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**Implicit and Explicit Emotional Congruence with Children in Sexual Offenders
against Children: A Multi-Method Examination and Cumulative Meta-Analysis**

by

Ian V. McPhail

A thesis submitted to
the Faculty of Graduate and Postdoctoral Affairs
in partial fulfillment of the requirements for the degree of

Master of Arts

in

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Abstract

Emotional congruence with children (ECWC) is argued to play a role in the aetiology child sexual abuse and has a predictive relationship with sexual recidivism. The current study adapted a measure of implicit cognition, the Implicit Association Test (IAT), to assess ECWC in 13 extrafamilial sexual offenders against children, 8 intrafamilial offenders, 17 non-sexual offenders, 9 sexual offenders against adults, and 54 students. Explicit ECWC was assessed with the Children and Sex Questionnaire, the Child Identification Scale-Revised, and the Repertory Grid. Results show that, generally, extrafamilial sexual offenders against children reported significantly higher levels of implicit and explicit ECWC. A cumulative meta-analysis incorporated findings with previous research comparing sexual offenders against children and non-sex offenders on measures of ECWC. Presented results support quantitative trends found in past research and suggest that the IAT may be valuable in understanding how these offenders perceive themselves and children.

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Implicit and Explicit Emotional Congruence with Children in Sexual Offenders against Children: A Multi-Method Examination and Cumulative Meta-Analysis

Sexual attraction to children occurs in a complex social network in which the potential victim may have multiple meanings for the offender, not all of which are purely physical.

(Howells, 1979, p. 526)

In theory and research, emotional congruence with children has been identified as a construct that may play an integral role in the aetiology of sexual offences against children. Theory on child sexual abuse opines that certain sexual offenders against children identify themselves with children more so than adult males who do not commit these acts (Finkelhor, 1984). The empirical literature has examined multiple facets of this construct; however, the research to date has relied on self-report methodologies (i.e., questionnaires) and may be providing an incomplete understanding of emotional congruence with children by failing to assess other aspects of cognition associated with this construct. The current research will assess differences in emotional congruence with children between sexual offenders against children (SOC¹) and non-sexual offenders using the Implicit Association Test (Greenwald, McGhee, & Schwartz, 1998) in order to assess aspects of this construct not measured by self-report methodology.

Providing a more comprehensive understanding of psychological constructs that are plausibly involved in the aetiology of child sexual abuse and have an empirically established link to recidivism may contribute to more accurate assessment and treatment strategies (Craig,

¹ There will be numerous acronyms used throughout this manuscript. To facilitate apprehension, Table 1 provides a comprehensive list of acronyms and their phrasings.

Browne, Stringer, & Beech, 2005; Mann, Hanson, & Thornton, 2010; Stermac & Segal, 1990). Emotional congruence with children has been empirically identified as a predictive risk factor (Beech, Friendship, Erikson, & Hanson, 2002; Hanson, Harris, Scott, & Helmus, 2007; Hanson & Morton-Bourgon, 2004, 2005; Thornton, 2002) and is a plausible causal factor of child sexual abuse. The current study, by using implicit and explicit measurement methodologies to assess emotional congruence with children, aims to further our understanding of this construct.

Theories Involving Emotional Congruence with Children

Finkelhor's Four Factor Model of Pedophilia

Finkelhor (1984) constructed a framework from existing theoretical and empirical literature on the causes of child sexual abuse. The Preconditions Model identifies major motivating factors for sexually abusive behaviour toward children and argues that non-sexual motivations play an important aetiological role in child sexual abuse. The factor in Finkelhor's (1984) Preconditions Model that describes non-sexual motivations of sexual offending is *emotional congruence* (Finkelhor, 1984; Araji & Finkelhor, 1985; Finkelhor & Araji, 1986). Emotional congruence is defined as the individual pursuing a relationship with a child due to a perceived fit between the individual's emotional needs and a child's characteristics (Finkelhor, 1984). The individual may be psychologically like a child and desire to relate to children in order to have companionship and love or to work out childhood issues (Bell & Hall, 1971). Another aspect of emotional congruence is that SOC strongly identify with their self when they were a child, resulting in a child-like self-image. While this explanation is derived from psychodynamic theories (Fraser, 1976), the underlying theme is empirically relevant: an association of self with childhood and youth is a possible mitigating factor for subsequent sexual behaviour. Also, included in the emotional congruence factor are early efforts to classify SOC based on behaviour

