has been limited (Martin, 2014; Staiger & Tucci, 2005). This may be partly due to a dominant discourse of childhood innocence that considers sexual behaviour as natural curiosity as in "boys will be boys" (Martin, 2014; Staiger & Tucci, 2005), leading to minimisation and under reporting of their behaviours (Gil & Johnson, 1993). Other views consider that any sexual behaviour is a sign that the child has been sexually abused (Friedrich, 2007; Gordon & Schroeder, 1995) or conversely that the child is a future sex offender (Friedrich, 2007; Martin, 2014). In isolated high profile cases, children have even been described by the media as "folk devils" deserving of the most punitive consequences (Barter, 2013). As a result, children with SBP are often misunderstood and consequently may miss opportunities to receive appropriate support and intervention, as these different views will shape the way that adults respond to them.

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[1] WellStop is based in Wellington and covers Napier, Gisborne, Horowhenua, Manawatu, Whanganui and Taranaki regions
[2] Safe Network is based in Auckland and covers Northland to the lower Waikato regions
[3] STOP Trust is based in Christchurch and covers the South Island

Literature Review

Literature Review Structure

A comprehensive review of the literature was conducted to provide a context for the present study. It starts broadly with common definitions and terms used in this area of research, descriptions of what constitutes normal and problematic sexual behaviour, and the characteristics of children who engage in these behaviours. From there on it considers the impact of trauma on children and how such experiences undermine the development of a secure attachment. Finally it will discuss how trauma and subsequent attachment difficulties contribute to children's sense of belonging to their family, school and community, sense of mastery and ability to manage emotions.

1.1 Definitions and Terms Used

Sexual behaviour problems (SBP) in children are defined as sexual behaviours, in children 12 years and under, that are developmentally inappropriate and harmful (Friedrich & Luecke, 1988; National Centre on Sexual Behaviour of Youth, 2003). Ryan and Blum (1994) further state that sexual behaviour in children is problematic when it puts the child at risk by interfering with their development, causes harm to others, makes others feel uncomfortable due to conflicting with family and community values, or it involves coercion and unequal power. The term includes a wide range of behaviours that are best viewed as being on a spectrum from sexualised behaviours such as excessive or public masturbation to coercive and aggressive sexual behaviours (Friedrich, 2007).

The terms "sexual offender" and "sexual perpetrator" are used in a legal context to describe a range of sexually abusive behaviours, usually by adults and sometimes by adolescents (CYF, 2013). For many years, this term was also used to describe adolescents and children who engaged in HSB. In recent years, there has been the recognition that labelling children and adolescents as sexual offenders is potentially harmful (Becker, 1998). The current consensus in the HSB sector in New Zealand is to describe the problematic behaviour of children and adolescents rather than label them (WellStop, n.d.). Typically, for children and young people aged over 10 years the term harmful sexual behaviour is used; for children aged 10 years and

under the term "concerning sexual behaviour" is used (CYF, 2013). Other terms such as problematic sexual behaviour, inappropriate sexual behaviour or sexual behaviour problems are also accepted (WellStop, n.d.). Although the behaviours are described as sexual, they are more likely to be related to anxiety, acting out what the child may have seen or experienced, curiosity, seeking closeness, self-soothing, or reasons other than sexual motivation or gratification (Chaffin, et al., 2008).

1.2 Normal versus Problematic Sexual Behaviour in Children

Staiger and Tucci (2005) suggest that a lack of clear understanding of normal sexual development in children, and what constitutes age appropriate versus problematic sexual behaviour, has contributed to a misunderstanding of children's sexual behaviours. Definitions of normality are subjective and bound by cultural and social norms, and have changed considerably in recent years (Russell, Buckley, Walton, Gerring, & Black, 2008; Vizard, 2006). However, there persists within our communities a tendency to pathologize and stereotype children with sexualised behaviours which may lead to unjust consequences, such as exclusion from school (Friedrich, 2007).

Children engage in a wide range of sexual behaviours and it is important to differentiate problematic sexual behaviours from those that are normal and developmentally appropriate (Kellogg, 2009). Normal sexual behaviours are characterised as being spontaneous, mutual and non-coercive behaviours between children of a similar age or developmental level (Chaffin, et al., 2008). Examples of age appropriate sexual behaviours for children aged 9 to 12 years would include self-stimulation in private, an interest in gaining knowledge about sex, a wish to discuss sexual acts with same age peers, and an interest in experimenting with sexual behaviours within a romantic relationship (Stop it Now, n.d.).

Problematic sexual behaviours in childhood are those that are more frequent, may involve preoccupation, are coercive, are between children of different developmental stages, do not respond to adult correction and guidance, cause emotional distress or harm, and interfere with the child's development (Ariji, 1997; Chaffin, Letourneau, & Silvosky, 2002). Examples would include compulsive masturbation, sexual activity with vulnerable individuals, forcing or

coercing others to engage in sexual activity, arranging a face to face meeting with someone they met online, and oral sex or intercourse with a person of a different age and developmental level (Family Planning Queensland, 2012).

Ryan (1999) cautions us to avoid focusing just on the sexual behaviour, but advocates looking at the dynamics of the relationships that the behaviours occur within, the interactions themselves and the context they occurred in when defining whether the behaviours are sexually problematic or not. Rich (2011) further points to determining the nature and quality of consent, including age, cognitive ability, the conditions and context in which consent was gained, to avoid pathologising normal behaviours.

1.3 Characteristics of Children with Problematic Sexual Behaviour

Overall the research describes children with SBP as a diverse group with complex needs, often associated with trauma (Barter, 2013). According to Allan, Allan, Marshall, and Kraszlan (2002), these children are similar to children with other types of harmful behaviours and differ considerably from adult sexual offenders (Chaffin, et al., 2008). They are predominantly male (Barter, 2013; Hackett, Masson, Balfe, & Phillips, 2013) which may be due to how males are socialized to externalise behaviours in comparison to females who internalise them (Miranda, Biegler, Davis, Frevert, &Taylor, 2001).

Children with SBP have high levels of co-morbid emotional and behaviour problems, in particular Conduct Disorder, Attention Deficit Hyperactivity Disorder, Oppositional Defiant Disorder, and Adjustment Disorder (Gray, Busconi, Houchens & Pithers, 1997; Friedrich, 2007). As well, they commonly have cognitive delays, learning problems, deficits in empathy and social skills, emotional regulation problems and are prone to depression (Friedrich & Luecke, 1988). According to Gray et al. (1997) their caregivers report levels of internalising and externalising behaviours in the clinical range on behavioural measures such as the Child Behaviour Checklist, specifically anxiety and obsessive behaviours for boys and girls and depression for girls (Friedrich & Luecke, 1988).

According to Gray et al. (1997), children with SBP are more likely to come from families with high levels of distress characterised by family violence, familial sexual abuse, physical abuse and neglect, poverty and criminality. Furthermore, families of these children often model interactions that lack empathy and cooperation (Friedrich, 1990), are more likely to be disengaged from their community, have poor impulse control, low distress tolerance and lack problem solving skills (Gray et al., 1997).

Exposure to adult sexuality and sexualised home environments contribute to the development of SBP in children (Friedrich, 2007). When children are exposed to excessive amounts of sexual stimuli, their natural curiosity about sex can become distorted, particularly when parents fail to adequately supervise or intervene (Waisbrod & Reicher, 2014). Studies have found that more than 50% of television shows contain sexual content and messages with no mention of the risks, responsibilities and consequences for sexual behaviour (Villani, 2001). For example, during live coverage of the 2004 Super Bowl, it was estimated that 6.6 million children aged 2-11 and 7.3 million teens aged 12-17 watched Justin Timberlake rip open Janet Jackson's bodice to expose her breast (Teen Sexual Behaviour for Parents, n.d.).

Childhood trauma and abuse is commonly reported in the backgrounds of children with SBP (Barter, 2013; Friedrich, 2007), however it cannot be assumed that this means sexual abuse as 50% of children with SBP have no known history of sexual abuse (Silovsky & Niec, 2002). Instead, these children are more likely to have been physically and emotionally abused and neglected or witnessed family violence (Ray & English, 1995; Silovsky & Niec, 2002). However sexual abuse is still an important contributing factor with studies showing that sexually abused children have higher rates of SBP than non-abused children (Berliner, 1991; Friedrich, 2007). As well, sexual abuse may lead to sexual preoccupation and acting out of sexual behaviours (Friedrich, 2007).

