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**DIFFERENTIATING CHILDREN WITH AND WITHOUT A HISTORY OF REPEATED
PROBLEMATIC SEXUAL BEHAVIOURS FOLLOWING ADULT REPRIMAND**

by

Tracey Curwen

A thesis submitted in conformity with the requirements
for the degree of Doctor of Philosophy
Department of Human Development and Applied Psychology
Ontario Institute for Studies in Education of the
University of Toronto

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Differentiating children with and without a history of repeated problematic
sexual behaviours following adult reprimand

Doctor of Philosophy, 2007
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Abstract

The goal of the current study was to determine factors that differentiate children who repeated and did not repeat inappropriate sexual behaviours following adult reprimand. A literature review revealed 33 factors likely related to repeated sexual behaviours. Predictive accuracy of these factors was investigated in 62 children (9 females) recently assessed for problematic sexual behaviours. The children were divided into those with and without a history of repeated problematic sexual behaviours following adult reprimand. A relationship was found between eight individual factors and group membership and the combination of these factors demonstrated accuracy in identifying group membership. The results indicate factors that may assist in identifying children who require intervention and those likely only requiring adult reprimand to deter continued problematic sexual behaviours.

Acknowledgements

This study would not have been possible without the supervision of my committee and the support and contribution of many colleagues, friends, and treatment providers.

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Dedication

This dissertation is dedicated to James Shea and Dr. William Friedrich. Both were highly supportive of this study but sadly, both died during the course of writing this paper.

Jim was the director of Peel Collaborative Child and Adolescent Sexual Abuse Treatment Program (PCC-ASATP) at the Peel Children's Centre. PCC-ASATP is a program in the Peel Region of Ontario that is devoted to providing assessment and treatment for children who engage in problematic sexual behaviours, sexually offending adolescents, and victims of sexual abuse. Jim was also instrumental in building a residential program for adolescents who have sexually offended and he ensured that this program provided respectful and supportive services and care to the residents. Jim encouraged this study and he believed in the value and importance of this work. Jim was a kind, generous, and compassionate man who believed in the goodness of children and adolescents, regardless of their behaviours. I feel fortunate to have worked with such a kind man.

Anyone working in this field will be aware of the work of Dr. Friedrich and the impact of his research on our current knowledge of child sexual behaviour. Prior to starting this study, I had not had any contact with Dr. Friedrich, although I was well aware of his work. He willingly reviewed the factors that I had suggested and took the time to correspond with me on these factors and the utility of them. He expressed great support for this study and he was interested in the outcome; sadly, I did not get the opportunity to share my results with him. I am very thankful to Dr. Friedrich for graciously taking time to correspond with me and to encourage this work. No doubt, Dr. Friedrich's untimely passing will greatly impact this field.

Chapter 1

Introduction

In recent years, considerable attention has been paid to the characteristics of children who engage in problematic sexual behaviours. Generally, knowledge and understanding of these children has improved; however, much of this literature is based on etiology of the sexual behaviour and general characteristics of these children. There has been little attempt to distinguish children who repeatedly engage in problematic sexual behaviours from those children who do not repeat such behaviours. Although incidence rates of repeated problematic sexual behaviours by children are unknown, recent research has demonstrated that many adolescents commenced their sexual aggression as children (Burton, 2000; Wieckowski, Hartsoe, Mayer, & Shortz, 1998). Knowledge of the factors that differentiate children who repeatedly engage in problematic sexual behaviours from children whose sexual behaviours stop following adult reprimands for the behaviours could assist in identifying those children who need intervention to stop their problematic sexual behaviours.

Background

Although many children engage in what are considered “normal” or age-appropriate sexual behaviours, there are some children whose sexual behaviours are considered age-inappropriate. Clinicians tend to agree that when an adult discovers that a child has been involved in inappropriate sexual behaviours, his/her first intervention should be to tell the child that the sexual behaviour is not appropriate, provide the child with reasons why the sexual behaviour is inappropriate, and instruct the child that the sexual behaviour must not be repeated. In some cases, once reprimanded for the inappropriate sexual behaviours, the child

stops engaging in them; however, there are children who, regardless of being reprimanded, continually engage in harmful and inappropriate sexual behaviours. Such differences (i.e. repeating vs. not repeating the sexual behaviours following reprimand) may be critical with respect to allocation of, often limited, resources for intervention. The goal of the current study was to determine whether specific factors differentiate these groups of children in order to assist in early identification of those children who will likely require additional intervention efforts.

There is little consensus as to the terminology that should be used to describe the quality or extent of childhood problematic sexual behaviours. Currently, the terms used to describe the harmful sexual behaviours that some children engage in include: abusive, inappropriate, molesting, or problematic sexual behaviour. This inconsistency in terminology highlights the confusion amongst professionals (Staiger, 2005). Moreover, the lack of consistency in terminology is not surprising given that there is no international minimum age at which a person can be held criminally responsible. The age of criminal responsibility ranges from 6 to 18. Some countries, such as Australia and Switzerland have criminal responsibility set at 7 years of age while the laws of other countries such as Chile, Portugal, and Denmark have the age of criminal responsibility set at 15 or 16 (UNICEF, 2002). In Canada, as in a number of other countries, 12 years is the youngest age at which a person can be criminally charged. These differing ages of criminal responsibility have likely contributed to the language used in relation to children who engage in problematic sexual behaviours. For example, using terms such as “molesting”, “abuse”, “recidivism” (to indicate repeated behaviour) and “victim” connote an element of criminal activity that some believe should not be associated, in any way, with a child. On the other hand, there are also

treatment providers who are not opposed to referring to a child as an “offender” or as having “sexually assaulted” another which, again, may be a function of the laws governing the practitioner’s clinical practice.

Regardless of the terminology used, it is important to note that although children engaging in problematic sexual behaviours cannot be criminally charged in Canada, the behaviours engaged in by some children are clearly in violation of another individual. In addition, these behaviours may be harmful to both the child and his/her victim. In this paper, the term “problematic sexual behaviour” is utilized to encompass any sexual behaviour that would be viewed by those in the field as uncommon, age-inappropriate, or harmful; however, this term should not be construed in any way as a minimization of the extent or impact of the behaviours. The term “victim” is used to refer to the individual against whom the child engaged in the sexual behaviours. In the strictest definition, a victim is one who has been “killed or hurt” and/or who has been “cheated or tricked” (Webster’s, 1997). Nowhere in the definition of “victim” must the executor of the behaviours that render somebody a victim be over a specified age. To avoid calling those who have been impacted by the sexual behaviours of a child anything other than a victim would be to minimize the impact, extent of harm, and unwanted nature of the sexual behaviours that were inflicted on that person.

The field has far to go in understanding children with sexual behaviour problems and in gaining some consistency in the terminology considered acceptable to describe the behaviours of these children. However, there has been some consensus regarding the problematic sexual behaviours children engage in that are appropriate and those considered unacceptable and potentially harmful to others. The following provides an overview of both appropriate and inappropriate sexual behaviours for children under 12 years.

Normal Childhood Sexual Behaviour

Sexual behaviours and physical sexual responses are a normal and natural part of child development (Araji, 1997; Friedrich et al., 1998; Johnson, 1993a). Sexuality begins in utero where erections and orgasms can occur (Johnson, 1993) and psychosexual development starts in infancy and continues throughout development (Friedrich et al., 1991). Until recently, however, there has been some confusion as to what constitutes normal childhood sexual behaviour (Friedrich & Trane, 2002).

Friedrich, along with colleagues, conducted a number of studies designed to identify normative childhood sexual behaviours (see Friedrich et al., 1992; Friedrich, Grambsch, Broughton, Kuiper, & Beilke, 1991; Friedrich, Fisher, Broughton, Houston, & Shafran, 1998). Investigations of age appropriate and normative sexual behaviours have utilized reports regarding the sexual behaviours of victims and nonvictims of sexual abuse, maternal reports of their child's sexual behaviours, and daycare staff reports of the sexual behaviours of children in their care. Most of these investigations have revealed that children engage in a variety of sexual behaviours that vary over the course of development. Many have described common and appropriate sexual behaviours based on the age group of the children under investigation; most discussions of childhood sexual behaviours refer to the following age groups: birth to 5 or 6, 5 or 6 to 10, and approximately 10 to 12. The importance of considering age in the study of childhood sexual behaviours has been stressed repeatedly because what is common at one developmental stage may not be common at another (Friedrich et al. 1998).

Between birth and 5 or 6 years of age, children can experience sexual responses such as erections, lubrication, and pelvic thrusting; however, these behaviours and responses are

not necessarily a conscious attempt to achieve orgasm, as would be the case for adults (Johnson, 1993a; Rutter, 1971). Gil (1993a) reported that children from birth to 4 years of age engage in self-stimulation and self-exploration, but also have limited peer contact (e.g. poking others' bodies, showing genitals). These self-focused sexual behaviours in the younger age group are not surprising given the limited peer contact at these ages. Based on maternal report, more sexual behaviours were reported for children aged 2 to 5, with steady decreases after that age point (Friedrich, et al., 1998). However, with children leaving the regular care of their mothers and entering the school system, it is possible that the decrease in maternal reported child sexual behaviour is a function of less time spent with the child.

Around ages 5 to 7, the sexual behaviour of children reportedly shifts from self to other. During these ages, children tend to have more peer contact as a result of entering the school system; therefore, they engage in more sexual behaviours with others. Children's behaviours at this age tend to involve more focused behaviours such as kissing and hand holding; they also may become curious about the human body, start to require privacy, and indicate shyness regarding sexuality (Gil, 1993a). However, Gil (1993a) notes that, even though young school-aged children are more engaged in experimental interactions with others, they still tend to remain somewhat subdued or repressed in their sexual contact with peers (Gil, 1993a).

By the time children reach ages 7 to 12, they are generally at a stage of experimental interactions (Gil, 1993a). At this age, peer sexualized contact can increase, children may touch each other over and under the clothing, and sexual behaviours may include intercourse (Gil, 1993a), although sexual intercourse under 12 years is not overly common (Haugaard & Tilly, 1988).

Sexual exploration and contact between children is a normal part of child development and children tend to move through clear stages of sexual behaviour as they age. Overall, a number of sexual behaviours are very common at varying ages and the most frequently reported behaviours include self-stimulation, exhibitionism, and behaviours related to personal boundaries (Friedrich et al., 1998). In addition, sexual interactions tend to progress from self-exploration to physical contact with others. Age appropriate sexual behaviours with others have been described as fairly inhibited explorations and normative sexual behaviours are mutual and playful.

Problematic Childhood Sexual Behaviour

While exploring age appropriate sexual behaviours, researchers found that a small number of children engage in less common sexual behaviours. Given the infrequency of these sexual behaviours and the small number of children engaging in them, certain sexual behaviours would be considered uncommon and inappropriate in the general child population. Children identified as engaging in problematic sexual behaviour may be involved in either developmentally inappropriate (e.g. penetration, oral-genital contact, etc.) or developmentally appropriate but contextually inappropriate (e.g. public self-stimulation, etc.) sexual behaviours. These uncommon sexual behaviours also include sexual acts that, if engaged in over 12 years of age, could be considered a chargeable offence under Canadian law. Although a number of the offence related sexual behaviours are based on age criteria (e.g. a charge of Sexual Interference stipulates that the victim must be under 14, see Brayton, 2000), many of these can be helpful in understanding problematic sexual behaviours in child populations. The similarity between chargeable sexual behaviours and the behaviours being

engaged in by some children assists in emphasizing that these childhood sexual behaviours should not be overlooked and that their impact should not be underestimated.

In a study of childhood sexual behaviours, certain sexual behaviours were reported with little frequency across all childhood age groups (Friedrich et al., 1998). For example, Friedrich et al., (1998) reported that very few children ask others to engage in sexual acts, insert objects in their rectum/vagina, attempt intercourse, touch the genitals of an animal, engage in oral-genital contact, undress other children, rub their body against others, and pretend that toys are having sex. As these sexual acts are statistically uncommon for children under 12 years of age, they are considered unusual and are viewed with concern. There is less statistical evidence to indicate how often children utilize specific strategies to gain the compliance of another in sexual behaviours. For example, it is not clear how many children “trick” other children into exposing themselves or how many children “bribe” other children into allowing themselves to be touched sexually. However, there is some consensus regarding which methods are inappropriate when used by a child to initiate or engage in sexual contact with another and many are considered unacceptable regardless of the age of the executor. Often, the issue of consent or gaining compliance is involved in rendering the child’s behaviours as inappropriate. As within older age groups, any child engaging another in sexual behaviours without his or her consent is considered to be inappropriate or abusive (Cunningham & MacFarlane, 1991; Gil, 1993a; Pithers et al., 1993; Ryan & Blum, 1994).

Consent is considered lacking when a victim has not stated to the child that he/she is willing to participate in the sexual behaviour. There are numerous methods that can be employed to ensure or obtain a victim’s participation in sexual behaviour without actually obtaining his/her consent. There is a lack of consent when the victim is coerced, tricked, or

bribed into engaging in sexual behaviours, and such forms of gaining compliance are considered inappropriate or abusive (Cunningham & McFarlane, 1991; Gil, 1993a). For example, one child may have coerced another into sexual contact by telling him/her, “This is what friends do”, bribed another with candy in exchange for sexual contact, or tricked another into being touched by tickling the victim and “accidentally” touching him/her during the game. In each of these scenarios, the victim of the sexual act did not freely consent to being touched; however, the method used to “touch” the victim may not have been obvious to others.