that indicate certain offenders as having immature sexual responses and a natural attraction to children (Fitch, 1962). Emotional congruence suggests children are a primary source of emotional gratification for SOC.

The Integrated Theory of Sexual Offending

More recently, emotional congruence has been subsumed into the Integrated Theory of Sexual Offending (ITSO; Ward & Beech, 2006) after a series of critiques argued the conceptual difficulties and inconsistencies in Finkelhor's Preconditions Model (Beech & Ward, 2004; Howells, 1994; Ward & Hudson, 2001). Inconsistencies arise within the Preconditions Model due to the disparate theoretical traditions that Finkelhor was utilizing when constructing the model and the conceptualization of emotional congruence (Howells, 1994). Another issue is the equivocal empirical evidence exploring what characteristics SOC find attractive about children (see Howells, 1979; Horley, 1988). The main critique of previous conceptualizations of psychological vulnerabilities,² to which emotional congruence can be considered to belong, is that the underlying causal mechanisms of these vulnerabilities are not identified (Ward & Beech, 2006). ITSO is a theoretical attempt to place these psychological vulnerabilities within a causal framework that uses neurobiological descriptions to understand how these vulnerabilities come to affect individuals. Within the ITSO, causes of psychological vulnerabilities found in previous theories of sexual offending are modelled as a confluence of brain development, ecological factors, and neuropsychological functioning. Of specific importance to the current discussion is the *motivational/emotional system*, which is associated with the cortical, limbic, and brainstem

² Vulnerabilities can be understood to mean psychological risk factors that contribute to child sexual abuse. These vulnerabilities are what have been conceptualized in the sex offender literature as stable dynamic risk factors (Hanson & Harris, 1998, 2000; Thornton, 2002) or psychologically meaningful risk factors (Mann, Hanson, & Thornton, 2010).

structures in the brain (Ward & Beech, 2006, p. 53). The motivational/emotional system functions to “allow goals and values to influence both perception and action selection rapidly and to adjust motivational state to fit changing environmental circumstances” (Pennington, 2004 as cited in Ward & Beech, 2006; p. 53). Developmental difficulties, such as an emotionally abusive/neglectful upbringing or poor parental attachments may produce deficiencies in this system and result in difficulty accurately identifying emotions relevant to offending behaviour or an inability to establish intimate relationships. ITSO proposes that problems in the various neurological systems will produce the aforementioned psychological vulnerabilities and clinical symptoms generally associated with sexual offending. The clinical symptoms and behaviours associated with emotional congruence are considered to be the result of deficiencies within the motivation/emotional system due to the affective aspects of the above described set of symptoms. ITSO, in effect, reconceptualises emotional congruence as a set of clinical symptoms that are caused by neurobiological functioning, genetic and environmental determinants of brain development, and ecological factors, such as poor parental attachment.

Massachusetts Treatment Center: Child Molester 3 Typology

A behavioural index of a construct that has been associated with emotional congruence (see Hanson & Morton-Bourgon, 2004) is the Interpersonal Type found in the Massachusetts Treatment Center: Child Molester 3 typology (MTC:CM3; Knight & Prentky, 1990). The MTC:CM3 typology bases the categorization of extrafamilial SOC on various sets of behavioural criteria. Within the MTC:CM3 typology, one of the primary discriminators is Amount of Contact with Children, of which the Interpersonal Type is an outcome. This decision point is of primary importance within the typology because a high amount of contact indicates a propensity of the individual for placing themselves in close proximity with children. A sexual offender