Research indicates that trauma impacts on a child's capacity to become resilient, leading to increased risk of further maltreatment and vulnerability (Rich, 2006). Such traumatic experiences also put children at risk of having attachment difficulties (Friedrich, 2007) which is an additional risk factor for a wide range of poor outcomes (Rich, 2007).

1.4 *Trauma Related Impacts*

The Adverse Childhood Experiences Study is a seminal study that investigated the correlation between adverse childhood experiences (ACEs) and health outcomes (Felitti et al., 1998). Researchers asked 17,377 adults about their history of exposure to ACEs which included physical, emotional, or sexual abuse; physical or emotional neglect; domestic violence; mental illness; criminality; parental separation or divorce; and parental alcohol and drug abuse (Anda et al., 2006). They generated an ACE score according to the number of different types of ACEs each participant experienced, and used this as a measure of cumulative childhood stress and found a "dose response" relationship between the ACE score and health outcomes (Felitti et al., 1998). They found that 64% of participants had been exposed to at least one ACE. Those with an ACE score of four or more had two times the risk of suffering from ischemic heart disease or developing any cancer, two and a half times the risk of chronic obstructive pulmonary disease or hepatitis, four and a half times the risk of suffering from depression and twelve times the risk of suicidality than someone with an ACE score of zero (Felitti et al., 1998).

Since the original ACE study in 1998, there have been numerous other studies linking ACE scores with different health outcomes. Notable studies included one that looked at the relationship between ACEs and child behaviour and found that having four or more ACEs more than quadrupled the risk of internalising behaviours, and nearly quadrupled the risk of externalising behaviours for children aged five to eight years (Clarkson Freeman, 2014). Similarly, a study by Flaherty et al. (2014) found that there was a relatively strong relationship between ACE scores and health problems at age 12 years. Another study by Lamers-Winkelmana, Willemen, and Vissera (2012) found that children who witnessed domestic violence were also exposed to other types of ACEs (mean 5.08) with 20% of their sample being exposed to seven or more ACEs. Contrary to the previous study, they found that the number of ACEs was not related to children having emotional or behavioural problems, although it was related to parental report of trauma related symptoms.

There has been limited research into the relationship between ACE scores and general criminal behaviour in juveniles. Specifically studies have confirmed that juvenile offenders

had much higher ACE scores than the general population (Baglivio et al., 2014), that there was a dose response relationship between ACE scores and serious, violent juvenile offending (Fox, Perez, Cass, Baglivio, & Epps, 2015), and that the ACE score predicted whether the juvenile belonged to one of five trajectory offending groups, which identified early onset and chronic offending groups (Baglivio, Wolff, Piquero, & Epps, 2015).

There are few studies that specifically explore the relationship between ACEs and sexually harmful behaviour. One study by Levenson, Willis, and Prescott (2015) looked at the prevalence of ACEs in adult female sexual offenders and found 41% of participants were exposed to four or more ACES (compared to 15% of female participants in the original ACE study by Felitti et al., 1998). They also found a significant difference in participants' exposure to sexual abuse, emotional abuse, emotional neglect, criminality, separation and divorce, domestic violence and substance abuse when compared to the original ACE study, and that participants with higher ACE scores were more likely to have younger victims. Prior to this study, Levenson, Willis, and Prescott (2014) looked at the prevalence of ACEs in male sexual offenders and found that they were three times more likely to have suffered sexual abuse as a child, twice as likely to have been exposed to physical abuse, 13 times more likely to have been emotionally abused and four times more likely to have been emotionally neglected and had parents who separated or divorced. Both studies found that adult sexual offenders were raised in chaotic social environments that were characterised by multiple maltreatments.

There have been no studies to date that examine the relationship between ACE scores and SBP in children. A study by Szanto, Lyons, and Kisiel (2012) looked at the relationship between SBP and a range of trauma experiences (they included five of the 10 ACEs as well as other types of trauma such as terrorism, war, medical trauma, community and school violence) and found that sexual abuse was the most common trauma type experienced. Other findings from their study included a strong association between multiple trauma exposures, as well as exposure to violence (family, community and school) as likely factors in the development of SBP in children (Szanto et al., 2012).

1.5 Multiple Trauma Experiences

Adverse childhood experiences are more often than not interrelated, with different types of trauma co-occurring (Anda et al., 2006). Studies have shown that children with SBP have experienced extreme levels of maltreatment, with very few (less than 6%) having no maltreatment experiences (Ryan, 1999; Tarren-Sweeney, 2008). A study by Gray, Pithers, Busconi, and Houchens (1999) found that 56% of children with SBP had experienced multiple forms of trauma. According to Tarren-Sweeney (2008) complex trauma characterised this population which is defined as childhood exposure to significant abuse, neglect and deprivation in the context of neglectful, dismissive and abusive parenting (Cook et al. 2005; van der Kolk & Courtois, 2005).

Maltreatment experiences undermine normal child development and pose significant risks that affect brain development, attachment, emotional and behavioural regulation and self-concept (Cicchetti & Toth, 2005; Cook et al., 2005). Maltreatment occurs within family environments where children are exposed to chaos, adult sexual behaviours, inconsistent parenting, inadequate supervision, poor boundaries and ineffective socialization (Cicchetti & Toth, 2005; Friedrich, 1997). Physical abuse and domestic violence often characterise these families, and such environments increase the likelihood of children developing anxieties that can lead to a propensity towards self-soothing behaviours that may include SBP (Friedrich, 2007; Merrick, Litrownik, Everson, & Cox, 2008). Children may engage in SBP in an attempt to meet intimacy needs and to cope with trauma (Gilgun, 2006) especially when overwhelmed and unable to get basic needs met in the face of hostile and neglectful parenting (Cicchetti & Lynch, 1993; Hawkes, 2011).

1.6 Attachment

Secure attachment develops in the context of sensitive and attuned caregiving and over time this becomes internalised (Friedrich, 2007). This process forms the child's internal working model, in which cognitive and affective aspects of the attachment relationship are integrated, providing a framework for the child to make sense of themselves, others and the world (Crittenden, 1995). These internal working models tend to persist across the lifespan and operate out of conscious awareness (Cicchetti & Toth, 2005).

Golding (2008) differentiates between positive and negative internal working models, stating that with a positive internal working model, children view themselves as competent, worthy of love and view others as reliable, trustworthy and supportive. In contrast she compares this with a negative internal working model where children feel incompetent, unworthy of love, and view others as unavailable, unresponsive, untrustworthy and hostile (Golding, 2008).

Golding (2008) describes three insecure attachment patterns related to negative internal working models. *Ambivalent attachment* develops when the caregiver is insensitive and responds in an inconsistent manner to the child, leaving the child feeling anxious about the availability of the caregiver. *Avoidant attachment* develops in the context of an unavailable and rejecting caregiver. The child withdraws and attempts to meet their own needs, while both fearing and desiring closeness. A *disorganised or reactive attachment* style is characterised by fear of the caregiver and an inability by the child to develop a strategy to deal with their intolerable fear (Golding, 2008).

A growing body of research has identified that children with SBP often have difficulties developing a secure attachment (Ryan & Lundeberg, 2009). This is not surprising given that children with SBP are more likely to have suffered maltreatment, and studies have found that 82% of maltreated children develop insecure patterns of attachment (Carlson, Barnett, Cicchetti, & Braunwald, 1989). In a Scottish sample of 189 children and young people with SBP, 68% of the participants had insecure attachments (Hutton & Whyte, 2006).

Siegel (1999) suggests that the brain circuitry for sexuality and aggression are closely linked and that children who are physically abused or grow up around family violence may be triggered to act out sexually in these environments. Interestingly, Hawkes (2011) proposes that the attachment and sexual systems are also closely linked; both integrate sensory information (taste, smell, sound and touch) and rely on "emotional, affective and behavioural skills to interpret and communicate intention and sexuality depends on the core attachment capacity to achieve and sustain physical and emotional proximity" (p. 95).

Secure attachment is a protective factor that influences the impact that any traumatic experiences may have on the child by facilitating a return to safety. However for children with attachment problems their caregivers may become a source of further traumatic stress rather than a mediator of stress (Cook et al., 2005). The inability to develop a secure attachment influences multiple areas of development over the lifespan (Cicchetti & Toth, 2005) and compromises the development of social skills and behaviours, including empathy, intimacy, self-regulation and moral behaviour (Rich, 2006). This present study focuses on three key areas of development: mastery, relatedness and emotional expressiveness.