In a more obvious manner, a lack of consent exists when the use of threat, force, or violence accompanies sexual behaviours. Crisci and Brown (1997) have indicated that normal sexual play involves “being silly” and “having fun”; however, any coercive or bullying behaviour used in the commission of a sexual behaviour is viewed as abusive. Unlike bribery or trickery, overt threats and the use of force or harm to engage another in sexual behaviour can be easily identified. For example, Johnson (1993c) described a scenario where one young boy was held down by multiple children in order for them to perform sexual acts on him, resulting in the victim requiring medical attention (p. 75). Children may also use more covert forms of force, threat, or violence to obtain a victim’s compliance. For example, a child may threaten to harm a pet or younger sibling of the intended victim, in order to gain their compliance. Regardless of whether the child used overt or covert methods, any use of force, threat, or violence to engage another in sexual behaviours is considered inappropriate and abusive.

Sexual behaviours are viewed with concern when they involve chronological and developmental differences, size differences, and/or status differences between the children

involved in the sexual behaviours (Gil, 1993a; Pithers et al., 1993). With respect to ages between children involved in sexual behaviours, a three-year or greater age difference is generally considered an age gap that is worthy of investigation for appropriateness (Gil, 1999a). However, Gil also warns that this age criterion should not be the only determinant of whether sexual behaviour was inappropriate. Specifically, children can sexually harm another child of a similar age, and sexual behaviour between children of varying ages may appear harmful but could have been misinterpreted by an adult.

It is generally agreed that there is cause for concern when children engaging in sexual behaviours are similar in age but at differing developmental stages, such as when one child is developmentally delayed or considerably immature (Cunningham & McFarlane, 1991; Gil, 1993a). A child with a developmental delay may not be capable of consenting to, or understanding, the sexual behaviours; hence, children of the same age may be at very different stage of sexual development. A number of researchers have noted that size and status differences between children are also of concern when they are involved in sexual behaviour (Cunningham & McFarlane, 1991; Gil, 1993a; Pithers et al., 1993). Although two children may be the same age, if one child is much larger than the other, there may be an issue of intimidation or force to gain compliance. Similarly when one child is placed in charge of another, such as in the case of babysitting or as a result of birth order, sexual contact may be engaged in without consent simply because the lower status child believes that he/she cannot refuse (Gil, 1993a).

In general, when sexual contact with another does not involve consent of both parties, regardless of the means used to avoid gaining true consent, the sexual behaviour is considered inappropriate. Although the inappropriate aspects of a child's sexual behaviours

may be clearly noted, there is a need to assess each case individually in order to understand the context and intricacies of the behaviours; it is important that adults do not judge the appropriateness of the sexual behaviours without an investigation of the details (Gil, 1993a).

Differentiating children who repeat from those who do not repeat sexual behaviour

Researchers have shown that children identified as engaging in sexually inappropriate behaviours could be involved in a variety of sexual behaviours including voyeurism, exhibitionism, stalking, bestiality, molestation, and incest (Gray, Busconi, Houchens, & Pithers, 1997; McClellan et al., 1996; Wieckowski et al., 1998). Thus, children who have gained the attention of professionals are, in some cases, engaging in serious, severe, and harmful sexual acts. Much of what is known about the problematic sexual behaviours of children has been based on descriptive studies. Little attention has been paid to whether involvement in specific or various problematic sexual behaviours is related to the risk of a child's sexual behaviours continuing, regardless of adult intervention.

The ultimate goal of treatment for children identified as exhibiting problematic sexual behaviours is to prevent the continuation of the behaviour. For some children, simply being told by an adult to stop the sexual behaviours is enough to terminate the behaviours; however, for other children, problematic sexual behaviours are repeatedly engaged in, regardless of adult intervention. Incidence rates of children who repeatedly engage in problematic sexual behaviours over time are unknown; however, a number of investigations have indicated that this is a problem worthy of attention. To date, there is no evidence to suggest why, once intervention has occurred, some children repeatedly engage in problematic sexual behaviours while others do not.

Studies of sexually offending adolescents have indicated that many engaged in inappropriate sexual behaviours as children (Burton, 2000; Lane, 1991; Wieckowski et al., 1998), and these early behaviours included both contact (e.g. fondling, fellatio, penile-vaginal penetration) and noncontact (e.g. voyeurism, exhibitionism) sexual behaviours. For example, in a sample of 30 sexually offending adolescents between 12 and 14 years of age at apprehension, 87% admitted noncontact sexual behaviours at just over 9 years of age on average, and the majority went on to commit contact sexual behaviours just under 11 years of age (Wieckowski et al., 1998). In a general sample of 471 adjudicated youth aged 12 to 22 ($M = 16.9$), 263 admitted sexual offences and, of those, 43% reported sexual behaviour problems as children (Burton, 2000). The results of these studies demonstrate that a number of sexually offending adolescents recalled engaging in inappropriate sexual behaviours during childhood; thus, for some children, early problematic sexual behaviours continue into adolescence. On the other hand, it is not known whether these adolescents were ever reprimanded for their problematic sexual behaviours as children or whether they continued the sexual behaviours despite adult intervention. Moreover, there is no evidence to indicate whether specific childhood factors differentiate those children who do not repeatedly engage in problematic sexual behaviours from those who repeat their sexual behaviours over time.

A prospective study following children reprimanded for their first problematic sexual behaviour and then followed over time would elucidate differences between children who repeatedly engage in sexual behaviours regardless of adult intervention and children who do not repeat once an adult has intervened. However, given that this design would be both costly and time consuming, as well as the fact that so little research has been conducted with this population, it would be prudent to first ascertain those factors that may be useful in future

longitudinal investigations. Recently, a method to compare individuals who have and have not repeated sexual offending behaviours has been used in adult and adolescent populations. By comparing those who were reprimanded (e.g. caught) and repeated (recidivists) to those who had been reprimanded but did not repeat (nonrecidivists) sexual offending behaviours, some insight into differential factors has been found for both adult (Thornton, 2002) and adolescent (Kenny, Keogh, & Seidler, 2001; Worling, 2004) sexual offending populations. For example, Worling (2004) compared two groups of sexually offending adolescents: one group had been reprimanded for the sexual behaviours in the past and had repeated the behaviours, and the other group had no known history of being reprimanded and repeating. The two groups differed in the overall presence of risk factors; those adolescents who repeated the sexual behaviours had a higher overall Total score (an aggregate of all individual risk factors that were present) compared to those without a history of reprimands (Worling, 2004). Worling points out that this method of comparing repeaters (repeated sexual behaviours following adult reprimand) and nonrepeaters (not previously reprimanded and not repeated following reprimand) is not an investigation of those who committed their first offence and those with multiple offences. The majority of adolescents in both groups had committed multiple sexual offences against at least one victim (71% & 81%; Worling, 2004). Therefore, this method, instead, is a comparison of those with and without a history of prior reprimands for problematic sexual behaviours.

A similar design as that utilized with adolescent populations could be used with a sample of children who have been identified for problematic sexual behaviours. In such a design, all children will have been identified and reprimanded by an adult for the behaviours and all will have been brought to the attention of professionals. However, the children would

be expected to differ based on whether 1) they were known to have previously been reprimanded for an earlier problematic sexual behaviour or whether 2) there was no known history of prior reprimands. A reprimand must be given by an adult to ensure that the child is aware his or her behaviour is not acceptable and must not be repeated.

Adult reprimands can include a range of sanctions such as a school suspension, loss of privileges, or simply being told by an adult that the behaviours must stop. By investigating differences between children with and without a history of reprimands, it would be possible to determine whether the groups differ on the presence of specific sexual behaviours or other risk factors. Evidence of differences between these two groups of children could indicate children who are more likely to require additional intervention to reduce their risk of repeated problematic sexual behaviours.

Risk Assessment Protocols

In order to differentiate children who repeat and do not repeat problematic sexual behaviours, it is necessary to determine which factors may be important to investigate in these groups. Without knowledge of the factors that differentiate children who repeat their sexual behaviours from those who do not, speculation and anecdotal evidence may lead to unnecessary treatment or the decision that treatment is not warranted. Therefore, to allow for evidence-based intervention decisions, it is important that research efforts focus on identifying the characteristics of children who disregarded the adult reprimands they received for their problematic sexual behaviours.

A number of methods have been developed in an attempt to determine which children are at risk of engaging in or continuing a variety of antisocial or inappropriate behaviours.

Risk assessment protocols have been developed to assess children at risk for a variety of behaviours of which sexual behaviour is just one (see Augimeri et al., 2000; Gilgun, 2001; Levene et al., 2000). Other risk assessment protocols have been developed in an attempt to identify risk factors specifically for children who have been identified for problematic sexual behaviours (see Rich, 2002). These risk assessment protocols follow an empirically guided format in which the inclusion of each variable has been supported by empirical findings, professional opinion, or both. Future investigations of these tools will indicate their utility and predictive ability. At present, however, as a result of limited empirical support, we rely primarily on clinical knowledge and speculation regarding risk in young populations.

The inclusion of both static and dynamic factors is important when attempting to identify factors that differentiate children who have and have not repeated problematic sexual behaviour following a reprimand. Static factors are those that are based on history and cannot be changed. In adult and adolescent samples, static factors have demonstrated utility in differentiating recidivists from nonrecidivists (Harris, Rice, Quinsey, Lalumiere, Boer, et al, 2003; Worling & Curwen, 2000). Therefore, it is possible that static factors are also important to identifying children with and without a history of being reprimanded and repeating sexual behaviours. Although static factors may be important, these factors do not account for the developmental, behavioural, emotional, and psychological changes that take place during childhood.

Dynamic factors, on the other hand, are those that can change over time. As such, the inclusion of dynamic factors could assist in guiding treatment planning. Dynamic factors may also permit some flexibility in our level of concern when information about the child changes, should that information be important to the child's potential for repeated

problematic sexual behaviours. However, to date, empirical evidence has not been provided to indicate which dynamic factors may be important in differentiating children who repeat their problematic sexual behaviours regardless of being reprimanded by an adult from those children who stop.

With no empirically validated factors to assist in understanding why some children repeat their problematic sexual behaviours while others do not, assessors must rely on clinical predictions when deciding which child requires intervention. Although clinical predictions are usually based on accumulated knowledge and experience, there is evidence to indicate that unstructured clinical prediction is only slightly better than chance (Hanson & Bussière, 1998). Therefore, an investigation of the factors that differentiate children who repeated their problematic sexual behaviours following a reprimand from those without this history would assist clinicians to better determine which child likely requires clinical intervention and may assist in identifying the level of intensity required in treatment.

Summary

Researchers have clearly outlined common sexual behaviours at various ages and they have also found that certain sexual behaviours are uncommon during childhood. Problematic sexual behaviours include sexual contact that could be considered criminal if the child was of a “chargeable” age or sexual behaviours that are developmentally or contextually inappropriate. Some of the uncommon sexual behaviours engaged in by certain children could have serious emotional and physical consequences to both the child instigating the sexual behaviour and his/her victims. Moreover, regardless of intervention, some children will continually engage in problematic sexual behaviours. Research has

demonstrated that many sexually offending adolescents commenced their problematic sexual behaviours as children, indicating the long-term nature of sexual behaviours for some children. However, there is a lack of empirical evidence to indicate whether specific characteristics are more prominent among children who repeated their problematic sexual behaviours versus those children who did not have a history of reprimands and repeated problematic sexual behaviours.

An investigation into the factors identified in the literature as related to repeated problematic sexual behaviour by children would indicate whether these hypothesized characteristics do actually differentiate children who do and do not repeat the sexual behaviour. Studies with adults and adolescents who have been caught and reprimanded but who repeated their problematic sexual behaviours have demonstrated differences between these individuals and those who did not repeat. Therefore, having knowledge of the factors that differ between children who repeated their problematic sexual behaviours following an adult reprimand and those without this history could assist service providers to identify children who may benefit from additional supports and interventions.

Current Study

The goal of the current study was to determine whether specific factors could differentiate children who repeated their problematic sexual behaviours from children without a history of problematic sexual behaviours following an adult reprimand. The study was carried out in three parts: determining which factors to investigate, evaluating the reliability and validity of the factors, and examining the discriminative ability of the factors.

Part 1: Determining potential factors for inclusion in main study

The goal of the first part of the study was to determine which factors were reported in the literature as related to repeated problematic sexual behaviours. A review of the literature occurred in 5 areas and included text specific to the following: children known to have continued their problematic sexual behaviours, children believed likely to continue their problematic sexual behaviours, treatment goals for children identified as having sexual behaviour problems, assessment tools designed to assess children at risk for general antisocial behaviours and sexual behaviours, and research specific to sexually offending adolescents who commenced their problematic sexual behaviours during childhood. The criteria for inclusion in the final list of factors was based on any mention that a specific behaviour or characteristic *could* contribute to a child repeatedly engaging in problematic sexual behaviours. This nonrigorous methodology was necessary due to the lack of empirical evidence on factors that differentiate children who repeat from those who do not repeat their problematic sexual behaviours.

The review of the literature revealed 31 potential factors (see Table 1) that were suggested as important to understanding why some children repeat problematic sexual behaviours. As can be seen in Table 1, 12 factors are static and the remaining 19 are dynamic. The dynamic factors were often selected based on the goals of treatment programs that work with these children in an attempt to assist them in stopping their problematic sexual behaviours.

Part II: Finalizing factors for inclusion in main study

The second part of the study was focused on establishing reliable factors for investigation in the main study. The first stage of this part of the study was to define each of the factors and outline examples in order to highlight the types of behaviours that qualify for inclusion in the factor. Although 31 factors were identified in the literature (see Part I: Determining factors for inclusion in the main study), upon defining each of the variables, it became apparent that one factor related to the child's family environment (Table 1: # 28 - Residing in a negative, unstable, and sexualized family environment) was, in essence, tapping three different family issues. Therefore, this family environment factor was split into three separate factors in the final list (see Table 2, factors under 5.0): Poor family sexual boundaries, Negative home environment, and Family instability.