against children is classified into the Interpersonal Type if he meets three criteria. First, the SOC spends a high amount of time with children in multiple social contexts. Second, there is evidence that the SOC has attempted to establish and maintain interpersonal relationships with children that are perceived as mutually satisfying (Knight, Carter, & Prentky, 1989). Third, the sexual behaviour that the individual engages in is non-orgasmic in orientation, such as mutual fondling or caressing, and there are multiple contacts with a single child. These criteria indicate that the motivation for contact and the quality of relationships formed with children may be important behavioural components that differentiate offender types. For example, those SOC classified in the Interpersonal Type are generally differentiate from exploitative and aggressive types of offenders (Knight, 1989).

Empirical Research on Emotional Congruence with Children

There have been a number of empirical evaluations of emotional congruence with children in SOC samples to examine the criterion and predictive validity of the construct. An early study assessed the factor structure and face validity of the Children Identification Scale-Revised, a self-report scale that measures an individual's level of cognitive and emotional affiliation with children and over-identification with childhood (Wilson, 1999). The scale was administered to homosexual pedophiles,³ heterosexual pedophiles, heterosexual nonpedophilic incest offenders, sexual offenders against adults (SOA), and nonsexual offenders recruited from private psychology clinics, community based relapse prevention treatment programmes, a provincial treatment centre, and federal correctional institutions. Factor analysis identified the items as

³ We have chosen to discuss this type of offender as *sexual offenders against children*. However, if different terminology was used in a cited article, the original terminology was retained for the current discussion. For example, homosexual pedophiles, SOC-EMV, or child molesters with unrelated male victims may be considered functionally equivalent.

loading onto eight factors, three of which were able to meaningfully differentiate groups. The Immaturity factor measures the inclination of an individual to interact with children on the child's level; the Mentoring factor measures an interest in helping children in various activities while maintaining an adult role; and the Start Life Over factor reflects a wish to restart life. Homosexual pedophiles and nonsexual offenders scored significantly higher than the three other groups on the CIS-R total score, while the former scored higher than all groups on the Immaturity factor (medium to large effect sizes, Table 1) and the latter scoring significantly higher than incest, heterosexual pedophiles, and SOA on the Start Life Over factor. For the Mentoring factor, SOA and nonsexual offenders scored significantly higher than the intrafamilial offenders. These findings suggest that the Immaturity factor may measure certain aspects of emotional congruence with children that are identifying features of how SOC with male, extrafamilial victims relate to children. Other factors, such as enjoying children's activities and empathy for children, did not differentiate groups. This preliminary research suggests that one of the more important facets of emotional congruence, as measured by the CIS-R, for differentiating groups is an individual's interactional style with children at the child's level.

A second CIS-R study administered the scale to extrafamilial SOC, intrafamilial SOC, SOA, violent nonsexual offenders, and nonviolent, nonsexual offenders (Stirpe, 2003). The three factors that were found to differentiate between groups in Wilson's (1999) study were used in the analysis. A multivariate analysis of variance found significant differences between the groups for the factors. Subsequent analysis demonstrated that the extrafamilial SOC had higher scores than all other groups on the Immaturity scale (Table 1). Although the differences between the intrafamilial group and other groups was not significant, there was a medium sized effect ($d = 0.56$) between the intrafamilial and nonviolent, nonsexual offender group on the Immaturity

factor. In contrast to Wilson's (1999) finding, the extrafamilial SOC reported significantly higher scores on the Start Life Over factor than the nonviolent non-sex offenders. Research administering the CIS-R to SOC and non-SOC groups has shown equivocal results that indicate some support for the measure's ability to distinguish between extrafamilial SOC and non-sex offender groups, as well as intrafamilial offenders. However, the most powerful factor in the CIS-R for differentiating groups was the Immaturity factor, which appears to most closely represent emotional congruence as conceptualized by Finkelhor (1984). These findings suggest extrafamilial SOC, especially those with male victims, have a higher level of emotional congruence with children than other groups assessed.