1.7 Mastery

According to Edwards (2002), children develop mastery within the context of the attachment relationship in three significant ways. Firstly, in the process of getting their needs met they learn that they can be effective within their relationships (Edwards, 2002). Secondly, they learn to rely on their parent to help them (Belsky, Garduque, & Hrncir, 1984), and thirdly they gauge the safety of their environment by their parents' reaction while trusting their guidance to master it (Edwards, 2002). Through positive social interactions with parental figures, they learn to tolerate frustration, develop courage to venture out, and in doing so develop self-efficacy (Edwards, 2002).

Multiple exposures to trauma on the other hand, leave children feeling powerless and incompetent as they are unable to effect change on their environment, leading to them feeling helpless and unworthy of love (Cook et al., 2005). Unable to trust their caregivers, maltreated children fail to learn to trust their own instincts, which leads to a lack of self-confidence and self-efficacy. As a result they tend to make poor choices and are attracted to similar children who reinforce their low self-esteem (Levenson et al., 2015). Repeated rejection by those who are supposed to support and care for them, leave maltreated children struggling to achieve age-appropriate competencies and a sense of mastery (Cook et al., 2005). These children instead may overcompensate to avoid feelings of inferiority by putting others down or acting as if they are superior; or on the other hand may undercompensate and give up (Edwards, 2002).

1.8 Relatedness

According to Connell and Wellborn (1991) relatedness, or the ability to feel a real connection to others, is an important psychological need along with mastery and autonomy. Children meet their needs for relatedness through patterns of cognition, emotion, mood, personality and behaviour within the social environment (Lynch & Cicchetti, 2002). Relatedness develops from internal working models of our early relationships with attachment figures, and when this is disrupted due to trauma, it can led to problematic patterns of relatedness (Cicchetti & Toth, 2005). In order to cope with trauma experiences children may develop cognitive adaptions, impaired self-esteem, poor decision making and dissociative behaviours that impact on their social functioning (Dietrich, 2007).

Children with SBP struggle with peer relationships due to having problems with emotional and behavioural regulation, low self-esteem and poor social skills (Cook et al., 2005; Ray & English, 1995). Those who have suffered trauma tend to have fewer prosocial behaviours and are more likely to be socially withdrawn and not liked by their peers (Salzinger, Feldman, Hammer, & Rosario, 1993). Feelings of incompetence and self-blame for their trauma experiences leave them struggling to trust others and accept social support (Cook et al., 2005).

1.9 Emotional Expressiveness

According to Creedin (2009) emotional reactivity is influenced by genetic and environmental factors, with the main environmental factor being sensitive, quality caregiving (Galderisi & Mucci, 2000) in which the caregiver takes the role of 'affect regulator' until the child can regulate themselves (Siegel, 1999). Within the attachment relationship, children learn to tolerate uncomfortable internal states and develop a range of coping strategies to self-regulate (Briere, 2002). As they learn to tolerate distress, they also develop empathy, which leads to prosocial goals (Edwards, 2002).

In contrast, when children are exposed to maltreatment, they are unable to develop emotional regulation skills due to being overwhelmed by distress which precludes learning to self-soothe (Briere, 2002). Furthermore, changes occur in the autonomic nervous system,

making them hypervigilant to environmental demands, and either emotionally reactive or emotionally under-responsive to challenges (Loman & Gunnar, 2010). Unable to regulate their emotions, they act out behaviourally which impacts their peer relationships (Saami, 1999) and have little tolerance or empathy for when others are distressed, responding instead by rejecting or distancing themselves (Larsen, Diener, & Cropanzano, 1987). They may use risky behaviours as a way of avoiding or soothing strong emotions (Hessler & Katz, 2010).

In summary, this literature review has highlighted that children with SBP are a diverse group with complex needs including high levels of co-morbid emotional and behavioural problems. They are likely to come from family environments that are characterised by high levels of dysfunction that may include family violence, familial sexual abuse, physical abuse and neglect, poverty and criminality, and where children may be poorly supervised and exposed to sexualised environments such as adult sexual behaviours and pornography. Many of their problems stem from trauma backgrounds and subsequent attachment difficulties that compromise the development of key domains such as emotional regulation, empathy, relatedness and mastery.

According to Tucci (2005) there is a lack of knowledge and understanding in the research relating to how these children perceive themselves and their experiences and this current study aims to address this deficit in knowledge.

1.10 Aims of this Study

This study aimed to answer the following research questions:

1. What is the prevalence of adverse childhood experiences (ACEs) of children with SBP compared to a general population?

2. How do children with SBP perceive themselves in terms of mastery (their ability to influence their world and their relationships)?

3. Do children with SBP report feeling a sense of relatedness and security within their relationships?

4. How do children with SBP perceive their own experiences of emotional reactivity?

Taking into account what the research says about these children, it was predicted that a high percentage of this group of children would have a history of trauma. Because trauma compromises the development of a secure attachment, and thus the child's internal working model, it further predicted that these children would have lower levels of relatedness and mastery, and higher levels of emotional reactivity.

This study further aimed to inform and assist clinicians working in the HSB sector to work more effectively with these children by providing a deeper understanding of children's experiences and how they perceive themselves.

Methodology

2.1 Ethics

This study was approved by Massey University Human Ethics Committee. Prior to approval the researcher had to answer a number of ethical questions and demonstrate ethical knowledge in relation to potential role conflict, and whether a third party should be employed to collect the data. These issues were resolved through collaborative discussion and explanation of the researcher's position in WellStop, as well as advocating for the protocol proposed for the research. On 14/07/2015 this study was approved as a Low Risk Notification. The data were historical data collected at assessment from past clients of WellStop whose parents consented to their data being used in research with "no personally identifying information to be released as part of any research report". To protect client confidentiality the protocol de-identified the client as early as possible. A four digit number was used to code the information at the earliest possible stage of data collection.

2.2 Design and Measures

This study focused on the analysis of children's scores and sub-scores on a resiliency questionnaire as well as anecdotal reports of whether these children had experienced certain types of traumatic experiences.

Resiliency Scales for Children and Adolescents (RSCA)

This measure can be completed by children aged 9 to 18 years and comprises of three self-report scales of 20 – 24 questions each, and corresponding sub-scales. The variables that were examined in the study had been operationally defined by Sandra Prince-Embury in her development of the RSCA and outlined in the RSCA manual (Price-Embury, 2007) and included the following:

(1) Sense of Mastery Scale with sub-scales for Optimism, Self-Efficacy and Adaptability.

(2) Sense of Relatedness Scale with sub-scales for Trust, Support, Comfort and Tolerance

(3) Emotional Reactivity Scale with sub-scales for Sensitivity, Recovery and Impairment

As per the manual, the Adaptability sub-scale (Sense of Mastery) is not interpreted for children aged 9-12 years and the Tolerance sub-scale (Sense of Relatedness) is not interpreted for children aged 9-11 years (Price-Embury, 2007) and so these scales have not been included in the study.

According to the manual, the alpha coefficients for the Mastery, Relatedness and Emotional Reactivity Scales were moderate to high (≥ .85) and test-retest reliability was moderate to high for the three scales (≥ .79) for the standardized sample (Prince-Embury, 2007). On the subscales (excluding Adaptability and Tolerance which are not interpreted for children aged 9-12) the alpha coefficients fell within the range of .69 and .88; test-retest reliability ranged from .68 to .83 (Prince-Embury, 2007).

Adverse Childhood Experiences Questionnaire

The researcher used the questionnaire from the Adverse Childhood Experiences (ACE) Study to categorise specific trauma experiences for the participants according to information in the database that had been gathered at assessment from multiple informants including the child, parent or caregiver, social worker and other health professionals and agencies. The questionnaire distinguishes three categories of ACEs that make up the ACE score. These categories are the abuse category of physical, emotional and sexual abuse; the neglect category of physical and emotional neglect; and household dysfunction category as defined by experiences of domestic violence, growing up with a family member with mental health problems, criminality in the family, parental separation or divorce, and growing up around alcohol and drug abuse (Center for Disease Control and Prevention, 2014; Health Presentations, nd). See Appendix A for a description of each ACE and variable construct.

2.3 Method

Participants

The sample consisted of 88 children aged 9-12 years who were referred to WellStop, a community-based Non-Government Organisation, for an assessment of their sexual behaviour problems. It included children referred to WellStop between March 2008 to March 2015 across the Wellington, Manawatu, East Coast Bays and Taranaki regions. The WellStop

Children's Programme accepts referrals for children aged 4-12 years, however children under the age of 9 years were excluded from the study as they were unable to complete the RSCA.