To ensure that the descriptors accurately defined the factor under investigation, the final list of factors and their descriptive information was distributed to 7 individuals with extensive experience assessing and treating children with sexual behaviour problems. Of the 6 who responded, two suggested slight changes or additions to the descriptors of two of the factors. One respondent also suggested including sexual contact with an animal as an additional behaviour that might aid in identifying children with problematic sexual behaviours.

The amended factors and their descriptors were pilot tested with a clinical sample to ensure face validity. Four assessors, including the researcher, had conducted sexual behaviour specific assessments with 10 children identified through a metropolitan school board. In pairs, the assessors had provided an assessment that included interviews and questionnaire completion with the identified child, the child's parent or guardian, and the

child's teacher. Also, where possible, school reports and documented accounts of the sexual behaviour and any other behaviour were also collected. The four assessors reviewed and discussed each factor as it related to a specific child recently assessed; the assessors discussed the relevance of the factor names, the factor descriptions, as well as the ease of determining the factors' applicability to each child. Following these discussions, some additional examples were included to increase ease and accuracy in coding the factors. The final list of factors, along with descriptive and coding categories, is presented in Table 2.

Interrater agreement

Dual ratings were provided for 10 children during pilot testing and two additional children from the main study. Although it was requested that two assessors code the factors for 20% of children in the main study, dual coding was provided for only two children due to a number of assessments being conducted in isolation and a lack of participant compliance. Following a discussion of the information and details collected as part of the assessment, the assessors were asked to independently code whether each factor was present (Yes), partially/possibly present (PP), or not present (No) for the child (see Table 2 for coding categories). The assessors then returned the completed factors to the researcher without discussing the coding with the other assessor. The dual ratings of these 12 children were then examined to establish interrater agreement.

Overall, 7 assessors provided dual coding for 12 children. There was no identified order or hierarchy between coders; in other words, one coder was not considered to be the first or second coder. There was also no consistency between pairs of assessors; therefore, each child had a different coder, depending on who was involved in his or her assessment.

Finally, there was no consistency in the role of each pair of assessors. For some children, the pair of coders was the individual assessor and the psychometrist but for others, the coders were the individual assessor and the clinical supervisor. The intraclass correlation coefficient (ICC) was used to investigate interrater agreement. ICC is recommended when there is no order or consistency to the pair of coders (Shrout & Fleiss, 1979). ICCs between .40 and .60 are considered fair, .61 to .80 are considered moderate, and .81 to 1.0 are substantial (Shrout, 1998). Poor interrater agreement suggests a measure that is likely not valid; however, a small sample size can impact power to detect true reliability (Shrout, 1998). Factors that attained an ICC of .61 or higher were retained for investigation in the main study (see Table 3). As can be seen in Table 3, 27 factors achieved acceptable ICCs. All of the factors that did *not* reach a moderate level of agreement between the coders were dynamic (i.e., current aggressive thoughts/fantasies, current power-based beliefs). This is not surprising as compared to static factors, such as age or gender, dynamic factors require a judgment by the coder regarding the presence or absence of the factor. Reasons for poor interrater agreement on these factors could include a lack of information, differing information between coders, or simply differing opinions on the presence of the factor. As indicated, there was an attempt to obtain interrater agreement for the main study; however, a number of participants noted that their assessments were conducted independently and, therefore, dual coding could not be obtained. This fact highlights the potential isolation of those working with this population.

Part III: Main Study

The goal of the main study was to determine whether the 27 factors that attained good reliability during preliminary investigation differentiated children who repeated their

problematic sexual behaviours from children who did not repeat their sexual behaviours following an adult reprimand. To investigate the utility of the factors in differentiating these groups of children, clinical assessors coded the presence of the factors on children they had recently assessed specifically for problematic sexual behaviours.

Chapter 2

Method

Ethical Approval

Ethical approval was attained through the University of Toronto's Research Ethics Review Board. Ethical approval was granted for clinicians to provide anonymous information on children recently assessed in their clinical practices. As information was anonymous, guardian consent to release the information to the researcher was not required for the study and clinicians signed informed consent to participate (see Appendix A).

Participants

Participants were clinical assessors (clinicians) who conduct assessments of children identified for problematic sexual behaviours. All participants were employed in social service agencies or in private practice. Participants worked in Canada, the United States, and Australia, and all participated voluntarily. A total of 13 individuals from 7 agencies and 2 private practices provided assessment information on 65 children. The information was incomplete for one child and two children had turned 14 by the time they were assessed, even though their problematic sexual behaviours had occurred under age 12. Given the two-year age gap between the older children in the sample and these adolescents, the two 14 year olds were not retained in the final analyses. Therefore, the total sample of children was 62. Clinicians had between 1.5 and 20 years ($M = 8.87$, $SD = 5.8$) experience providing sexual behaviour specific assessments. The clinicians reported having assessed between 2 and 300 ($M = 49.92$, $SD = 80.1$) children and having provided treatment to between 5 and 50 ($M =$

26.76, $SD = 18.34$) children with sexual behaviour problems. Twelve of the thirteen clinicians were female.

Inclusion/Exclusion Criteria

Potential participants were informed that the child for whom they were completing the data collection forms must have been referred specifically for problematic sexual behaviours and must have met one of the criteria outlined on an Inclusion/Exclusion criteria form (see Appendix B). It was required that the child be above Borderline intelligence and the child's sexual behaviours must have met one of the following criteria: a chronological (3-year) age difference between the child and his/her victim; developmental age difference between the child and his/her victim with the victim being of lower intelligence; size difference with the child being of greater stature than the victim; status difference with the child being in some position of authority over victim (e.g., babysitter, older sibling); or the child's sexual behaviours incorporated elements of dominance, threats, coercion, or force against the victim to gain compliance or ensure secrecy. Children who were engaging in developmentally inappropriate sexual behaviours as outlined by Gil (1993a) were also included, regardless of whether they had an identified victim (e.g., consensual anal penetration by a 6-year old). As recommended by one of the reviewers, sexual contact with an animal was also included as problematic sexual behaviour.

Measures

Demographic information: Demographic data were collected to describe the children under investigation.

Child gender: The child's gender was indicated.

Child age: The child's age at the time of assessment was provided in months.

Ethnic background: Participants coded the ethnic background of the child by selecting from a number of options provided: Caucasian, African, Asian, Hispanic, or by indicating the ethnicity.

Current Residence: A list of possible current residences for the child was provided: parental home, foster, relatives, group home, or other. If the options did not accurately identify the child's residence, the participant could provide the current residence.

Family involved in assessment: The participant was asked to indicate whether the child's family or significant others were involved in the assessment.

Primary guardians: The participant was asked to indicate who raised the child for most of his/her life and options included: biological parents, biological father and step mother, biological mother and step father, foster parents, relatives, grandparent(s), or the guardians' relationship could be added.

Education: The participant was asked to indicate whether the child was receiving any special education or whether he/she had a diagnosed learning disability.

Puberty: Participants indicated whether the child had reached puberty, and the following options were provided: yes, no, or unknown.

Age of first and last sexual behaviour: The age of first known problematic sexual behaviour in months and the age of last known problematic sexual behaviour in months were requested.

Risk Factors - The factors were selected and defined by the author specifically for this study. Following investigation (see Part I: Determining factors for inclusion in main study and Part

II: Finalizing factors for use in main study) of the factors, 27 factors remained to be further investigated in the main study. The final 27 factors included 12 static factors primarily related to characteristics of the sexual behaviours and details of victimization and 15 potentially dynamic factors based on the child's recent and current functioning (i.e., current-to-past 6 months). Each of the assessment factors contained three coding options: *No*, *Possibly/partially present*, or *Yes* (see Table 2 for coding scheme). A similar coding scheme has been utilized in risk assessment protocols with sexually offending adolescents (Worling & Curwen, 2001) and to assess a child's risk for involvement in more general antisocial behaviours (Augimeri, Koegl, Webster, & Levene, 2001; Gilgun, 2001; Levene, Augimeri, Pepler, Walsh, Webster et al., 2001). The factors were classified into six categories: Sexual Behaviours Characteristics; Victimization; Personal Characteristics; Interpersonal Characteristics; Family Characteristics; and Intervention. The factors are briefly outlined below and the reader is referred to Table 2 for complete descriptions and examples for coding the presence or absence of each factor.

1.0 Sexual Behaviours Characteristics

Use of Force/Threat/Violence: During any sexual behaviour or in an attempt to keep any of the sexual behaviours a secret, the child used methods of force, threat, or violence.

Coercion/Manipulation: The child has ever used nonviolent means, such as bribes or tricks, to obtain cooperation during sexual behaviours.

Pattern of Sexual Behaviours: The child has ever engaged in a pattern of sexual behaviours. It is important to note that the child *must* have either had multiple victims, have engaged in multiple behaviours against one victim, or have repeatedly engaged in age

inappropriate sexual behaviours regardless of whether the other individual consented. If the child engaged in any of these behaviours on one occasion only, even if he/she engaged in two of the behaviours on one occasion only, the factor would be considered *not* present.

Penetration: The child has ever penetrated or attempted to penetrate another individual. Penetration can occur using any object or body part inserted into the mouth, rectum, or vagina of another.

Multiple Types of Sexual Behaviours: The child has ever engaged in more than one type of sexual act.

Sexual Thoughts/Fantasies: Over the past 6 months, the child has had inappropriate sexual thoughts or fantasies. Inappropriate thoughts or fantasies are those considered to have “adult” themes or abusive content such as aggressive or manipulative themes.

Distorted Sexual Beliefs: The child does not have appropriate understanding of sexual matters. Distorted sexual beliefs could include such issues as sexual fears, anxiety related to sexual issues, and justification for sexual behaviours.

Lacks Understanding of Consequences of Sexual Behaviours: The child currently does not understand the consequences of sexual behaviours to self and/or others or the child is not concerned with the consequences of his/her sexual behaviours.

Sophisticated Sexual Behaviours: The child has ever employed sophisticated, well-planned, or strategic methods to engage in sexual behaviours.

Denial: The child currently denies any involvement in sexual behaviours and/or any problem with sexual behaviours.

Victim Selection based on Vulnerability: The child has ever chosen a victim because of specific characteristics which made them appear vulnerable.

2.0 Victimization

Victim of Sexual Abuse: The child is known to be a victim of sexual abuse. A history of sexual abuse was coded dichotomously as “yes” or “no”.

Arousal during own Sexual Victimization: The child experienced sexual arousal during his or her own sexual abuse.

Trauma from own Sexual Victimization: The child is the victim of sexual abuse *and* currently experiences negative emotional impact from this abuse.

Arousal to memories of own Sexual Victimization: The child currently experiences sexual arousal to thoughts or discussions of his or her own sexual victimization experiences.

Multiple Sexual Offenders: More than one person has ever sexually abused the child.

Impact of Nonsexual Victimization: The child is the victim of any form of nonsexual abuse *and* currently experiences negative emotional impact from this abuse.

Witnessed Violence: The child has witnessed, been exposed to, or been aware of violence in the home or in the community.

3.0 Interpersonal Characteristics

Social Skill Deficits: Over the past 6 months, the child has experienced multiple social-skill problems or difficulties.

History of Nonsexual Aggression: Over the past 6 months, the child has been aggressive in a nonsexual manner.

4.0 Personal Characteristics

Impulsivity: Over the past 6 months, the child has been impulsive or demonstrated poor self-control.

Poor Self-Esteem: Over the past 6 months, the child has demonstrated low-self esteem.

5.0 Family Environment

Poor Family Sexual Boundaries/Sexualized Family Environment: The child has ever resided in a home where the sexual boundaries would be considered inappropriate.

Negative Home Environment: Over the past 6 months, the child's home has had a negative atmosphere, which could be demonstrated through such circumstances as unresolved abuse, stress, or tension.

Family Instability: Over the past 6 months, indicators of family instability were present in the child's home. Such things could indicate instability as a lack of parenting consistency, frequent disruptions such as a parent leaving and returning, or Child Protection involvement.

Parental/ Guardian Rejection: Rejecting behaviours have been directed at the child by a parent/guardian or the child has felt rejected by a parent/guardian.

6.0 Intervention

Treatment/Intervention: The child has not responded to sexual behaviour specific intervention to date or will not have the opportunity to attend sexual behaviour specific treatment.

Total Score: Factors were scored by assigning a score based on the presence of the factor: a score of 0 was assigned when a factor was coded as *No*, a score of 1 when *partially/possibly present (PP)* was coded, and a score of 2 when the factor was coded as *Yes*. The Total Score was simply a sum of each assigned score.

Repeated/Nonrepeated group membership: Two groups were formed based on whether or not the child had ever been reprimanded by an adult and then repeated the sexual behaviours. All children were caught at least once for their sexual behaviours and all received some form of reprimand for their sexual behaviours, as indicated by their attendance for a sexual behaviour assessment with one of the study's participants. Participants were asked to indicate how the child was reprimanded for the sexual behaviour that resulted in their referral for the current assessment. Participants were also asked to indicate whether any other reprimands had occurred prior to the most recent one.

Participants were informed that reprimands must have been given by an adult and must have been specific to the sexual behaviour. Furthermore, the reprimand must have been done in such a way as to indicate to the child that his/her sexual behaviour was unacceptable and must stop. A number of options were provided to suggest possible reprimands, which included the following: school suspension, referral to agency, police charge, conviction, police warning, parental warning, school warning, child protection warning, or other adult warning with the option to identify the adult. Participants were not aware that comparison groups would be established based on the details of reprimands.

Nonrepeated Group: If the child was reprimanded for inappropriate sexual behaviours on one occasion *only* and the child was *not* known to have repeated the sexual behaviours following that reprimand, the child was categorized as “nonrepeated”. This is not the same as a child who had engaged in a sexual behaviour on one occasion only; this is simply a child who, once caught, did not repeat the behaviour again and who did not have a prior history of being reprimanded. In fact, many of these children had more than one victim ($M = 6.01$, $SD = 6.48$). Information on multiple victims generally came to light once the child was caught and the behaviours were further investigated. For example, during pilot testing, multiple children had been caught by a teacher who witnessed inappropriate sexual behaviours. Upon further investigation, these children were found to have multiple victims who had never disclosed and had not been previously identified.