A second self-report scale developed to measure emotional congruence with children⁴ is the Children and Sex Questionnaire's Emotional congruence scale (CSQ:ECWC; Beckett, 1987). The CSQ:ECWC assesses the emotional significance of children to an individual and how well an individual can relate to and understand the perceived thoughts, feelings, and concerns of children. Relatively high levels may be viewed as problematic, especially for individuals who are not parents, whereas, relatively low levels may be problematic for parents (Beech, Fisher, & Beckett, 1998). An evaluation of the sex offender treatment program (SOTP) in the United Kingdom administered the CSQ:ECWC to offenders undergoing treatment in the prison system (Beech, Fisher, & Beckett, 1998). Pre-treatment scores on the CSQ:ECWC show extrafamilial SOC (non-parents) report higher levels than both intrafamilial offenders and nonsexual offenders who are not parents (Table 1). Intrafamilial offenders, however, reported significantly lower levels of emotional congruence with children than nonsexual offenders who are parents. These

⁴ *Emotional identification with children* and *emotional congruence* are used relatively interchangeably in the literature, given the similarity in definition of the terms. We use *emotional congruence with children* when discussing the construct of interest to reflect current usage.

findings suggest that extrafamilial SOC may show higher levels of emotional congruence with children than intrafamilial offenders, who, as parents, may need to emotionally withdraw from their children in order to commence and maintain offending behaviour (Beech et al., 1998).

Beech (1997) used an agglomerative cluster analysis to derive a Deviance categorization based on SOC's scores on a battery of psychometric tests that measure functioning in a number of domains relevant to sexual offending. SOC were classified to the High Deviance category if they had high scores on a number of the psychometric tests and were found to be socially inadequate, such as being emotionally fixated on children, sexually obsessed, and having distorted views of victims and children in general. These offenders, as a group, had a higher number of victims, a higher level of sexual recidivism risk, more extrafamilial and male victims compared to the Low Deviance offender cluster. On the CSQ:ECWC, High Deviance SOC had significantly higher scores than the Low Deviance group and a non-offending control group (Table 1). A second study using these psychometrically derived typologies found similar results in terms of differences in victim characteristics, risk level, and levels of emotional congruence with children (Beech, 1998). However, Mandeville-Norden and Beech (2009) found a three factor solution using the same psychometric measures and noted the only difference between groups in offence characteristics was that the high deviance cluster had a higher number of extrafamilial victims. This deviance classification scheme appears to need further clarification, however, these studies suggest that SOC who report the highest levels of emotional congruence with children present a higher level of static recidivism risk and have more extrafamilial and male victims.

In a large sample of SOC and SOA ($n = 481$), levels of emotional congruence with children were compared between groups (Underhill, Wakeling, Mann, & Webster, 2008). A secondary

purpose of this study was to examine the hypothesis that SOC compensate for intimacy deficits with adults by using children as substitutes to meet their emotional needs. The pattern of results show SOC with male victims and SOC with both male and female victims to report higher levels of emotional congruence with children than intrafamilial offenders, extrafamilial SOC with female victims, and SOA (Table 1). These results support previous findings that suggest more deviant SOC, indicated by victim gender and relationship to victim, score significantly higher than other sex offender groups. In additions to these findings, the relationship between emotional congruence with children and intimacy deficits was not significant, indicating that those offenders who had higher levels of emotional congruence did not report more intimacy deficits with adult women. This research supports the notion that these offenders approach children out of a perceived similarity and enjoyment of children, rather than due to an inability to succeed with other adults.

In preliminary follow-up research, the Deviance typologies that incorporate scores on the CSQ:ECWC have been found to be associated with rates of sexual recidivism. High deviance offenders sexually re-offended at a rate approximately 13 times that of the Low deviance offenders (Beech, Friendship, Erikson, & Hanson, 2002). Including psychometric measures of dynamic risk, of which the CSQ:ECWC scale is one measure, increased the level of predictive accuracy of actuarial assessment alone. This indicates that psychometrically assessed dynamic variables contribute additional information when predicting recidivism. Thornton (2002), using a classification system incorporating the CSQ:ECWC, found that psychometrically assessed dynamic risk variables had a moderate predictive accuracy for sexual recidivism ($AUC = .78$). This research provides preliminary support that emotional congruence with children may be adding risk relevant information when predicting sexual recidivism.