Data Collection Protocol

A database search was conducted to identify all children referred between March 2008 to March 2015 who were aged between 9 and 12 years at the time of referral. March 2008 was chosen as the start date because this is when the RSCA was introduced as a measure in child assessments.

The client paper file was located and checked for parental consent for the data to be used for research purposes. Any files without parental consent were excluded as were those files where the participant had not completed an RSCA at assessment. Basic demographic data were collected and all information was logged against a 4-digit code.

The researcher completed a database search for each participant to identify any Adverse Childhood Experiences (ACE) suffered using a modified version of the Adverse Childhood Experiences Study Questionnaire (Health Presentations, n.d.). RSCA T scores were also collected. Information was recorded against the 4-digit number, and thus was coded and anonymised as early as possible in the data gathering process. From there on the data were analysed and reported on in an anonymised and aggregated format to ensure client anonymity and confidentiality.

2.4 Analysis and Presentation of Findings

An initial analysis described the demographic characteristics of the sample, determined the prevalence of specific ACEs and whether the sample represented a group of traumatised children or a group that was more diverse in character. The researcher completed an analysis of the RSCA scores and sub-scores which were based on 64 items that children rated on a 5-point Likert scale (Never, Rarely, Sometimes, Often, Almost Always). A collective analysis of these data provided insight into how children with sexual behaviour problems viewed themselves in terms of mastery, relatedness and emotional reactivity.

The sample size was relatively small (n=88) so analysis focused on identifying trends and patterns and using descriptive statistics to describe and summarise these. The researcher used a combination of charts, tables and statistical narrative to present the findings.

Results

3.1 Demographic Characteristics of the Sample

The demographics of the sample (n=88) is shown in Table 1. Analysis identified that 60.2% of the sample (n = 53) came from the Wellington region and 39.8% (n = 35) came from other regions. The sample was made up of 93.2 % boys (n = 82) and 6.8% girls (n = 6). The age range was 9 to 12 years $(\bar{x}$ = 10.8; SD = 1.1).

Table 1

Sample Demographics (n=88)

Characteristics	*n*	%
Regions		
Wellington	53	60.2
Napier	25	28.4
Palmerston North	6	6.8
Gisborne	3	3.4
Taranaki	1	1.1
Gender		
Male	82	93.2
Female	6	6.8
Age		
9 years	13	14.8
10 years	22	25
11 years	20	22.7
12 years	33	37.5
Ethnicity		
European	44	50
Māori	29	33
Māori / European	4	4.5
Pacific Islander	4	4.5
Māori / Pacific Islander	3	3.4
European/ Pacific Islander	2	2.3
Other	2	2.3

Ethnicity

In 2013, the national population of New Zealand comprised of 74% who identified as having at least one European ethnicity, 15% who identified with Māori ethnicity, and 7% with at least one Pacific ethnicity (Statistics New Zealand, 2013). An analysis of the ethnic distribution of the sample found that 89.8% (n = 79) identified as having one ethnic group and 10.2% (n = 9) identified as belonging to two ethnic groups. 51.5% (n = 50) identified as having one European ethnicity; 37.1%% identified as being Māori (n = 36) and 9.3% (n = 9) identified as having one Pacific Islander ethnicity.

3.2 What is the prevalence of adverse childhood experiences (ACE) of children with SPB compared to a general population?

The ACE score for each participant was calculated by adding up the number of different specific adverse childhood experiences each participant was exposed to, as reported by multiple informants at assessment. For each of the ten items on the Adverse Childhood Experience Questionnaire, the maximum score was one point as the questionnaire did not account for multiple exposures to one type of trauma. This meant that if a child had (for example) multiple physical abuse experiences, the score would be one for that item. The score also did not take into account the severity and impact of participants' trauma experiences.

In the sample, the number of exposures to different types of trauma experiences ranged from 0 (no reported exposure to any ACE) to 10 (exposure to 10 ACEs) with a mean of 5.55. The results showed that these children had experienced high levels of different types of trauma with 71.6% of them having had four or more different types of trauma experiences. In this sample, 14.8% of children had been exposed to eight different types of trauma experiences, and 11.4% had been exposed to all ten types of trauma experiences. Results showed that 9.1% of the children had not been exposed to any trauma experiences and 3.4% had experienced one type of trauma. These results are shown in Table 2.

Table 2

Frequency of Adverse Childhood Experiences Scores

ACE Score	*n*	%
0	8	9.1
1	3	3.4
2	8	9.1
3	6	6.8
4	6	6.8
5	9	10.2
6	9	10.2
7	10	11.4
8	13	14.8
9	6	6.8
10	10	11.4
Total	88	100%

Frequency of ACE Scores by Ethnicity

Because Māori children were over-represented in this sample when compared with the national population, further analysis examined the distinction between Māori (n = 36) and non-Māori (n = 52). The mean ACE score for Māori children was 7.11 (median= 7.5) compared to a mean ACE score of 4.46 for non- Māori children (median= 5). Māori children were 1.5 times more likely to have experienced four of more ACEs (88.9% compared to 59.6%) and 2.3 times more likely to have experienced seven or more ACEs than non- Māori children (66.7% compared to 28.8%). Conversely, ACE scores of zero were found in 2.8 % of the Māori children compared to 13.5% of non- Māori children.

Comparison of ACE Types

The most commonly reported adverse experience was parental separation and divorce, followed by domestic violence. Results are shown in Table 3 and indicate that physical abuse was the most common abuse/ neglect experience for this sample of children. Sexual abuse, while still prevalent in this sample, was reported less than other forms of abuse and neglect.

Table 3

Comparison of Adverse Childhood Experiences Types

Types of Adverse Childhood Experiences	Total f (n=88)	%
Physical Abuse	54	61.4
Emotional Abuse	51	58
Sexual Abuse	39	44.3
Physical Neglect	43	48.9
Emotional Neglect	50	56.8
Domestic Violence	58	65.9
Mental Health	43	48.9
Criminality	32	36.4
Separation/ Divorce	73	83
Alcohol/ Drug	46	52.3

Comparison of Sample to the Original ACE Study

Differences were noted when the scores from the sample were compared with those from the Center for Disease Control and Prevention (2014); this latter study collated results from the original ACE study of 17,337 participants, which asked adult participants to report on adverse childhood experiences. As shown in Figure 1, 9.1% children with SBP in this current study had an ACE score of 0 compared to 36.1% in the original CDC sample.

Of significance is that children with SBP were 5.7 times more likely to have experienced four or more ACEs than those in the original CDC study (71.6% compared to 12.5%). As well, 39 children (44.3%) in this sample had ACE scores of 7 or more. These results suggest that the children with SBP in this study had much higher levels of exposure to ACEs than the adult participants in the original CDC sample.
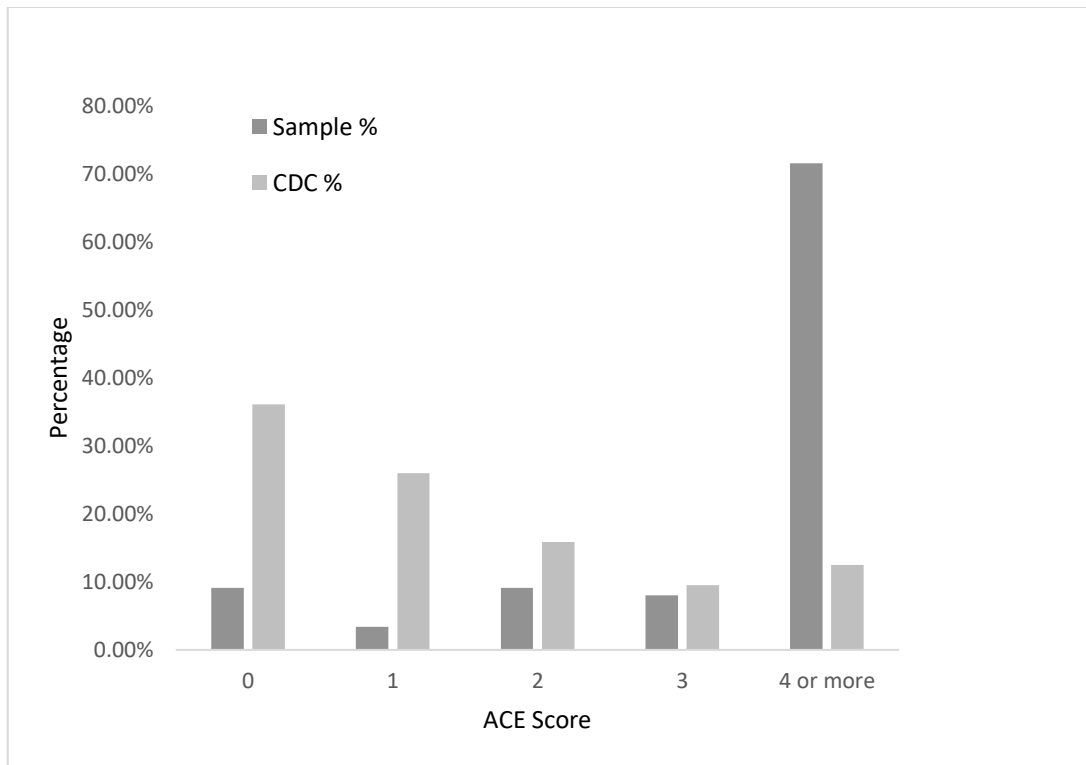
Figure 1. Adverse Childhood Experiences Score of Sample Compared to Adverse Childhood Experiences Score from CDC[4]