Repeated Group: If the child had been reprimanded for inappropriate sexual behaviours on *more* than one occasion, the child was placed in the “repeated” group. Multiple reprimands indicated the repeated nature of the sexual behaviours, regardless of being told to stop by an adult. Children in this group were known to have repeated their sexual behaviours following between 1 and 5 ($M = 2.43$, $SD = 1.17$) reprimands and they had an average of 6.41 ($SD = 6.19$) victims. In fact, 43% of children in this group had been reprimanded between 3 and 5 times and, regardless of the reprimands, continued to engage in the sexual behaviours.

Procedure & Analytic Plan

Factor coding

The current study used information provided by clinicians about children they had assessed as a result of their sexual behaviours. Once an assessment was finished, the clinician completed the demographic information and coded the 27 factors. To code the factors, the participant had to choose between three possible codes: definitely present (*Yes*), Partially/possibly present (*PP*), or not present (*No*) (see Table 2 for coding scheme). For each factor, the participants were instructed to read the description and examples listed for each coding option and then select the coding option that was relevant to the child. If information collected through the assessment indicated that the specific factor was definitely true for the child, the *Yes* option was indicated. When the factor was potentially true or was true but to a lesser extent than was outlined in the descriptors under the *Yes* categorization, the code of *Partially/possibly present* was indicated: this coding could have occurred under circumstances where limited details of the factor were provided, i.e. other professionals had alluded to a problem, or the child/family suggested that there was a problem but did not indicate any details. Otherwise, if all information collected during the assessment indicated that the child had not experienced any of the details as outlined in the description of the factor, the factor was coded as *No*. When the information necessary to code the specific factor was not collected or was unknown, all coding options for that factor were left blank. Responses were based on information collected during the assessment, which could include details provided from sources external to the clinician (e.g. other agency reports, school reports, etc.). Although the author was available to respond to questions, no formal training occurred.

Comparing groups on demographic data

To ensure that the groups were similar on a number of demographic variables, the groups (repeated and nonrepeated) were compared using χ^2 for categorical data and *t* tests for continuous data. Demographic information between the groups was examined to describe the population under study and to ensure that extraneous variables were not related to group membership.

Comparing groups on factors

Cramer's *V*, a chi-square based measure of association for tables bigger than 2x2 (Walsh, 1990), was used to investigate the relationship between group membership (repeated and nonrepeated) and the presence of each factor (*Yes, Partially/possibly, No*). Where a significant association was found, Receiver-operator characteristic (ROC) curves were used to estimate overall sensitivity (percentage of true-positive cases) and specificity (percentage of false-positive cases) of that factor in identifying group membership. The area under the ROC curve (AUC) was used to investigate predictive accuracy of group membership based on the presence or absence of each factor. ROC is a measure of predictive accuracy that has the advantage of being independent of base rates (Harris et al., 2003). Therefore, even if very few children were coded as present (*Yes*) on a factor, the AUC would still provide predictive accuracy and estimate the true- and false-positive trade off for identifying group membership based on that factor. The AUC can range between 0.0 to 1.0; an AUC = .50 indicates 50% or chance and 1.0 indicates perfect prediction (Kraemer et al., 2003). Interpretation guidelines for the ROC curve values are as follows: an AUC between .50 and .70 has low accuracy, .70 to .90 indicates moderate accuracy, and >.90 is designated as high accuracy (Swets, 1988).

In this study, an AUC of .84 would indicate that, 84% of the time, a randomly selected child from the repeated group would have been coded higher (i.e., *Yes*) on the factor than a randomly selected child from the nonrepeated group. Analyse-it (2006) was used to compute and compare all AUCs. To determine whether individual factors or a combination of factors (Total Score) most accurately identified group membership, each individual factor with a significant AUC was compared to the AUC for the Total Score. When the same sample is used to conduct two separate ROCs, the AUCs are compared using the correlation between the AUCs and the standard error of the difference in areas of the AUC (Hanley & McNeil, 1983).

Chapter 3

Results

Clinical ratings were provided for 9 girls and 53 boys. At the time of the assessment, the children ranged in age from 63 to 147 months ($M = 121.77$, $SD = 18.94$), with similar ages for males (121.3 , $SD = 18.9$) and females (127.11 , $SD = 19.1$), $t = -.91$ (2, 60), $p > .05$. There were 2 male children who had turned 12 during the course of their assessment; however, neither was known to have engaged in any problematic sexual behaviour since turning 12 and, therefore, were retained. Most children were not known to have reached puberty at the time of assessment ($n = 48$, 77.4%), and this information was not known for 3 (4.8%), children. There were no significant differences between the genders for pubertal status (77.4% males and 77.8% females not reaching puberty), $\chi^2 = (2, N = 62) = .63$, $p > .05$. Males and females were combined to investigate clinical coding trends.

For clarity, all factor names will be presented in italics and the reader is referred to Table 2 for description and examples of each factor and criteria for coding the presence of a factor.

Factor Coding

The percentage of children coded in each of the 3-coding options as well as the percentage of children with missing information is presented for all factors in Table 4. Of those variables with missing data ($n=8$), 50% were dynamic. Along with not coding a factor, coding the *Possibly/partially present* option suggests some uncertainty as to the presence of the factor (Worling, 2004). On average, a coding of possibly/partially present was provided for 26.6% ($SD=12.39$) of children across the 15 dynamic variables and 20.9% ($SD=14.52$) across the 12 static variables.

As can be seen in Table 4, there was an even split between the percentage of children who were reported to be victims and not victims of sexual abuse. Many children (>50%) were reported to have definitely penetrated or attempted to penetrate at least one victim (*Penetration*), to have social skill difficulties (*Social Skill Deficits*), and to have difficulties expressing and coping with their emotions (*Affective Coping Skill deficit*). Approximately one-quarter or fewer children were described as having used violence towards their victim (*Force/Threat*), to currently have inappropriate sexual thoughts or fantasies (*Sexual Thoughts/Fantasies*), to deny their involvement or problem with sexual behaviours (*Denial*), to have a family member who denies the sexual behaviours (*Family in denial*), or believed unwilling or unable to attend treatment for their sexual behaviours (*No response to treatment/intervention*).

Five children (8%) did not receive a code on the *Sexual Thoughts and Fantasies* factor and 2 (3%) children were not coded on the *Impact of Nonsexual Victimization* factor. Of those assessors who reported that their client was a victim of sexual abuse ($n = 32$), most were able to code whether the child was currently experiencing trauma as a result of that abuse (*Trauma from Own Sexual Abuse*); however, between 6% and 12% of those children who were reported to be sexual abuse victims were not rated for three victimization factors (*Arousal During Sexual Victimization, Multiple Offenders, Arousal to Memories of Own Victimization*). It is important to note that, for those children who received a coding on the *Arousal to Memories of Own Victimization* factor, no child was coded as present (*Yes*) on this factor (56% coded as *possibly/partially* occurring). To retain as many factors as possible for exploration, only the *Arousal to Memories of Own Sexual Victimization* was excluded from

further analyses due to the high percentage of missing data. Therefore, 26 factors remained for further investigation.

Differentiating repeated from nonrepeated children

Comparing groups on demographic data

To describe the groups under investigation, and to make certain that the groups were similar on demographic factors, they were compared on a number of demographic variables that were not tapped through any of the 26 factors (see Table 5 & 6). As the purpose of the study was to identify whether general factors discriminated the two groups, any piece of information that could be used to code a factor was not explored separately. Recall that each factor contained a number of possible behaviours or issues that could account for the factor being present. For example, the gender of the child's victims could be used to code the *Multiple Sexual Behaviours* factor; therefore, the main effects for victim gender as an independent variable were not explored. As can be seen in Table 5, the groups were similar with respect to race, current residential location, whether their family was involved in the assessment, who the child was primarily reared by, and education level. In addition, the reprimand that the child received for the most recent sexual behaviour was also similar between the groups, with most being warned by parents, child protection, or referral to an agency.

Table 6 presents the group comparisons of continuous demographic data. As can be seen, the only difference between the groups was related to age of first problematic sexual behaviour. Further investigation revealed that children in the repeated group started their problematic sexual behaviours younger than the nonrepeated group (72.4 vs. 101.25 months),

$t(2, 53) = 3.59, p < .001$. The repeated group had also engaged in problematic sexual behaviours over a longer period of time ($M = 45.0$ months, $SD = 26.13$) compared to those in the nonrepeated group ($M = 23.89$ months, $SD = 23.80$), $t(2, 53) = 3.13, p < .01$.

Initial group comparison on factors

The relationship between group membership and presence of a factor is presented in Table 7. As can be seen, there were associations between group membership and the presence of 8 factors (*Force/Threat; Pattern of Sexual Behaviours, Multiple Types of Sexual Behaviours; Sexual Thoughts/Fantasies; Victim of Sexual Abuse; Impact of Nonsexual Abuse; History of Nonsexual Aggression; Poor Family Sexual Boundaries*). Two factors had marginal relationships with group membership (*Impulsivity, $p = .052$ and Social Skill Deficits, $p = .08$*). Given the small sample size and the number of analyses conducted, only those factors that resulted in statistically significant group associations ($p < .05$) were retained. Therefore, 8 factors were retained for subsequent analyses.

Exploring potentially confounding variables

As there were only 9 females in the sample, the females were investigated separately from males to explore the coding for females in the repeated and nonrepeated groups. Within the females only, a significant relationship between the *Multiple Types of Sexual Behaviours* factor and group membership was found. All those females in the repeated group had engaged in *Multiple Types of Sexual Behaviours* ($n = 7, 100\%$) compared to only one female (50%) from the nonrepeated group, $V = (2, N = 9) = .66, p = .047$. As no other unique associations between group membership and the presence of factors were demonstrated for females when compared to the full sample, females were retained as part of the sample.

As noted, the repeated group had engaged in problematic sexual behaviours over a longer period of time. To ensure that the presence of factors was related to group membership and not simply the duration of involvement in problematic sexual behaviours, ANCOVAs were conducted with duration of sexual behaviours as the covariate. To derive the duration of the problematic sexual behaviours, the age that the child started their behaviours (in months) was subtracted from their age at assessment in months. Given that the coding scheme (*No*, *PP*, *Yes*) was not continuous, treating them as dependent variables with a normal distribution is problematic; however, as there is no method to analyze covariates in categorical data, this method was used for exploratory purposes only. To treat the categorical coding scheme as continuous, a score was assigned a score based on the presence or absence of the factor (*No* = 0, *PP* = 1, *Yes* = 2) with the presence of the factor being scored higher. The assigned score was used as the dependent variable. As noted, duration of problematic sexual behaviours was the covariate and group membership (repeated/ nonrepeated) was the independent variable. Significant group differences were found for 7 of the factors with the repeated group having higher mean scores. The eighth factor, *Impact of Nonsexual Victimization* approached significance ($F = 2.94$, $p = .09$). Therefore, it is likely that group differences on the factors were not simply a function of the length of time the children had been engaging in the problematic sexual behaviours.

Exploring the coding scheme

An investigation into the coding scheme was conducted based on the presence of the 8 risk factors. To ensure that the 3-point coding scheme was necessary, a 2-point coding scheme (i.e. *Present* or *Not present*) was examined. The *Possibly/partially present* (*PP*)

response was recoded: first into the *Yes* category and then into the *No* category. Recoding resulted in dichotomized factors with the first method indicating that the factor was either definitely present or not (recoding *PP* into the *No* category) and the second resulted in *some* indication that the variable was present or was definitely not a problem (recoding *PP* into the *Yes* category). Regardless of the coding scheme, the groups differed on most factors. However, two factors did not differ and they were the *Sexual Thoughts and Fantasies* when recoded from *PP* to *Yes* and the *Poor Family Sexual Boundaries* factor when recoded from *PP* to *No* (see Table 8). Therefore, regardless of the recoding method, significant group differences were still present on most factors and, as the coding of *PP* was necessary for two factors, the 3-point coding scheme was retained.

Accuracy of factors in identifying group membership

As noted, five children (8%) did not receive a rating on the *Sexual Thoughts and Fantasies* variable and two (3%) children were not coded on the *Impact of Nonsexual Victimization* factor. A code of No (not present) was substituted for missing variables ($n=7$ children in total) for all 8 factors. The AUC for each of the 8 factors is presented in Table 9. To investigate the accuracy of the 8 factors in identifying group memberships, ROCs were calculated. As can be seen, all AUCs ranged between .60 and .75 with a *Pattern of Sexual Behaviours* having the highest predictive accuracy (.75) of the factors.

The next step was to determine whether a combination of the eight factors had better predictive accuracy than any one factor. A Total Score (see Analytic plan) was computed and examined. Item-total correlations indicated that all factors contributed significantly to the Total Score ($p < .01$) and all were above $r = .61$, except *Force, Threat, or Violence*,

Victim of Sexual Abuse, and *Poor Family Sexual Boundaries* (see Table 9). Internal consistency for the 8 factors was $\alpha = .70$ ($n = 55$). The Total Score AUC was .86 (95% CI = .77 - .95, $p < .0001$) suggesting moderate accuracy in predicting group membership. Therefore, based on the Total Score from the 8 factors, 86% of the time, a randomly selected child from the repeated group would have a higher Total Score than a randomly selected child from the nonrepeated group.