Comparing Types of Adverse Childhood Experiences

There were significantly higher frequencies of ACEs for the total sample across the different types of adverse childhood experiences, when compared to those from the Center for Disease Control and Prevention (2014) as shown in Figure 2.

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[4] Percentages for the CDC sample are from the original ACE study sample (n=17,337) as posted on the CDC website http://www.cdc.gov/violenceprevention/acestudy/prevalence.html
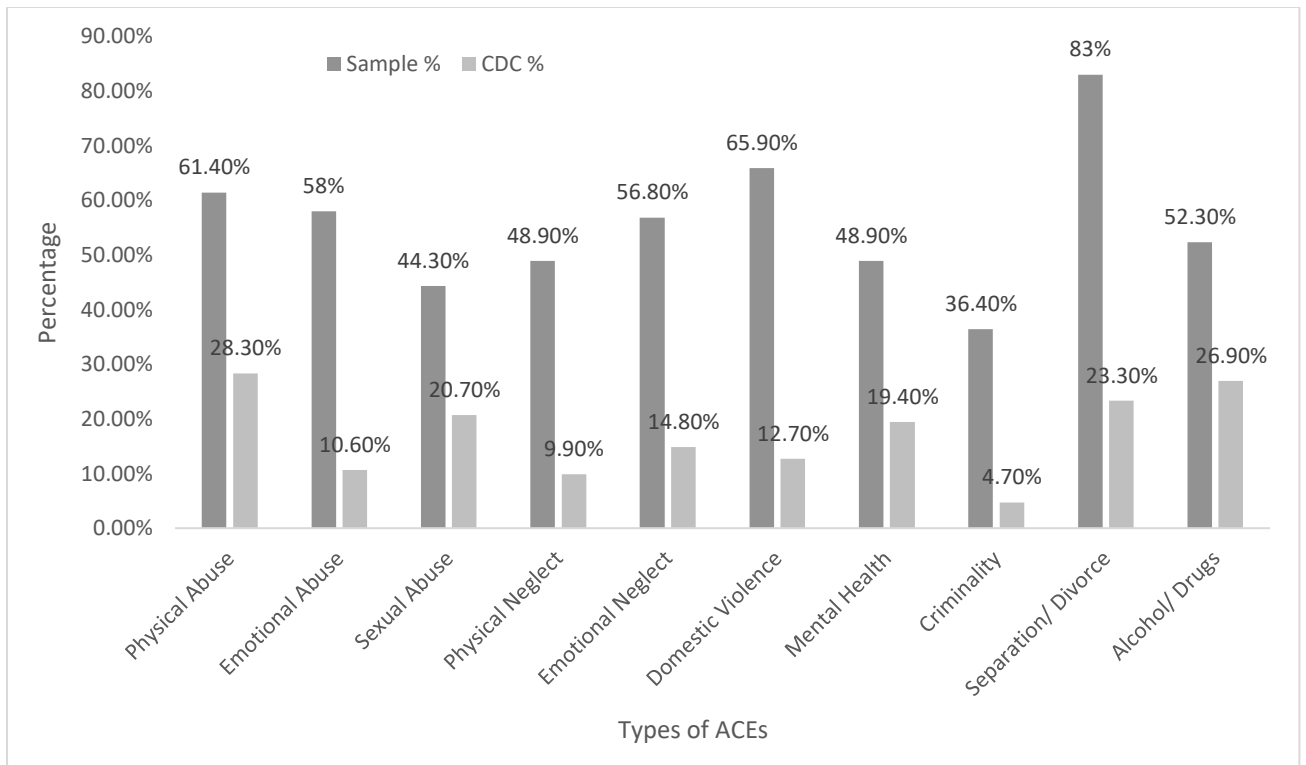
Figure 2. Comparison of Types of Adverse Childhood Experiences Between Study Sample and CDC Sample

Association Between ACE Types

A Phi-coefficient was used to determine the degree of association between different ACE types. As shown in Table 4, associations between the different ACE types ranged from little or no association to strong association (range Phi = .04 to .81), which suggests that maltreatment experiences occur in environments that support other types of abuse, neglect and dysfunction. The strongest association was between physical abuse and domestic violence. Notable associations existed between physical neglect and emotional neglect, and emotional abuse and emotional neglect. Physical abuse was associated with emotional abuse and physical neglect.

Table 4

Associations (Phi) Between Types of Adverse Childhood Experiences

	PA	EA	SA	PN	EN	DV	MH	CR	SD	AD
Physical Abuse (PA)	1	0.55**	0.29**	0.59**	0.49**	0.81**	0.12	0.36**	0.47**	0.36**
Emotional Abuse (EA)		1	0.20	0.51**	0.65**	0.50**	0.14	0.12	0.37**	0.34**
Sexual Abuse (SA)			1	0.18	0.13	0.35**	0.04	0.28**	0.36**	0.26*
Physical Neglect (PN)				1	0.67**	0.46**	0.18	0.40**	0.34**	0.34**
Emotional Neglect (EN)					1	0.39**	0.21*	0.23*	0.30**	0.41**
Domestic Violence (DV)						1	0.18	0.44**	0.53**	0.42**
Mental Health (MH)							1	0.16	0.11	0.21
Criminality (CR)								1	0.30**	0.39**
Separation/ Divorce (SD)									1	0.43**
Alcohol/ Drug (AD)										1

** Correlation is significant at the 0.01 level

 * Correlation is significant at the 0.05 level

3.3 How do children with SBP perceive themselves in terms of mastery?

The Sense of Mastery scale on the RSCA considers the child's perceived ability to influence the world and relationships around him or her and is comprised of subscales Optimism and Self-Efficacy (Prince-Embury, 2007). Prince-Embury (2007) defines Optimism as a positive attitude about the world and life in general; this relates to positive self-esteem, and perception of control. Self-Efficacy relates to the child's ability to develop problem-solving strategies and their belief in their own ability to change their situation (Prince-Embury, 2007). Such a belief strongly predicts the child's motivation and behaviour, as the higher the sense of self-efficacy, the greater the child's ability to show effort and persistence (Pajares, 2002).

The mean score for overall Sense of Mastery was in the low range, with the 95% confidence interval falling within the low to below average range. The mean score for Optimism was in the average range and for Self-Efficacy in the below average range, with the 99% confidence interval falling within the below average range to average range for both subscales. This suggests that children with SBP are less optimistic about their lives, have concerns about their abilities to solve problems and master their environment and have a lower sense of competence compared to their peers. These results are presented in Table 5.

Table 5

Sense of Mastery Results

Mastery	Sense of Mastery Scale	
	x̄ (SD)	95% CI
Total Mastery	39.19 (12.53)	(35.68, 42.71)
Optimism	7.63 (4.29)	(6.43, 8.84)
Self-Efficacy	7.10 (3.53)	(6.11, 8.09)

[5]

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[5] Sense of Mastery Scores: T Scores ≤ 40 are in the low range;
41-45 below average range; 46-55 average range;
56-59 above average range; ≥ 60 high range
Subscale Scaled Scores ≤ 4 are in low range; 5-7 are below average;
 8-12 are in the average range; 13-15 above average; ≥ 16 high

A Spearman's rho correlation coefficient was used to determine the relationship between children's ACE scores and their scores on the Sense of Mastery scale and subscales. For all Mastery scales and subscales there was a weak negative correlation with ACE scores (Overall Mastery $r(86)$= -.157; Optimism $r(86)$= -.169; Self-Efficacy $r(86)$= -.145).