The differential predictive accuracy between the Total Score and the 8 individual assessment factors was investigated by comparing the predictive accuracy between AUCs (see Table 9). The Total Score had significantly better predictive accuracy over 7 of the 8 individual factors (all z_{Δ} 's = .17 to .26, all p 's $< .05$) except *Pattern of Sexual Behaviours* ($z_{\Delta} = .11$, $p > .05$) (see Table 9). Given that the *Pattern of Sexual Behaviours* factor had similar predictive accuracy to the eight-factor Total Score, this factor was removed and the AUC for a 7-factor Total Score was examined. The AUC for the seven factors, not including the *Pattern of Sexual Behaviours* factor, was .86 (95% CI = .76 - .95, $p < .0001$). Therefore, there was no difference in predictive accuracy between the Total Score whether or not it included the *Pattern of Sexual Behaviours*.

To investigate the impact of considering a factor to be not present when the data for that factor were missing, the data were reanalyzed for only those children with complete data ($n = 55$). Recall that a score of 0 representing a *Not present* code was substituted for seven children. The Total Score for those with no missing data resulted in the same AUC (.86; 95% CI = .76 - .95, $p < .001$); however, the Total Score for the complete data sample showed superior predictive accuracy over only half (4/8) of the final assessment factors (see Table 9)

(recall that with the substitution of 0 for missing data, the Total Score was superior over 7 of 8 factors).

The purpose of the study was to investigate the factors identified through a literature review as noted to be important in understanding why some children repeat their sexual behaviours. Sexual contact with an animal was not originally identified through the literature; however, this behaviour was subsequently hypothesized by one of the reviewers as possibly important. Therefore, sexual contact with an animal was not included as a factor, but was investigated as a behaviour that could be unique to children who repeat their sexual behaviours and could account for a child being identified with a sexual behaviour problem. No child had *only* ever engaged in sexual contact with an animal and for 5 (8.1%) children, this behaviour was one of those that contributed to their identification. All 5 children who had sexual contact with an animal were in the repeated group and there was a significant relationship between group membership and sexual contact with an animal, $\chi^2 = (1, N = 62) = 5.43, p < .05$.

Chapter 4

Discussion

The current study had two goals; the first objective was to identify factors that were likely important to understanding children who repeated problematic sexual behaviours following an adult reprimand. The second goal was to determine whether specific factors were present, to a greater extent, for children who had a history of repeated problematic sexual behaviour following an adult reprimand than for those who had not. A review of the literature revealed 33 factors thought to increase a child's risk for repeating their problematic sexual behaviours. The 33 factors encompassed characteristics of the child's sexual behaviours, victimization experiences, personal and interpersonal characteristics, family issues, and intervention. The results indicated that 8 factors were present to a greater extent for children who repeated their problematic sexual behaviours following an adult reprimand compared to those without this known history. In addition, a combination of the eight factors was shown to be superior over most individual factors in accurately identifying children who were known to have repeated their problematic sexual behaviours following adult reprimand from those without this history.

The 33 factors initially included in the study included 12 static and 21 dynamic factors. Static factors were primarily related to characteristics of the child's sexual behaviours and included such details as having ever used force or violence during a sexual behaviour or ever penetrating a victim. Static factors also included victimization experiences, a history of nonsexual aggression, and whether the child had ever resided in a home where family members had poor sexual boundaries. Relying only on static factors to understand why some children repeatedly engage in problematic sexual behaviours may

assist with identifying those at risk; however, having knowledge of only static factors does not inform intervention programs for these children.

In the literature reviewed, many dynamic factors were also identified as potential risk factors for a child to repeat his/her problematic sexual behaviours. It was not surprising that a greater number of dynamic factors were identified, given the importance of considering sexual behaviours within a developmental psychopathology framework (Friedrich, 1997). Therefore, it is important to account for the changes in thoughts, feelings, and behaviours at such young ages. In addition, the inclusion of literature on treatment programs for sexually inappropriate children likely contributed to the overrepresentation of dynamic factors. Treatment providers have speculated that the child's current personal and interpersonal characteristics, current living arrangements, and current thoughts and feelings must be altered to reduce the risk that the behaviours will continue. However, in this study, in which children were differentiated based on a history of repeated problematic sexual behaviours following reprimand or not, the majority of factors identified as important were static. Although these factors will not guide the issues to address in treatment, they do allow for more confidence in identifying those children who may require intervention to stop their problematic sexual behaviours.

This study required clinicians who had recently assessed a child to indicate the presence or absence of 27 factors. The coding scheme included definitions and examples of behaviours or characteristics that would meet the criteria for the factor to be present or not present for the child. Based on demographic data, provided by the clinician, the children were divided into two groups: those who had repeated their problematic sexual behaviours after being reprimanded by an adult and those children who did not have a history of prior

reprimands for sexual behaviours. As noted previously, this study was not an investigation comparing children who engaged in problematic sexual behaviours for the first time to those with a history of sexual behaviours; both groups had, on average, more than two years of involvement in problematic sexual behaviours. The difference between the groups was that some children did not have a history of repeated problematic sexual behaviours following a reprimand and others did. In fact, the group of children who repeated the behaviours had, in most cases, been reprimanded on multiple occasions and, regardless of these warnings, their problematic sexual behaviours did not stop.

The factors that were present to a greater degree in children who repeated sexual behaviour included the following: the use of force, threat, or violence during sexual behaviours; having demonstrated a pattern of sexual behaviours; having engaged in multiple types of sexual behaviours; currently having age-inappropriate sexual thoughts or fantasies; being a victim of sexual abuse; currently experiencing negative impact from a nonsexual victimization experience; having a history of nonsexual aggression; and having ever resided in a family with poor sexual boundaries. Interestingly, regardless of the fact that a greater number of dynamic risk factors were identified in the literature, only two: current *Impact of Nonsexual Abuse* and *Inappropriate Sexual Thoughts/Fantasies* were present to a greater degree in children who repeated their sexual behaviours. As dynamic factors have the potential to change, further investigation should reveal whether decreases over time in these or other dynamic factors have an impact on the continuation of problematic sexual behaviours.

As noted, 8 factors were shown to be related to, and to accurately classify, group membership (repeated and nonrepeated). To determine whether greater accuracy in

identifying group membership could be gained by taking into account the presence of multiple factors, a Total Score based on the presence of the eight individual factors was calculated. The results indicated that the combination of factors was better at predicting group membership compared to all but one of the eight factors when considered independently. It is important to note that there was no difference in predictive accuracy between the 8-factor Total Score and the single factor assessing whether the child had repeatedly engaged in sexual behaviours against one victim, had engaged in sexual behaviours against multiple victims, or had repeatedly engaged in age-inappropriate sexual behaviours as measured by the *Pattern of Sexual Behaviours* factor. This finding suggests that, regardless of other behaviours, if the child has demonstrated some pattern in his or her problematic sexual behaviours, he or she is more likely to be a child who has repeated the sexual behaviours regardless of being told to stop by an adult. Therefore, the presence of a *Pattern of Sexual Behaviour* factor on its own, or the presence of multiple individual factors, could indicate a child who may require more than an adult reprimand to stop the problematic sexual behaviours.

The manner in which a number of the factors were coded may indicate the need for more consistency in assessments of children with sexual behaviour problems. Most of the missing data was on dynamic factors. In order to establish whether a dynamic factor is present or not for a child, the assessor must have obtained the necessary information to make a determination. Similarly, indicating that a factor was either somewhat or possibly present suggests some uncertainty as to the presence of the factor (Worling, 2004). In situations where an assessment did not produce adequate or accurate information, determining the presence of all factors would be difficult. In some cases, the study was introduced to

clinicians only after they had completed their assessment; therefore, it is possible that some of the factors being investigated were not actually formally assessed. For example, no child with a known sexual abuse history was reported to currently experience physical pleasure from memories of his/her abuse and, in fact, this information was often missing. Indeed, there may have been children who were experiencing these feelings but the assessor did not gather the information necessary to code this factor. Therefore, continued investigation of all the factors identified for this study should be undertaken with participants already familiar with them. It is also possible, however, that accurately evaluating personal experiences is an impossible task (Foster & Cone, 1995). Nevertheless, having the factors as a guideline for future assessments may assist to standardize assessments of children with sexual behaviour problems.

The results demonstrated eight factors that differentiated children who repeated their problematic sexual behaviours from those who did not repeat following an adult reprimand. Given that this was the first study of its kind, it would be premature to disregard any of the original 33 factors initially proposed. Utilizing all the factors to guide future assessments would assist to establish some consistency in the information collected across various assessors. Ultimately, those factors most important in evaluating the potential for repeated problematic sexual behaviour or the need for intervention to assist the child to stop his/her behaviours will be established. Until further empirical evidence of risk factors is presented, no one factor should be considered more or less important. Furthermore, continued investigation into the function of a child's current thoughts and feelings with repeated sexual behaviours must be undertaken; without evidence as to the role of the child's subjective

experiences, the contribution of current thoughts and feelings to repeated problematic sexual behaviours will remain purely speculative.

The factors investigated in this study were a representation of a number of possible issues. For example, the *Pattern of Sexual Behaviours* would be coded as present if the child had engaged in a number of different sexual behaviours against one person, if the child had multiple victims, or if the child had engaged in developmentally inappropriate sexual behaviours on multiple occasions. Similarly, the *Multiple Types of Sexual Behaviours* factor would have been present for a child who had victims of both genders or engaged in sexual behaviours with victims in multiple age groups. Therefore, given the possible overlap between the factors as well as the behaviours that suggest the presence of a factor, future investigations with larger samples should tease apart the criteria for each factor. It is possible that the descriptive criterion used to code the factor actually differs between children who have and have not repeated problematic sexual behaviours. It is also necessary to consider that specific behaviours encompassing a factor may be related to more than one factor; for example, there may be some overlap in *Family Instability* and *Negative Home Environment*. Further research should focus on determining the unique characteristics of each factor to reduce the possibility of over- or under-estimating clinical concern.

This study was an exploration of those factors *specifically* outlined in the literature as being important to understanding children who repeated their problematic sexual behaviours following an adult reprimand; however, exploration revealed a number of other factors not outlined in the literature but potentially important and worthy of further investigation. One such behaviour was a reported history of sexual contact with an animal. Those children who engaged in this behaviour were all in the repeated group and a significant relationship

between the behaviour and group membership was demonstrated. Sexual contact with an animal is uncommon in community samples of children (Friedrich et al., 1991) and, therefore, is viewed with concern. In samples of children with sexual behaviours problems, sexual contact with an animal appears to be more prevalent in male children (Gardner, 1997); however, both males ($n = 3$) and females ($n = 2$) in this study engaged in the behaviour. Sexually touching an animal might be a behaviour that assists to identify a child who may well continue his/her problematic sexual behaviours; however, further investigation is necessary to elucidate the relationship between this atypical behaviour and repeated problematic sexual behaviour.

Both groups had been involved in the problematic sexual behaviours over multiple years. However, children in the repeated group started engaging in problematic sexual behaviours at a younger age than the children in the nonrepeated group and, therefore, engaged in these behaviours longer. Although there was an attempt to ensure that the duration of the child's involvement in problematic sexual behaviours did not account for the differences in the presence of factors, one cannot be certain that this was not an influence. The length of time of involvement in problematic sexual behaviours could suggest entrenched behaviours that may be more difficult to break or it could suggest other early difficulties (i.e. *Poor Family Sexual Boundaries*) that may have initiated and then maintained the behaviours. Future investigations should consider the child's age of initial problematic sexual behaviours, the duration of the sexual behaviours, and influences on early sexual behaviours to fully understand how these are related to repeated problematic sexual behaviours.

The small number of females precluded gender specific exploration. Although males and females were justly combined, it is possible that specific issues not investigated in this study would warrant a separation of these children. Similar numbers of males and females have been reported in sexual behaviour samples (Friedrich et al., 2003). It appears, therefore, that females were underrepresented in this study, which highlights the need for further exploration of gender specific discriminative factors. In addition, the majority of the sample was living at home; however, high numbers of children in out-of-home placements have a history of sexually inappropriate behaviours (Ryan, 2000) and further investigations should account for residential placement.

Limitations

This study was an important step towards understanding the characteristics of children who repeatedly engage in problematic sexual behaviours despite being reprimanded. However, there are a number of limitations that must be considered when interpreting the results. The major limitation of this study was the method used to group children with (repeated) and without a history of repeated problematic sexual behaviours (nonrepeated). This grouping was established to suggest that children who, in the past, had a history of repeated problematic sexual behaviours might be similar to those children who are more likely to continue problematic sexual behaviours in the future. Similarly, those grouped as not having a history of repeated problematic sexual behaviours, as determined by no known problematic sexual behaviours following reprimands, were intended to represent those children who, over time, are less likely to repeat their problematic sexual behaviours.

As the groups were devised based on retrospective information, it is impossible to know whether they accurately represent future behaviour. The major limitation with this grouping method was with the nonrepeated group. Over time, some children in the nonrepeated group may actually repeat their problematic sexual behaviours. It is also possible that children in the nonrepeated group actually belonged in the repeated group, but the information about past reprimands was not known. To accurately classify individuals based on their sexual behaviours, we rely on our knowledge of their involvement, which is often based on victim reports. It is well known that many victims do not disclose abuse and that many sexual offences are never detected; these same detection problems exist for children who engage in harmful and inappropriate sexual behaviour. The extent of the problematic sexual behaviours engaged in by children will likely remain underreported; therefore, details of the past and future behaviours of these children, as with those who sexually offend, may be somewhat inaccurate. Regardless of the methodology used, identification issues are inherent when the behaviours under investigation are of such a sensitive nature. Moreover, the cross-sectional design was used to capture information about these children at one point in time in an attempt to identify which factors may be important for a more costly longitudinal study. As with any cross-sectional study, the future is always uncertain, but we draw our conclusions based on what is known at the time of the study.

Another major design limitation of this study is one inherent in test development; a single sample should not be used to derive factors and assess discriminant validity. Given that the final factors were identified and then validated on the same sample, relying on the specific issues outlined in this study to assign a level of concern to a specific child would be unethical. Therefore, the factors outlined in the study should be considered a starting point

for future research into the issues related to children who repeatedly engage in problematic sexual behaviours.