3.4 Do children with SBP report a sense of relatedness and security within their relationships?

The Sense of Relatedness scale on the RSCA assesses the child's ability to feel securely connected in a social context and includes subscales to measure their sense of trust, comfort in relationships, and perceived access to support from others (Prince-Embury, 2007). Sense of Trust is the degree to which others are perceived as trustworthy and reliable, and Prince-Embury suggests that this relates to the child's attachment style. The Support subscale assesses the child's ability to accept support which is based on their ability to trust in relationships, whereas the Comfort subscale measures the degree to which children feel comfortable with others (Prince-Embury, 2007).

The mean score for overall Sense of Relatedness was in the below average range with the 99% confidence interval falling within the low to below average range. The mean score for the subscales of Trust, Support and Comfort were all in the average range with the 99% confidence interval falling within the below average range to average range. These results are presented in Table 6.

A Spearman's rho correlation coefficient was used to determine the relationship between children's ACE scores and their scores on the Sense of Relatedness scale and subscales. For the overall Relatedness scale and the Trust subscale there was a very weak negative correlation with ACE scores (Overall Relatedness $r(86)$= -.091; Trust $r(86)$= -.071). For the Support and Comfort subscales there was no correlation with ACE scores (Support $r(86)$= .015; Comfort $r(86)$= .029).

Table 6

Sense of Relatedness Results

Relatedness	Sense of Relatedness Scale	
	x̄ (SD)	95% CI
Total Relatedness	41.10 (15.18)	(36.84, 45.36)
Trust	7.74 (4.12)	(6.58, 8.89)
Support	7.89 (3.96)	(6.78, 9.00)
Comfort	8.17 (3.57)	(7.17, 9.17)

[6]

3.5 How do children with SPB perceive their own experiences of emotional reactivity?

According to Prince-Embury (2007) emotional reactivity relates to the child's ability to maintain themselves when emotionally aroused. This scale has three subscales: Sensitivity which measures how sensitive they are and how strongly they react emotionally; Recovery or the ability to bounce back when emotionally upset; and Impairment or the degree to which the child is impaired or overwhelmed when upset (Prince-Embury, 2007).

The results in Table 7 show that all mean scores on the Emotional Reactivity Scale and subscales fell within the average range. For overall Emotional Reactivity the 99% confidence interval fell within the average to above average range. Confidence intervals for the subscales of Sensitivity and Recovery were within the average range whereas for Impairment they were within the average to above average range.

A Spearman's rho correlation coefficient was used to determine the relationship between children's ACE scores and their scores on the Emotional Reactivity scale and subscales. For the overall Emotional Reactivity scale and the Impairment subscale there was a weak positive correlation with ACE scores (Overall Emotional Reactivity $r(86) = .136$; Impairment $r(86) =$

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[6] Sense of Relatedness Scores: T Scores ≤ 40 are in the low range;
41-45 below average range; 46-55 average range;
56-59 above average range; ≥ 60 high range
Subscale Scaled Scores ≤ 4 are in low range; 5-7 are below average;
8-12 are in the average range; 13-15 above average; ≥ 16 high

.162). For the Sensitivity and Recovery subscales there was no correlation with ACE scores (Sensitivity r(86) = .030; Recovery r(86) = .060).

Table 7

Emotional Reactivity Results

	Emotional Reactivity Scale	
Emotional Reactivity	$\bar{x}$ (SD)	95% CI
Total Emotional Reactivity	53.63 (12.69)	(50.06, 57.19)
Sensitivity	10.81 (3.63)	(9.80, 11.84)
Recovery	10.18 (3.38)	(9.23, 11.13)
Impairment	12.06 (3.82)	(10.98, 13.13)

[7]

Further analysis looked at the frequencies of scores within the low, below average, average, above average and high ranges and these results are shown in Table 8. This shows that a significant number of children with SBP (30.7%) had overall scores for Emotional Reactivity in the high range.

Table 8

Frequency of Score Range for Emotional Reactivity

Score Range	Emotional Reactivity		Sensitivity		Recovery		Impairment	
	n	%	n	%	n	%	n	%
Low	11	12.5	3	3.4	1	1.1	0	0
Below Average	9	10.2	11	12.5	10	11.4	12	13.6
Average	34	38.6	46	52.3	56	63.6	39	44.3
Above Average	7	8.0	18	20.4	14	15.9	18	20.4
High	27	30.7	10	11.4	7	8.0	19	21.6

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[7] Emotional Reactivity Scores: T Scores ≤ 40 are in the low range;
41-45 below average range; 46-55 average range;
56-59 above average range; ≥ 60 high range
Subscale Scaled Scores ≤ 4 are in low range; 5-7 are below average;
8-12 are in the average range; 13-15 above average; ≥ 16 high

Discussion

4.1 Summary of Main Findings: Prevalence of ACEs

As predicted, analysis of the data used to address the first research question revealed that children with SBP have been exposed to greater levels of adversity and maltreatment than the general population. Specifically, they have been exposed to multiple forms of trauma when compared with a general population. In this current study children were exposed to a mean of 5.55 ACEs and 71.6% had experienced four or more ACEs (compared to 12.5% of the general population). A significant number of children in the sample had experienced seven or more ACEs and 11.4% had experienced all 10 types of ACEs. These results are consistent with others studies that found high levels of maltreatment in children with SBP (Gray et al., 1999; Ryan, 1999; Tarren-Sweeney, 2008). In this study, 9.1% of children had zero ACEs and thus were assumed to have no trauma history, compared to 36.1% of a general population. This was similar to previous studies that found less than 6% of children with SBP had no trauma in their histories (Ryan, 1999; Tarren-Sweeney, 2008).

The most prevalent ACEs were loss of a parent through separation or divorce (83%), domestic violence (65.9%) and physical abuse (61.4%). There was a strong relationship between domestic violence in the home and physical abuse. The next most prevalent ACEs were emotional abuse (58%), emotional neglect (56.8%) and parental substance abuse (52.3%). 44.3% of children in the sample had a history of sexual abuse. These results are consistent with previous research that found that children with SBP are more likely to have been exposed to family violence or have been physically or emotionally abused than sexually abused (Ray & English, 1995; Silovsky & Nice, 2002). Friedrich (2007) explains this well when he says "Domestic violence and child maltreatment are excellent teachers of coercive behaviour. Children exposed to each of these are more likely to think about relationships in terms of anger and coercion" (p. 34).

The findings supported prior research suggesting that ACEs co-exist (Anda et al., 2006) and that abuse and neglect occur within dysfunctional family environments characterised by chaos, overwhelmed caregivers, domestic violence, substance abuse, mental health problems

and criminality (Friedrich, 2007; Levenson et al., 2015). Furthermore, high levels of maltreatment compromise the development of a secure attachment and the child's internal working-model of the world (Cicchetti & Toth, 1995). This may lead to sexual and/ or attachment behaviours that illicit hostile responses from caregivers and others, reinforcing the child's internal working-model that the world is hostile and therefore they need to exert some form of control to survive (Hawkes, 2011).

Other findings were that ACE scores were not significantly correlated with scores on the resiliency measure. This may be due to resiliency being a multidimensional rather than a unidimensional construct (Klika & Herrenkohl, 2013; Kumar, Steer, & Gulab, 2010). There seems to be a lack of consensus in the literature about how risk factors and strengths interact with each other (Prince-Embury, 2008) and explanations for how some maltreated children develop resilience in the face of adversity and others do not (Klika & Herrenkohl, 2013). Studies using cluster analysis with RSCA results have identified different profiles of resiliency that describe children on a continuum from very resilient (with average to high levels of Mastery and Relatedness and low to average levels of Emotional Reactivity), to very vulnerable (with low levels of Mastery and Relatedness and high to very high levels of Emotional Reactivity) (Deblinger, Runyon, & Steer, 2014; Kumar, et al., 2010; Mowder, Cummings, & McKinney, 2010; Prince-Embury & Steer, 2010). These four studies used samples of children who had different presenting issues. One looked at children who had been physically and sexually abused; another investigated children who were psychiatric inpatients; in the third sample the children and adolescents were juvenile offenders; in the final sample the children were from a mental health outpatient sample. All studies identified four different profiles of resiliency, highlighting differences as well as overlap in profiles of these children (Deblinger, et al., 2014; Kumar, et al., 2010; Mowder, et al., 2010; Prince-Embury & Steer, 2010).