Other limitations included the small sample size, especially given the number of analyses conducted. The sample size did not allow for dividing the children based on age group, which has been recommended. Friedrich (1997) has noted that the meaning the child attaches to the sexual behaviours, the recency of their own traumatic experiences, and the duration of the problematic sexual behaviours may all be linked to the age of the child; therefore, age-related experiences may be essential to understanding repeated problematic sexual behaviours. As noted, the repeated group did start their problematic sexual behaviours at a younger age and over a longer period of time compared to the nonrepeated group. The recency of traumatic experiences was not investigated but may be vital to understanding the contribution of age and trauma to repeated problematic sexual behaviours. Therefore, further investigation into the age-related problematic sexual behaviours and the impact of age as an independent factor on repeated sexual behaviours is vital to understanding this population. Future research should investigate the validity of these factors with respect to the age when the problematic sexual behaviours commenced, the duration of the sexual behaviours, and any age differences in the presence of the factors.

In the early investigation of the 33 factors, two assessors coded the factors on the same child. These assessors were each involved in the children's assessment; however, a number of dynamic factors attained poor agreement. Although poor interrater agreement precluded the factors from further analyses, it is recommended that continued investigation into all the factors and the interpretation of them by clinicians be conducted. Accurate assessments of children with sexual behaviour issues are vital to drawing conclusions and to

recommending or not recommending additional treatment. The fact that a number of assessors who were similarly involved with a child did not agree on the presence of a number of dynamic factors raises questions regarding the accuracy of assessments conducted by individuals.

This study is the first known empirical investigation into factors outlined in the literature as potentially important to a child's risk for ongoing problematic sexual behaviours. Until further investigation into these or other potential risk related factors is done, it is necessary to stress the need for caution in interpreting these results, and to advise that utilizing these results in a clinical setting must be done with prudence. To employ these factors in establishing "risk ratings" for children known to have engaged in problematic sexual behaviours would be erroneous. Until further empirical evidence is provided on these factors, clinicians should balance the limitations of current knowledge of risk factors with Ryan's (2000) caution of the "lure of a quick answer". As noted, specific behaviours or thoughts and feelings should not be viewed in isolation when assessing a child's potential for continued problematic sexual behaviours and, similarly, factors outlined in this study should be considered potentially important until they are validated with a similar population. Even with validation, the goal in conducting this type of assessment should be accurate identification of children who may benefit from additional intervention and not for the purpose of making risk statements alone, or to segregate children demonstrating sexual behaviour problems.

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Table 1: Potential Risk factors identified on the basis of literature review.

Potential Risk Factors	Literature
Static Factors	
1) Use of physical force during sexual behaviour or threatened physical force	Gil, 1993b; Gray, Busconi, Houchens, & Pithers, 1997; Johnson, 1993b; Ray & English, 1995; Rich, 2002
2) Use of coercion or manipulation to gain victim compliance	Gilgun, 2001; Johnson, 1993; Ray & English, 1995; Rich, 2002
3) A history of sexual behaviours	Burton, Nesmith, & Badten, 1997; Gil, 1993b; Johnson & Feldmeth, 1993; Johnson, 1993b; Ray & English, 1995; Weikowski, Hartsoe, Mayer, & Shortz, 1998
4) Engaging in multiple types of sexual behaviours	Burton, 2000; Gardner, 1997; Gray, Busconi, Houchens, & Pithers, 1997
5) Engaged in penetration	Araji, 1997; Burton, 2000; Johnson & Feldmeth, 1993
6) Engaged in sophisticated or "predatory" sexual behaviours	Gil, 1993b; Ray & English, 1995
7) Selecting victim based on specific characteristics (i.e. vulnerability)	Gil, 1993c; Johnson & Feldmeth, 1993; Johnson, 1993b; Ray & English, 1995
8) A victim of sexual abuse	Augimeri et al., 2000; Levene et al., 2000; Ray & English, 1995; Rich 2002
9) Experienced physical arousal during own sexual victimization	Johnson, 1993e
10) Multiple sexual offenders against the child	Burton, Nesmith, & Badten, 1997
11) Child has witnessed violence within the family or in the neighbourhood	Augimeri et al., 2000; Gilgun, 1996; Johnson, 1993b; Levene et al., 2000; Ray & English, 1995; Rich, 2002; Wiekowski et al., 1998
12) Child is impulsive	Augimeri et al., 2000; Bonner, Walker, & Berliner, 1999a; Calder et al., 2001; Horton, 2000; Lane, 1991; Levene et al., 2000; Rasmussen, Burton, & Christopherson, 1992; Rich, 2002
Dynamic Factors	
13) Child currently has inappropriate sexual thoughts or fantasies	Johnson, 1993b; Lane, 1991; Wiekowski et al., 1998
14) Sexual beliefs are distorted (i.e. justify sexual behaviours, believe sexual behaviour is normal)	Berliner, Manaos, & Monastersky, 1986; Burton, 1997; Calder et al., 1997; Gil, 1993b; Horton, 2000; Johnson, 1993d; Lane, 1991; Rich, 2002
15) Lacking understanding of consequences of their sexual behaviours or lack empathy for the victim	Calder et al., 2001; Cunningham & MacFarlane, 1996; Gil, 1993b; Gilgun, 1996; Horton, 2000; Johnson, 1993d; Lane, 1991; Ray & English, 1995; Rich, 2002
16) Deny the sexual behaviour or a problem with sexual behaviour	Calder et al., 2001; Cunningham, & McFarlane, 1991, 1996; Johnson, 1993b; Lane, 1991; Rasmussen, Burton, & Christopherson, 1992; Ray & English, 1995; Rich, 2002
17) Opportunities for continued sexual behaviour (i.e. access or not monitored)	Calder et al., 2001; Epps, 2001; Gil, 1993b; Horton, 2000; Johnson, 1993b; Lane, 1991
18) Trauma resulting from own sexual victimization	Calder et al., 2001; Johnson, 1993d; Rich, 2002
19) Arousal to memories of own sexual abuse	Hall, Mathews, & Pearce, 1998
20) Negative impact of nonsexual victimization experiences (i.e. physical, emotional abuse)	Calder et al., 2001; Gil, 1993b; Johnson, 1993b; Ray & English, 1995; Rich, 2002; Weikowski et al., 1998
21) History of nonsexual aggression (i.e. harming animals, verbal/physical aggression, volatile)	Gilgun, 2001; Johnson, 1993b; Rich, 2002; Wiekowski et al., 1998
22) Aggressive sexual thoughts or fantasies	Johnson, 1993b
23) Believing that power is equated with safety	Lane, 1991
24) Social skill deficits	Augimeri et al., 2000; Bonner, Walker, & Berliner, 1999a; Gil, 1993b; Gilgun, 2001; Horton, 2000; Johnson, 1993d; Lane, 1991; Levene et al., 2000; Ray & English, 1995
25) Affective coping skill deficit	Augimeri et al., 2000; Gilgun, 2001; Johnson, 1993d; Levene et al., 2000; Rich, 2002
26) Poor self esteem	Berliner, Walker, & Bonner, 1999a; Lane, 1991; Calder et al., 2001; Gil, 1993b; Johnson, 1993d
27) Family that denies sexual behaviours	Augimeri et al., 2000; Epps, 2001; Gil, 1993b; Johnson, 1993b; Levene et al., 2000; Ray & English, 1995; Rich, 2002
28) Residing in a negative, unstable, and sexualized family environment	Augimeri et al., 2000; Bonner, Walker, Berliner, 1999b; Burton, Nesmith, Badten, 1997; Gilgun, 2001; Johnson, 1993b; Levene et al., 2000; Ray & English, 1995; Rich, 2002; Wiekowski et al., 1998
29) Having an absent or rejecting parent	Gilgun, 2001; Johnson, 1993b; Ray & English, 1995; Rich, 2002; Weikowski et al., 1998
30) Response to past or motivation for treatment	Augimeri et al., 2000; Levene et al., 2000; Rich, 2002
31) Parental involvement in treatment	Augimeri et al., 2000; Bonner, Walker, & Berliner, 1999b; Gil, 1993c; Johnson, 1993d; Levene et al., 2000

Table 2: Factor and coding descriptions.

Factor	Yes	Partially/possibly	No
Static Factors			
1.0 Sexual Behaviour Characteristics			
Use of Force/Threat/Violence	During any sexual behaviour or in an attempt to keep any of the sexual behaviours a secret, child has ever used: ● excessive force or violence ● threatened to use force or violence ● used intimidation against the victim ● physical strength to gain compliance.	During any sexual behaviour or in an attempt to keep sexual behaviour a secret, child <i>may</i> have used force/threat/or violence as outlined.	Has <i>never</i> used any of the force/threat/violence methods outlined.
Coercion/Manipulation	Child has ever used nonviolent means to attain cooperation during sexual behaviours which could have included, but are not limited to: bribes ● manipulation ● tricks ● coercion	<i>May</i> have used nonviolent means to attain cooperation during sexual behaviours as outlined above.	Has <i>never</i> have used nonviolent means to attain cooperation during sexual behaviours as outlined above.
Pattern of Sexual Behaviours	Has ever engaged in a pattern of sexual behaviours which could be indicated by: <input type="checkbox"/> one victim on multiple occasions <input type="checkbox"/> multiple victims <input type="checkbox"/> pattern of inappropriate sexual behaviours/repetitive	<i>MAY</i> have patten of sexual behaviours as outlined above.	<i>No</i> known history of prior sexual behaviours as outlined above.
Multiple Types of Sexual Behaviours	Has ever engaged in more than one type of sexual behaviour. Can include, but not limited to, 2 or more of the following: sexual touching over clothes; sexual touching under clothes; male and female victims; victims from multiple age groups; penetration with object; excessive masturbation; internet sex rooms/chat lines; forcing victim to sexually touch self; sexual touching above waist' sexual touching below waist; oral penetration; anal penetration; vaginal penetration; cross-dressing; obscene phone calls; penetration with penis; exhibitionism; stalking; froitage; kissing; viewed pornography; show pornography to victim; voyeurism; bestiality; sexual behaviour not listed.	<i>May</i> have engaged in multiple sexual behaviours, as outlined above.	Has <i>never</i> engaged in more than one type of sexual behaviour.
Penetration	Has ever penetrated or attempted to penetrate another (includes penetration with penis, object, finger). <input type="checkbox"/> attempted vaginal, oral, anal penetration <input type="checkbox"/> completed vaginal, oral, anal penetration.	<i>May</i> have ever penetrated or attempted to penetrate another (includes penetration with penis, object, finger).	Has <i>never</i> engaged in vaginal, oral, or anal penetration or attempted penetration of another.
Selection based on Vulnerability	Has ever chosen at least one victim because of specific characteristics, which made them appear vulnerable. Victim characteristics were known to the child and may include, but are not limited to: those who are easy to fool, bribe, or force; no verbal ability to report; a person with intellectual deficits; a person who was vulnerable; person with trauma history; less assertive person; person with a known sexual victimization history; person who was asleep; person not physically able to protect self	<i>May</i> have selected at least one victim because of their vulnerability.	Did <i>not choose</i> any victim based on their vulnerability.
2.0 Victimization			
Victim of sexual abuse	Known history of sexual abuse.		No known history of sexual abuse
Arousal during own Sexual Victimization	Experienced sexual arousal during own sexual abuse	<i>May</i> have experienced sexual arousal during own sexual abuse	Did not experience sexual arousal during own sexual abuse
Multiple Sexual Offenders	Has ever been sexually abused (any unwanted sexual contact/act) by more than one person. Offender need not have been charged or been of a chargeable age.	<i>May</i> have been sexually abused by more than one person as outlined above.	Has been sexually abused by one person only
Witnessed Violence	Has witnessed, been exposed to, or been privy to violence as noted by, but not limited to: family friends/peers have been harmed by violence	<i>May</i> have witnessed, been exposed to, or been privy to violence as outlined above	Has <i>never</i> witnessed, been exposed to, or been privy to violence as outlined above.