While detailed analysis is outside the scope of this study, it was concerning to find that Māori children were over-represented in the sample which may be consistent with studies that show that Māori youth are over-represented in criminal justice statistics (Department of Corrections, 2007). Also consistent with the literature were findings that Māori children were

exposed to greater levels of adversity than non- Māori children (Marie & Ferguson, 2009). Other studies that have found similar disparities between Māori and non- Māori include studies by Crengle et al. (2013); and Lievore, Mayhew, & Mossman, (2007). Appendix B contains further details of the ACES reported by Māori and non- Māori in this study.

4.2 Summary of Main Findings: Mastery

Analysis of the data to address the second research question confirmed the prediction that children with SBP struggle to achieve mastery. Specifically, children with SBP have a lower overall sense of mastery than their peers which means they are less likely to feel competent and able to master their environment. Having lower levels of self-efficacy and optimism, may result in children being pessimistic about life and their abilities and so they may avoid challenges, have poor aspirations and motivation to achieve goals, and may be more vulnerable to stress compared to their peers.

To further understand how these children view themselves it was helpful to look at the items on the RSCA that make up the subscales and contribute to their lower than average scores. For optimism, these children are less likely to think that life is fair and that good things will happen, that they can get the things they need, can control what happens to them, that their life will be happy and that (no matter what happens) things will be all right. Having below average levels of self-efficacy, these children are much less likely to feel competent about their ability to solve problems and handle challenges that arise. They are less likely to view themselves as doing things well, being good at fixing things and figuring things out, making good decisions, being able to adjust when plans change, being able to get past problems and solve problems, and that trying hard will make a difference.

These results are consistent with previous studies that found that maltreated children are likely to have pervasive feelings of incompetence and helplessness (Cook et al., 2005; Simpson, 2010). Those aged 9 to 12 years tend to perceive themselves negatively in terms of being competent (Vondra, Barnett, & Cicchetti, 1989), which puts them at risk of losing their sense of mastery to manage and solve problems in the future (Hobfoll, et al., 2007). Maltreated children struggle to achieve a secure attachment and thus their ability to master

emotional regulation is compromised (Cicchetti & Toth, 1995). This leads to a range of poor outcomes including school failure, problems with social competence, impulsivity, and internalising and externalising behavioural problems (Shonk & Cicchetti, 2001). Considering that maltreated children are consistently operating at a high baseline state of arousal in situations where there are no threats to their safety (Perry, 2006; Streeck-Fischer & van der Kolk, 2000), it is not surprising that they struggle to focus on learning at school, respond inappropriately in social situations and feel less than optimistic about their lives.

4.3 Summary of Main Findings: Relatedness

The third research question aimed to understand whether children with SBP felt a sense of relatedness and security within their relationships. As predicted, this study found that children with SBP had low to below levels of Relatedness compared to their peers, suggesting that these children may not feel securely attached in their relationships. Their scores on the subscales of Trust, Support and Comfort were in the below average to average range which suggests they experience somewhat lower levels of trust, support and comfort than their peers, or that they may have lower expectations for these needs. Alternatively some of these children (identified as having average levels of trust, support and comfort) may be still willing to trust others, feel that they can access some support and feel comfortable with others.

Aspects of how these children view their relationships are reflected in the items on the relatedness subscales. In terms of trust, these children are somewhat less likely to spend time with friends, trust others, perceive that others treat them well and accept them for who they are, and allow others to see their real feelings. The Support subscale measures a child's perceived access to support rather than actual support (Prince-Embury, 2007). Results suggest that children with SBP are somewhat less likely to have a good friend, perceive that there are people who love and care about them, believe that there is someone they can talk to if they get upset or angry, and feel that if something bad happens they can ask their friends or parents for help. In terms of comfort, which measures how comfortable they feel around others and their ability to relate to others, they are somewhat less likely than their peers to meet new people easily, make friends easily, perceive that people like them and feel calm with people.

These results are supported by research that has found that the quality of early attachment relationships influences the quality of future relationships with peers and others (Colman, 2003). Through sensitive and available caregiving at times of distress, children internalise a working model of their caregiver as being available, protective and supportive (Golding, 2008). Maltreated children however, internalise working models relating to themselves as being unworthy of care, significant others as being untrustworthy, and an expectation that their caregiver will not be available to meet their needs (Colman, 2003). Consequently they tend to form confused or disorganised representational models of their relationship with their caregiver, self and significant others which leads to confused patterns of relatedness to others (Lynch & Cicchetti, 1991; Toth & Cicchetti, 1996). Lower levels of trust undermine their social development and they have difficulties trusting others and being able to follow the lead and guidance of a trustworthy adult, making and keeping friends, having empathy for others, and communicating effectively with others (Bomber, 2007).

4.4 Summary of Main Findings: Emotional Reactivity

The final research question aimed to understand how children perceive their own experiences of emotional reactivity. Developmentally, children aged 9 to 12 years learn to manage their own emotional states using metacognitive skills, or the ability to reflect on their own thinking processes (Raikes & Thomson, 2005). Based on knowledge from the past, children learn to manage emotions within the context of their social relationships and are influenced by the social expectations of those around them (Thompson, 1994). Maltreated children however may struggle to achieve emotional regulation (Cook et al., 2005; Golding, 2008; Shore, 2012). Instead they may be dysregulated, lack the skills to soothe themselves and overreact to even minor stressors (Briere & Elliot, 1994).

Contrary to prediction, this study found that children with SBP perceived themselves as being overall no more emotionally reactive than their peers. Their scores fell into the average range for Sensitivity and Recovery which suggests that they perceive that they are no more sensitive to emotional triggers and take no longer to recover from emotional upset when compared to their peers. However, their scores for Impairment were in the average to above average range

which means that they see themselves as being somewhat more impaired when upset than others their age.

How these children perceive their emotional competence is reflected in the items on the emotional reactivity subscales. In terms of sensitivity to emotional triggers, these children perceive themselves as being no more likely to strike back when upset, no more likely to get upset when things don't go their way or when people don't like them, and no more likely to get so upset that they can't stand how they feel when compared with their peers. In terms of how long it takes them to recover from being emotionally upset, they perceive themselves as being similar to their peers and not staying upset for long periods of time. In relation to the level of impairment they experience when upset, they are somewhat more likely than their peers to get so upset that they lose control, be unable to think clearly, react without thinking, make mistakes, do the wrong thing, get into trouble and do things that they feel bad about.

There are three possible explanations that may account for these results. Firstly maltreated children are sensitized to stress and respond in different ways. Some are hyper-aroused and become anxious and easily triggered, reacting strongly to events that remind them of their trauma (Diseth, 2005). Others become dissociated and disengaged, appearing blank and inattentive, and detached from their emotional experience (Diseth, 2005; Glaser, 2000). While both responses are forms of emotional dysregulation, their scores may cancel each other out as one may lead to emotional reactivity and high scores on the Emotional Reactivity scale, the other may lead to emotional numbing and low scores on the Emotional Reactivity scale.

Secondly, the results may be due to these children having higher rates of insecure attachment than a normative group, leading to their different emotional responses cancelling the other out. Children with an avoidant style of attachment tend to be emotionally shut down and distant; they inhibit emotional expression as they have learnt that this makes their caregiver unavailable to them (Bomber, 2007; Golding, 2008). As a result they manage their emotions cognitively and emotional integration is limited (Golding, 2008). On the other hand, children with an ambivalent attachment style display high levels of emotional distress, even to minor

triggers, and act out their feelings in order to illicit their caregiver's attention (Bomber, 2007; Golding, 2008). Finally children with a disorganized pattern of attachment experience high levels of unregulated distress and arousal and so respond erratically with bizarre and extreme behaviours (Golding, 2008).

A third possible explanation is that the language used for this scale may have confused some children. The author of the measure chose to use the words "get upset" on the items as a neutral term so that children could then associate it with any strong emotion (Prince-Embury, 2007). Given that this was a younger child sample with high levels of maltreatment, and that many of the children would have low levels of emotional literacy, it is possible that some children were confused by the language and may not have related "getting upset" to having strong emotional reactions.