Factor		Yes	Partially/possibly	No
5.0 Family Environment				
Poor Family Sexual Boundaries/ Sexualized Family Environment	Child has ever been exposed to poor sexual boundaries in the home. Poor boundaries may include, but are not limited to: family nudity; history of prostitution in family; lack of privacy (e.g. bathroom, changing); knowledge of adult sexual behaviours (hearing/seeing); child used to meet parents' sexual needs; has received age inappropriate sexual knowledge; perpetration in family (not including child's sexual behaviours); inappropriate displays of affection; exposure and/or access to explicit media; sexual talk in family that is demigrating, objectifying, disrespectful; more than one child sexually abused in family (not by this child); guardians confused about sexual boundaries/sexuality; photographed in nude or engaging in sexual acts		May have been exposed to inappropriate sexual boundaries within the family as outlined above.	Child has not been exposed to poor sexual boundaries within the family.
Dynamic factors				
1.0 Sexual Behaviour Characteristics				
Sexual Thoughts/ Fantasies	Over the past 6 months has had inappropriate sexual thoughts or fantasies. Age inappropriate sexual fantasies/thoughts about things outside of what is natural and expected sexual behaviour for each age group** Inappropriate sexual thought/fantasies may be demonstrated through, but are not limited to: adult themes (e.g. 6 year old fantasizing about intercourse); the urge to sexually abuse during self-stimulation; thoughts/fantasies of sexual violence; thoughts/fantasies of sexual coercion; thoughts/fantasies of sexual aggression; fantasies/thoughts include age, size, or status differences; sexual fantasies/thought which include themes of power and control		Over the past 6 months may have had an inappropriate sexual thought/fantasy as outlined above.	Has never had an inappropriate sexual thought/fantasy, over the past 6 months.
Distorted Sexual Beliefs	Currently has distorted sexual beliefs that are demonstrated through, but not limited to: justifying own sexual behaviours; anxiety regarding sexuality; confusion about own sexuality; anger regarding sexuality; confusion about sexual issues; sees own sexual behaviours as "normal"; confusion about appropriate and inappropriate sexual behaviours		May currently have distorted sexual beliefs as demonstrated through those issues as demonstrated above	Does not currently experience distorted sexual beliefs as demonstrated above.
Lacks Understanding of Consequences of Sexual Behaviours	Currently lacks understanding of consequences of behaviours as demonstrated through, but not limited to: does not understand the consequences of sexual behaviours to self; does not understand the consequences of sexual behaviours to other; does not think of consequences to self or other; is not concerned about the consequences to self or other; does not have age appropriate empathy for other		May not currently consider the consequences to self OR other AND/OR may not currently be concerned about consequences to self OR other	Currently able to understand consequences of sexual behaviours to self and other and is concerned about consequences to self and other.
Sophisticated Sexual Behaviours	Has ever employed sophisticated means to engage in sexual behaviours with others. Sophisticated means may include, but are not limited to, sexual behaviours that were: strategic • well thought out • highly planned		May have employed sophisticated means to engage in sexual behaviours with others	Has never used sophisticated means used to engage in sexual behaviours.
Denial	Currently denies: any involvement in sexual behaviours and/or any problem with sexual behaviours		Currently acknowledges involvement for some, but not all sexual behaviours. May acknowledge having some problem with sexual behaviour.	Acknowledges involvement in all sexual behaviours, even if doesn't accept full responsibility. Recognizes inappropriateness of sexual behaviours.
Opportunities for Sexual Behaviour	Over the next 6 months, child will have the opportunity to engage in continued sexual behaviours with others. Opportunities can include, but are not limited to: living with and/or allowed access to potential victims; guardians who are unable to control child; child will not receive adequate supervision **consider all areas of life, e.g. school, extracurricular activities, and home. Will rarely be monitored by people who are aware of the sexual behaviours.		Over the next 6 months, child may have opportunity to engage in continued sexual behaviours with others. Therefore, will be monitored often, but not all of the time by people aware of the sexual behaviours.	Over the next 6 months, child will not have the opportunity in all realms (school, home, etc) to engage in continued sexual behaviours with others. Monitored all the time by people who are aware of the sexual behaviours.

Factor	Yes	Partially/possibly	No
2.0 Victimization			
Trauma from own Sexual Victimization	Is the victim of a nonsexual abuse (i.e. physical, emotional abuse, neglect, or other nonsexual abuse) AND currently experiences the negative emotional impact from this abuse (e.g. trauma, sadness, anxiety, etc.).	<i>May</i> currently experience the negative emotional impact of past nonsexual abuse, as outlined above	Not currently experiencing the negative emotional impact of nonsexual abuse or trauma history.
Arousal to memories of own sexual victimization	Currently sexually aroused to thoughts or discussions of own sexual victimization experiences.	<i>May</i> currently experience sexual arousal to thoughts of own sexual victimization.	Does not currently experience sexual arousal to thoughts of own sexual victimization
Impact of Nonsexual Victimization	Is the victim of a nonsexual abuse (i.e. physical, emotional abuse, neglect, or other nonsexual abuse) AND currently experiences the negative emotional impact from this abuse (e.g. trauma, sadness, anxiety, etc.).	<i>May</i> currently experience the negative emotional impact of past nonsexual abuse, as outlined above.	Not currently experiencing the negative emotional impact of nonsexual abuse or trauma history
3.0 Interpersonal Characteristics			
History of Nonsexual Aggression	Over the past 6 months child has been aggressive in a nonsexual manner. Nonsexual aggression can include, but is not limited to: poor anger control (i.e. rage, explosive, unpredictable anger, etc), threatening; demanding; attacking others/ fighting/hitting; oppositional behaviours; manipulative; cruelty towards people or animals; age inappropriate temper tantrums	Over the past 6 months, child <i>may</i> have engaged in nonsexual aggression as outlined above.	Over the past 6 months, child <i>has not</i> engaged in nonsexual aggression.
Aggressive Thoughts/Fantasies	Over the past 6 months had aggressive (nonsexual) thoughts and/or fantasies. Thoughts and fantasies may be demonstrated through, but are not limited to: role-play of an aggressive fantasy; thoughts/fantasies of harming another, thoughts/fantasies of controlling others; thoughts/fantasies of aggressive retaliation; thoughts/fantasies of violent retaliation; play that suggests thoughts/fantasies of harming and/or aggression towards others	Over the past 6 months, child <i>may</i> have had aggressive nonsexual fantasies or thoughts.	Over the past 6 months, child has <i>no known</i> aggressive nonsexual fantasies or thoughts.
Power-Based Beliefs	Over the past 6 months, has held views that support power-based beliefs and/ or behaviours. Power-based beliefs/behaviours could include, but are not limited to: believes that strength equals power; feels sense of entitlement due to gender; feels sense of entitlement due to strength; bullying; solves problems with power/strength; self-esteem is based on being powerful; feels that a lack of power is a negative trait; power/control/dominance are important.	Over the past 6 months, <i>may</i> have held views that support power-based beliefs and/or behaviours as outlined above	Over the past 6 months, <i>has not</i> held views that support power-based behaviours (outlined above).
Social Skill Deficits	Over the past 6 months, the child has experienced multiple (2+) social skill problems/deficits. Social skill problems may be evident through, but are not limited to: difficulties interacting with peers; poor communication; social isolation; friends who get into trouble; few, if any, age appropriate friends; socially inept; age inappropriate interests; lacks social confidence and/or competence	Over past 6 months, the child <i>may</i> have a number of social skill problems or <i>definitely has</i> at least one social skills problem/deficit.	Over past 6 months, child has had <i>no</i> social skill deficits/problems.
4.0 Personal Characteristics			
Impulsivity	Over the past 6 months, child has been impulsive or demonstrated poor self-control. Impulsivity and poor self-control can include, but are not limited to: acting before thinking; unable to wait turn; interrupting others	Over the past 6 months, child <i>may</i> not have had very good self-control.	Over the past 6 months, child <i>has</i> shown good self-control.
Affective Coping Skill Deficits	Over the past 6 months the child has experienced affective coping-skills deficits. Deficits may include, but are not limited to: poor problem solving skills; poor conflict management; withdrawing; poor emotion regulation; cannot express emotions; easily frustrated; using aggressive or manipulative methods to solve problems; sexual self-stimulation following negative emotions	Over past 6 months may have had or has had some affective coping-skills deficits (see above).	Over past 6 months has not demonstrated poor affective coping-skills and does not display deficits or behaviours noted.
Poor Self-Esteem	Over the past 6 months the child has had low-self esteem. Low self-esteem could be demonstrated through, but not limited to: negative self-statements; interpreting situations with negative self-conclusions; negative self-talk; lack of assertiveness; lacking goals; no understanding of own needs; no internal sense of self; feels incapable of positive and/or consistent action	Over the past 6 months, child <i>may</i> have demonstrated low-self esteem. Low self-esteem may be demonstrated though, but is not limited to, those issues listed above.	Over the past 6 months the child has <i>not</i> demonstrated poor self-esteem.

Factor	Yes	Partially/possibly	No
5.0 Family Environment			
Family in Denial	At least one legal guardian who has contact with the child denies the child's sexual behaviours. Denial may be demonstrated though, but is not limited to: do not acknowledge problem sexual behaviours; unwilling to cooperate with treatment; do not take responsibility for changes that need to happen; know little about the sexual behaviours; not willing to supervise the child; do not believe the sexual behaviours took place; do not believe the behaviours were sexual in nature	At least one legal guardian who has contact with the child may deny the child's sexual behaviours as listed above.	No legal guardians who have contact with the child deny the child's sexual behaviours as listed above. All legal guardians acknowledge the child's sexual behaviours.
Family Instability	Over the past 6 months, 2 or more indicators of family instability were present. Instability can include, but is not limited to: a history of protective services; multiple parental figures; unexplained absent parent; family disruptions (e.g. divorce, out of home placements); strangers in and out of home; economic stressors; frequent residential moves; no sense of predictability/orderliness.	Over the past 6 months, one family instability indicator was definitely present OR may have 2 or more indicators present as outlined above.	Over the past 6 months, no family instability indicators were present.
Negative Home Environment	Over the past 6 months, 2 or more factors indicating a negative home environment were present. A negative home environment may include, but is not limited to: unresolved abuse/trauma history inadequate parenting; alcohol/drug abuse; no sense of orderliness/predictability; isolation from extended family; poor anger management; social services involvement; family turmoil/arguments/violence; poor housing; stress; cultural conflicts; poor communication; poor parenting; inconsistent discipline; parents isolated from each other; guardian with psychiatric/emotional difficulties; age inappropriate expectation; poor child management; child is caretaker; police involvement; impaired attachment	Over the past 6 months, one negative home environmental factor was definitely present OR may have 2 or more factors present as outlined above.	Over the past 6 months, no negative home environmental factors were present.
Parental/guardian rejection	Rejecting behaviours have been directed at child by a parent/guardian, over the past 6 months. Rejecting behaviours may be indicated by, but are not limited to: <ul style="list-style-type: none"> at least one guardian dislikes child guardian projects negative attitudes on to child another child is favoured no apparent emotional connection to any guardian child is isolated within family child told they are moving to another placement 	May have experienced rejecting behaviours over the past 6 months, as outlined above.	No known rejecting behaviours were present over the past 6 months, as outlined.
6.0 Intervention			
Treatment/Intervention	Has not responded to sexual behaviour specific intervention to date; will not engage in intervention sexual behaviour specific intervention; does not have access to sexual behaviour specific intervention; is or has been resistant to sexual behaviour specific intervention	Child may be resistant to treatment/intervention as demonstrated above.	Will not be or is not resistant to treatment/intervention as outlined above.
No Parent/Guardian Treatment Involvement	No legal guardians/parents will be involved in child's sexual behaviour specific intervention/treatment.	At least one guardian/parent will or might engage in their child's sexual behaviour specific intervention.	All legal guardians/parents are willing and interested in involvement in child's sexual behaviour specific intervention.

Table 3: Intraclass correlation coefficient (ICC) for all factors.

Assessment variables	ICC (<i>n</i> =12)
1.0 Sexual Behaviours Characteristics	
Force/threat/violence	1.0
Coercion/manipulation	.96
Pattern of Sexual Behaviours	.94
Multiple Types of Sexual Behaviours	.94
Penetration	.94
Sexual Thoughts/Fantasies	.78
Distorted Sexual Beliefs	.78
Lack Understanding	.83
Sophisticated Sexual beliefs	.94
Denial	.65
Victim Selection	.91
Opportunities for Sexual Behaviours	.53
2.0 Victimization	
Victim of Sexual Abuse	1.0
Trauma from own Sexual Victimization	.92
Arousal during of Sexual Victimization	1.0
Arousal to Memories of Sexual Victimization	1.0
Multiple Offenders	.97
Impact of Nonsexual Abuse	.85
Witness Violence	.91
3.0 Interpersonal Characteristics	
Impulsivity	.86
History of Nonsexual Aggression	.81
Aggressive Thoughts/Fantasies	.43
Power Based Beliefs	.32
4.0 Personal Characteristics	
Social Skill Deficits	1.0
Affective Coping Skill Deficit	-.29
Poor Self-esteem	.96
5.0 Family Environment	
Family in Denial	.59
Poor Family Sexual Boundaries	.79
Negative Home Environment	.86
Family Instability	.71
Guardian Rejection	.74
6.0 Intervention	
No Response to Treatment/Intervention	.78
No Guardian Treatment Involvement	.52

Table 4: Percentage of children coded in each category and missing responses for all factors in main study.

Assessment variables	<i>n</i>	No %	PP %	Yes %	Non-response/ Missing %
1.0 Sexual Behaviours Characteristics					
Force/threat/violence	62	58.1	19.4	22.6	0
Coercion/manipulation	62	32.3	29.0	35.5	3.2
Pattern of Sexual Behaviours	62	21.0	21.0	58.1	0
Multiple Types of Sexual Behaviours	62	43.5	21.0	35.5	0
Penetration	62	11.3	4.8	83.9	0
Sexual Thoughts/Fantasies	62	29.0	37.1	25.8	8.1
Distorted Sexual Beliefs	62	6.5	30.6	62.9	0
Lack Understanding	62	12.9	21.0	66.1	0
Sophisticated Sexual beliefs	62	46.8	22.6	30.6	0
Denial	62	30.6	45.2	24.2	0
Victim Selection	62	38.7	24.2	37.1	0
2.0 Victimization					
Victim of Sexual Abuse	62	48.4	0	51.6	0
Trauma from own Sexual Victimization	32	6.3	28.1	62.5	3.1
Arousal during of Sexual Victimization	32	25.0	56.3	12.5	6.3
Arousal to Memories of Sexual Victimization	32	31.3	56.3	0	12.5
Multiple Offenders	32	46.9	28.1	18.8	6.3
Impact of Nonsexual Abuse	62	30.6	14.5	51.6	3.2
Witness Violence	62	22.6	16.1	58.1	3.2
3.0 Interpersonal Characteristics					
Impulsivity	62	21.0	12.9	66.1	0
History of Nonsexual Aggression	62	19.4	6.5	74.2	0
4.0 Personal Characteristics					
Social Skill Deficits	62	4.8	11.3	83.9	0
Poor Self-esteem	62	8.1	25.8	66.1	0
5.0 Family Environment					
Poor Family Sexual Boundaries	62	14.5	24.2	61.3	0
Negative Home Environment	62	24.2	21.0	54.8	0
Family Instability	62	32.3	16.1	51.6	0
Guardian Rejection	62	45.2	32.3	22.6	0
6.0 Intervention					
No Response to Treatment/Intervention	62	56.5	24.2	19.4	0

Note: PP=partially/possibly present

Table 5: Nominal demographic data for the repeated and nonrepeated groups.