Further analysis showed that a significant number of children with SBP (30.7%) had overall scores for Emotional Reactivity in the high range. This finding is consistent with the other studies that looked at resiliency profiles for children who were similar in some ways to the children in this study. In a study that looked at child juvenile offenders, 29.8% of the sample (n=191) had overall scores for Emotional Reactivity in the high range (Mowder et al., 2010) and in another study by Deblinger et al. (2014) that investigated a sample of children who had experienced physical and sexual abuse, 21.6% (n= 250) had overall scores for Emotional Reactivity in the high range. Previous studies have concluded that having high emotional reactivity and a history of trauma is predictive of future psychopathology (Prince- Embury, 2008), and that children who are emotionally dysregulated may engage in harmful behaviours as a way of dealing with or blocking out emotions (Hessler & Katz, 2010).

4.5 Study Limitations
There were a number of limitations to this study. Firstly the small sample size meant that analysis was limited to descriptive statistics and basic group comparisons, making it difficult to generalise the results to the wider population of children with SBP. Another limitation around size was that the sample only contained six girls which meant that girls could not be treated as a separate group and instead were treated as part of the whole group. Therefore

the findings relate more to boys as they comprised 93% of the sample. Research has highlighted that gender based differences between girls and boys should be acknowledged in order to advance our understanding of the unique needs of girls with SBP (Robinson, 2009; Weedon, 2011).

Secondly, this study examined ACEs and did not consider other possible adverse experiences that children may suffer such as being bullied or surviving a fatal accident. The ACE study focused on poly-victimization, which was later defined by Finkelhor, Ormrod, and Turner, (2007) as four or more different types of abuse which does not account for frequency and severity of trauma. Furthermore, other researchers have found that certain types of trauma, specifically those that are perceived as life-threatening such as physical abuse, sexual abuse and emotional neglect, have a greater impact on child adjustment than household dysfunction such as criminality and mental health problems of a family member (Perry, 1993).

Thirdly, the comparison data were derived from a general adult population, where adults were asked about adverse experiences as a child up to the age of 18 years. This current study would have been less affected by retrospective recall issues in the original ACEs study due to the events being more recent for the participants in this study. However the children in this study were aged 9-12 years and could potentially be exposed to further types of ACEs in the future years to age 18. Furthermore, there were significant cultural and gender differences as participants in the original ACE study were American with a gender mix of 54% female and 45% male (Center for Disease Control and Prevention, 2014).

Fourthly, the ACE score was derived from data gained from multiple sources at assessment, rather than administering the ACE questionnaire to clients. It would be reasonable to assume that parents, caregivers and children did not disclose trauma experiences fully at assessment due to social desirability factors, insufficient rapport built with the assessor or fear of consequences of reporting maltreatment. Furthermore, parents may not be aware of their child's experiences and children may forget, repress memories of trauma, or feel uncomfortable discussing them.

Finally, this study relied on self-reported data from children who may not have the capacity to be introspective or be aware of their feelings. According to Smith (2007) children who are referred for behavioural issues may have a tendency to underreport their behaviours, possibly due to not being able judge the severity of their behaviours. Conversely the research also suggests that children are better at rating their subjective internal states than other respondents (Smith, 2007).

4.6 Clinical Implications

Despite the above limitations, this study has a number of strengths, including that it is based on New Zealand data which may assist clinicians working in the HSB sector to work more effectively with these children. By investigating the prevalence of ACEs in the lives of children with SBP, this study has highlighted that these children have experienced significant levels of trauma compared to a general population and so intervention plans should look at how children's exposure to further trauma can be reduced.

As well, this study considered children's own experiences of their competence, relationships and ability to express emotions. In doing so, this study attempted to privilege and give voice to what children had to say about their experiences which is a significant strength of this study. How the children perceive themselves is vital to considering clinical interventions that take into account their feelings of mastery and ability to relate to others.

Also, these findings highlight the need to increase mastery through enhancing coping skills as well as parent, family and group interventions to strengthen children's relationships with others. While most children with SBP would benefit from interventions that enhance emotional coping, children with high scores in the emotional reactivity domain will benefit from more intense interventions to address sensitivity, recovery and impairment aspects of emotional reactivity in order to reduce their vulnerability to future psychopathology (Prince-Embury, 2008).

These findings further highlight that a comprehensive assessment should include a history of exposure to ACEs to assist in the development of treatment goals, and that trauma-informed

therapeutic interventions are needed, to both reduce exposure to ACEs and promote resilience. Interventions should also promote the principles of trauma- informed care, not only within the clinical environment but within non-clinical environments such as home, school, residence, where healing from trauma can take place when significant adults are empowered with the knowledge to facilitate this (Bath, 2015).

4.7 Directions for Future Research

Ideas for future research include expanding this study to include youth aged 13-17 years to further understand their trauma experiences with the use of the ACE questionnaire, alongside an exploration of their RSCA profiles and how these correlate with their risk assessment using the Estimate of Risk of Adolescent Sexual Offense Recidivism (ERASOR). Future research could also explore children's self-report on the Trauma Symptom Checklist for Children (TSCC) and whether there is a relationship with their scores on the TSCC and their ACEs score. Additionally, it would be interesting to investigate whether the delivery of interventions to enhance resiliency, as measured on the RSCA before and after treatment, had an impact on children's scores on the TSCC, before and after treatment. Finally research could investigate the differences between ACE scores for Māori and non- Māori children, and how these relate to their resiliency profiles and what this might mean for interventions for Māori children.

Conclusion

To conclude, findings from this study build on previous studies about the trauma experiences of children with SBP by using ACE scores to show that children with SBP have been exposed to significantly higher levels of adverse experiences compared to those of an adult sample in which ACE scores were derived from childhood experiences. Because of the impact of trauma and possibly to feeling less securely attached within their relationships, these children feel less competent and optimistic about their lives, and perceive themselves as less able to solve problems and navigate life's challenges compared to their peers. While many of them may feel let down by the adults in their lives and find it difficult to trust, findings show that some are still open to trusting and accessing support from others, suggesting that there is a window of opportunity in which to intervene with these children. Although the prediction that these children would have high levels of emotional reactivity was not met, it was determined that a significant number (30.7%) scored in the high range for emotional reactivity. It was suggested that these children represent a particularly vulnerable group of children who may benefit from more intensive intervention.

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Brief description of each ACE and Variable Construct

Description of ACE	Variable Construct
Child was physically abused by a family member	Physical Abuse
Parents/ caretakers were hostile, berating, and/ or belittling of the child	Emotional Abuse
Child was a victim of sexual abuse	Sexual Abuse
Family failed to provide food, shelter, clothing, nurturing or health care to the child	Physical Neglect
Little or no willingness by family to support the child, or the child does not feel loved/close to any family member	Emotional Neglect
Child lived in a home where there was violence between parents/ caregivers or child witnessed violence in the home	Domestic Violence
Child has lived with family member who suffered from mental health problems	Mental Health
Incarceration of family member	Criminality
Child does not live with both parents	Separation/ Divorce
Child has lived with household member who had alcohol or drug problems	Alcohol/ Drug

Adapted from Baglivio, et al., (2015)

Comparison of ACE Types of Total Sample, Māori and Non- Māori

Types of Adverse Childhood Experiences	Total *f* (n=88)	%	Māori *f* (n=36)	%	Non-Māori *f* (n=52)	%
Physical Abuse	54	61.4	27	75	27	51.9
Emotional Abuse	51	58	24	66.7	27	51.9
Sexual Abuse	39	44.3	21	58.3	18	34.6
Physical Neglect	43	48.9	24	66.7	19	36.5
Emotional Neglect	50	56.8	27	75	23	44.2
Domestic Violence	58	65.9	31	86.1	27	51.9
Mental Health	43	48.9	23	63.9	20	38.5
Criminality	32	36.4	20	55.6	12	23.1
Separation/ Divorce	73	83	33	91.7	40	76.9
Alcohol/ Drug	46	52.3	26	72.2	20	38.5

Sexual abuse, while still prevalent in the sample, was reported less than other forms of abuse and neglect, however Māori children were 1.7 times more likely to have been sexually abused than non-Māori children (58.3% compared to 34.6%).

Results also indicated that Māori children are 1.8 times more likely to experience parental alcohol and drug abuse issues than non-Māori children, and they are 1.7 times more likely to live with family members who have mental health problems. Furthermore, Māori children are 2.4 times more likely to experience criminality within their families than non-Māori children. While it is outside the scope of this study to determine if this is statistically significant, these results suggest that Māori children with SBP were much more likely to have multiple ACES than non- Māori children, and may be of clinical importance.