Demographic	<i>N</i>	Repeated % (<i>n</i>)	Nonrepeated % (<i>n</i>)
Caucasian	58	71.4(20)	63.3 (19)
Current Residence	59		
Parental home		37.9 (11)	50.0 (15)
Group home		31.0 (9)	20.0 (6)
Foster home		24.1 (7)	10.0 (3)
Relatives		3.4 (1)	6.7 (2)
Other ^a		3.4 (1)	13.3 (4)
Family involved in assessment ^b	50	70.8 (17)	88.5 (23)
Primarily reared by:	58		
Biological parents only		40.7 (11)	51.6 (16)
At least 1 biological parent ^c		41.9 (13)	44.4 (12)
Education			
Special Education (yes)	57	42.8 (12)	44.8 (13)
Learning disabilities (yes)	56	25.0 (7)	21.4 (6)
Average (90-109) intellectual functioning ^d	55	58.6 (17)	65.3 (17)
Most recent reprimand was for <i>contact</i> sexual behaviour	49	96.1 (25)	91.3 (21)
Reprimand for most recent behaviours ^e	60		
School suspension		13.7 (4)	6.4 (2)
Referral to agency		48.3 (14)	35.5 (11)
Police warning		10.3 (3)	12.9 (4)
Conviction		0	3.2 (1)
Parental warning		62.1 (18)	48.3 (15)
School warning		17.2 (5)	3.2 (1)
Child protection warning		62.1 (18)	74.1 (23)
Other adult warning ^f		37.9 (11)	32.2 (10)
Prior reprimands (repeated group)	31		
School suspension		12.9 (4)	
Referral to agency		25.8 (8)	
Police warning		3.2 (1)	
Conviction		0	
Parental warning		87.1 (27)	
School warning		32.3 (10)	
Child protection warning		25.8 (8)	
Other adult warning ^g		32.3 (10)	

Note: ^a residential treatment, friends ^b both biological parents attended the assessment for 14 children

^c includes involvement from step, foster parents, grandparents, single parent ^d this information was documented for 43.6% and suspected for others: 2 (3.2) in superior range with 1 in each group ^e a total of 17 (27.4%) children received 1 reprimand, 20 (32.3%) received 2 reprimands, and 22 (35.5%) had 3 or more reprimands that precipitated the current assessment

^f includes treatment centre staff, residential staff, foster home, and doctor (16.1%) ^g includes removal from residence (n=5), residential/treatment centre staff warning (n=2), foster home warning (n=1), unknown (n=2)

**p*<.05

Table 6: Means and standard deviations for data assessed as continuous measures for the repeated and nonrepeated groups.

Demographic	Repeated		Nonrepeated	
	<i>M (n)</i>	<i>SD</i>	<i>M (n)</i>	<i>SD</i>
Continuous Demographic Variables				
Number of residential moves	3.81 (26)	2.86	3.45 (29)	2.34
Number of primary caregivers	3.89 (29)	2.86	3.37 (30)	1.63
Number of changes in primary caregivers	2.70 (28)	2.01	1.95 (29)	1.65
Grade at assessment ^a	4.24 (21)	1.67	5.11 (27)	1.67
Age first inappropriate sexual behaviour**	72.44 (27)	29.13	101.25 (28)	29.06

Note: ^a does not include 2 children who were in senior kindergarten, 1 child who was in a section 20 classroom (grade unknown), 1 child who was in a diagnostic classroom (grade unknown), 1 child in a day treatment program (grade unknown), 9 grade unknown.

* $p < .01$

Table 7: Comparing the repeated and nonrepeated groups on the presence of each factor.

Assessment variables	Nonrepeated		Repeated		V		
	No (n)	PP (n)	Yes (n)	No (n)		PP (n)	Yes (n)
1.0 Sexual Behaviours Characteristics							
Force/threat/violence	77.4 (24)	12.9 (4)	9.7 (3)	38.7 (12)	25.8 (8)	35.5 (11)	.40**
Coercion/manipulation	40.0 (12)	26.7 (8)	33.3 (10)	26.7 (8)	33.3 (10)	40.0 (12)	.14
Pattern of Sexual Behaviours	38.7 (12)	25.8(8)	35.5 (11)	3.2 (1)	16.1 (5)	80.6 (25)	.49***
Multiple Types of Sexual Behaviours	45.2 (14)	29.0 (9)	25.8 (8)	41.9 (13)	12.9 (4)	45.2 (14)	.24
Penetration	22.6 (7)	9.7 (3)	67.7 (21)	0	0	100.0 (31)	.44**
Sexual Thoughts/Fantasies	42.9 (12)	42.9 (12)	14.3 (4)	20.7 (6)	37.9 (11)	41.4 (12)	.33*
Distorted Sexual Beliefs	3.2 (1)	41.9 (13)	54.8 (17)	9.7 (3)	19.4 (6)	71.0 (22)	.26
Lack Understanding	22.6 (7)	19.4 (6)	58.1 (18)	3.2 (1)	22.6 (7)	74.2 (23)	.29
Sophisticated Sexual beliefs	54.8 (17)	22.6 (7)	22.6 (7)	38.7 (12)	22.6 (7)	38.7 (12)	.19
Denial	29.0 (9)	41.9 (13)	29.0 (9)	32.3 (10)	48.4 (15)	19.4 (6)	.11
Victim Selection	41.9 (13)	29.0 (9)	29.0 (9)	35.5 (11)	19.4 (6)	45.2 (14)	.17
2.0 Victimization							
Victim of Sexual abuse	64.5 (20)	-	35.5 (11)	32.3 (10)	-	67.7 (21)	.32**
Arousal During own Abuse	20.0 (2)	70.0 (7)	10.0 (1)	30.0 (6)	55.0 (11)	15.0 (3)	.14
Trauma from Own Sexual Abuse	8.3 (1)	25.0 (3)	66.7 (8)	4.8 (1)	38.1 (8)	57.1 (12)	.14
Multiple Offenders	54.5 (6)	18.2(2)	27.3 (3)	47.4 (9)	36.8 (7)	15.8 (3)	.21
Impact of Nonsexual Abuse	46.7 (14)	13.3 (4)	40.0 (12)	16.7 (5)	16.7 (5)	66.7 (20)	.33*
Witness Violence	33.3 (10)	13.3 (4)	53.3 (16)	13.3 (4)	20.0 (6)	66.7 (20)	.24
3.0 Interpersonal Characteristics							
Impulsivity	29.0 (9)	19.4 (6)	51.6 (16)	12.9 (4)	6.5 (2)	80.6 (25)	.31 ^a
History Nonsexual Aggression	32.3 (10)	9.7 (3)	58.1 (18)	6.5 (2)	3.2 (1)	90.3 (28)	.37**
4.0 Personal Characteristics							
Social Skill Deficits	9.7 (3)	16.1 (5)	74.2 (23)	0	6.5 (2)	93.5 (29)	.28 ^b
Poor Self-esteem	9.7 (3)	29.0 (9)	61.3 (19)	6.5 (2)	22.6 (7)	71.0 (22)	.10
5.0 Family Environment							
Poor Family Sexual Boundaries	25.8 (8)	19.4 (6)	54.8 (17)	3.2 (1)	29.0 (9)	67.7 (21)	.32*
Negative Home Environment	25.8 (8)	29.0 (9)	45.2 (14)	22.6 (7)	12.9 (4)	64.5 (20)	.22
Family Instability	35.5 (11)	16.1 (5)	48.4 (15)	29.0 (9)	16.1 (5)	54.8 (17)	.07
Guardian Rejection	47.4 (15)	35.5 (11)	16.1 (5)	41.9 (13)	29.0 (9)	29.0 (9)	.15
6.0 Intervention							
No Response to Treatment/intervention	67.7 (21)	22.6 (7)	9.7 (3)	45.2 (14)	25.9 (8)	29.0 (9)	.27

Note: PP = Partially/possibly present
^a p < .05 ^{**} p < .01 ^{***} p < .001 ^a p = .052 ^b = .08

Table 8: Comparison of coding scheme in differentiating repeated and nonrepeated groups.

Assessment variables	Coding Scheme		
	0,1,2, ^a	1=0 ^b	1=2 ^b
1.0			
Force/threat/violence	.40**	5.90**	9.54**
Pattern of Sexual Behaviours	.49***	12.98***	11.78**
Multiple Types of Sexual Behaviours	.44**	11.92***	7.89**
Sexual Thoughts/fantasies	.33*	5.17*	<i>ns</i>
2.0			
Victim of Sexual Abuse	.32**	6.45**	6.45**
Impact of Nonsexual Abuse	.33*	4.28*	6.24**
3.0			
History Nonsexual Aggression	.37**	8.42**	6.61**
5.0			
Poor Family Sexual Boundaries	.32*	<i>ns</i>	6.37**

Note: 0=No (not present), 1=Partially/possibly present, 2=Yes (present)

0, 1, 2 = original 3-point coding scheme, 1=0 indicates partially/possibly present was recoded into No

1=2 indicates partially/possibly present was recoded into Yes

^a Cramer's V , ^b χ^2

* $p < .05$ ** $p < .01$ *** $p < .001$

Table 9: Item-total correlations and comparisons of predictive accuracy between the Total Score and individual factors with and without missing data.

Final assessment variables	AUC (95% CI, SE)	Total Score		Item-total Correlation
		0=missing ($n=62$) Z_{Δ}	no missing data ($n=55$) Z_{Δ}	
1.0				
Force/threat/violence	.69** (.55-.82, .068)	0.18*	0.15	.38**
Pattern of Sexual Behaviours	.75*** (.63-.87, .063)	0.11	0.13	.76***
Multiple Types of Sexual Behaviours	.66* (.52-.79, .070)	0.20*	0.23	.61**
Sexual Thoughts/fantasies	.66** (.53-.80, .070)	0.19**	0.18**	.63**
2.0				
Victim of Sexual Abuse	.66* (.52-.79, .070)	0.20*	0.15	.38**
Impact of Nonsexual Abuse	.67* (.52-.81, .074)	0.20**	0.19**	.62***
3.0				
History Nonsexual Aggression	.66** (.53-.80, .075)	0.19**	0.18*	.65***
5.0				
Poor Family Sexual Boundaries	.60 (.45-.74, .072)	0.26***	0.27***	.54***

* $p < .05$ ** $p < .01$ *** $p < .001$

Appendix A: Consent form



University of Toronto

Staff Participation ASRP Project Consent Form

I understand that a multi-agency project is being conducted with agencies in Ontario and the United States regarding children under 12 years of age who have engaged in harmful sexual behaviours. I am aware that this project is being coordinated by Tracey Curwen and is being conducted as a requirement of a doctoral program at the University of Toronto and as such is being supervised by Dr. Jennifer Jenkins of the University of Toronto. I am aware that the agency that I am employed with has been identified to participate in the project as we conduct assessments of children under 12 who fit the research criteria. I have been asked to participate, as I am currently involved in the assessments of children who engage in sexual behaviours.

I understand that the information requested by the researcher will include information regarding my findings from the assessment. More specifically, the information requested will be related to the child's history, family circumstances, mental health involvement, sexual victimization, and sexual behaviours. I understand that I will complete two forms. The first form will require me to provide demographic information on the child's family composition, academic and social service history, past treatment, and medications. I understand that the second form will require me to rate a number of variables as present, partially/possibly present/not present for the child or whether the information is unknown.

I understand that this information is specifically being collected as a means of identifying factors associated with recidivism. I understand that if I choose not to participate in this project, that this decision will not change my roles and responsibilities in my current position. I also understand that I am free, at any point, to discontinue my participation with the project. I am also aware that should I choose to participate in this project, the services provided to my clients will not be impacted in any way and that I should not change the manner in which I provide the services.

I am aware that identifying information will never be provided to the researcher and, therefore, will never appear in any research report. I am aware that each child's information will be combined with that of other children and will be presented as averages from groups of individuals. I am aware that the information gathered for this research will assist with the investigation into the consequences of inappropriate sexual behaviours. Along with the completion of a doctoral dissertation, aspects of the research may be presented at conferences and/or published in peer-reviewed journals. I am also aware that this agency will be provided a copy of the research results and that I will be permitted access to this should I request it. I understand that this research will assist treatment providers in their work with those children who have been identified as engaging in inappropriate sexual behaviours and their families.

I have read this consent form and the accompanying letter and I understand the contents. Any questions that I had have been answered to my satisfaction. I hereby consent to participating in this research project by completing the required data collection forms.

Participant's Name

Today's Date

Participant's Signature

Signature of Witness

Appendix B: Inclusion Criteria

**<12ASRP Project
Inclusion Criteria**

Child must have been **under 12** the last time they were known to have engaged in a sexual behaviour against another.

Child **MUST** be in the **low average** or above range of Intelligence (IQ).

Child **MUST** have a victim (e.g. excessive masturbation in private as only sexual behaviour does not qualify)

The child must **ALSO** meet at least one of the following criteria to be eligible for inclusion.

The category must be related to the child's sexual behaviour (please check all that apply).

At least one of the child's victims was

- 3 or more years younger
- Developmentally younger (e.g. developmentally delayed)
- Physically much smaller
- the child was in a position of responsibility over at least one victim (e.g. babysitting, older sibling, caretaker)

- the child dominated at least one of their sexual behaviour victims
- the child threatened at least one of their sexual behaviour victims
- the child used coercion to gain compliance with at least one victim
- the child used force against at least one of their victims
- the child has engaged in voyeurism
- the child has exposed him/herself and this was unwanted by at least one victim
- the child has self-stimulated in public (e.g. at school on a number of occasions and in view of others).
- the child has had sexual contact with an animal:
 - pet - type _____
 - other animal (not a pet) _____