Thornton (2002) suggests that socio-affective functioning is a domain containing dynamic variables that are related to an individual's treatment need and recidivism risk. Emotional congruence with children is one of the four aspects of the socio-affective functioning domain that may provide relevant information when conducting an assessment of risk. In support of this hypothesis, Thornton (2002) found a moderate effect size between repeat SOC and first-time SOC on the CSQ:ECWC scale in a retrospective study (Table1).

A study examining Beech's deviance typology as a means of assessing recidivism risk provides further evidence that emotional congruence with children may provide a high level of discriminatory power within this classification system (Beech & Ford, 2006). A discriminant function analysis was conducted with eight self-report measures of socio-affective constructs, cognitive distortions, personal distress, and locus of control. The results of this analysis showed that the CSQ:ECWC scale contributed the most discriminatory power when classifying offenders into the High and Low deviance categories, suggesting that this construct strongly contributes to the deviance typology, which has preliminary association with sexual recidivism. This study found that High deviance SOC were more likely to re-offend than Low deviance SOC. This research indicates that emotional congruence with children in SOC may contribute a substantial proportion of risk relevant information compared to other dynamic risk factors.

In a meta-analysis of recidivism studies, Hanson and Morton-Bourgon (2004) examined the literature to find predictor variables of sexual and other types of recidivism. Emotional congruence with children was identified as being moderately predictive of sexual recidivism ($d = .42$, $N = 419$, 95% CI = .16 - .69). This predictor included descriptions of self as being emotionally closer to children than adults, having a child orientated lifestyle, or having children as friends.

Table 2

Summary of Self-report Research on SOC's Emotional congruence with Children

Study	Groups	Measures	Results
Wilson (1999)	Heterosexual pedophiles ($n = 51$) Homosexual pedophiles ($n = 38$) heterosexual nonpedophilic incest offenders ($n = 51$) NSO ($n = 24$) SOA ($n = 22$)	CIS-R	Homosexual pedophiles scored significantly higher on Immaturity factor than the incest offenders ($d = 0.84$), heterosexual pedophiles ($d = 0.66$), and SOA ($d = 0.70$) groups
Stirpe (2003)	SOC-E ($n = 22$) SOC-I ($n = 19$) SOA ($n = 20$) Violent NSO ($n = 20$) Non-violent NSO ($n = 20$)	CIS-R	SOC-E significantly higher than SOC-I ($d = 0.66$), SOA ($d = 0.88$), violent NSO ($d = 0.79$), and non violent NSO ($d = 1.33$) on Immaturity factor. SOC-I higher than SOA ($d = 0.22$), violent NSO ($d = 0.13$), and non-violent NSO ($d = 0.56$), none of these differences are significant
Beech, Fisher, & Beckett (1998)	SOC-E ($n = 28$) SOC-I ($n = 49$) NO ($n = 81$)	CSQ:ECWC scale	SOC-E vs. SOC-I: $d = 0.51$ (95% CI = 0.04 – 0.98); SOC-E vs. NO: $d = 0.16$ (95% CI = -0.64 – 0.32); SOC-I vs. NO: $d = -1.07$ (95% CI = -0.62 to -1.51)
Beech (1997)	SOC Cluster 1 (Higher Deviance; $n = 26$) SOC Cluster 2 (Lower Deviance; $n = 33$) NO ($n = 81$)	CSQ:ECWC scale	Cluster 1 vs. 2: $d = 1.35$ (95% CI = 0.79 – 1.92); 1 vs. NO: $d = 0.60$ (95% CI = 0.15 – 1.05); 2 vs. NO: $d = -0.57$ (95% CI = -0.16 to -0.99)
Beech (1998)	High Deviance SOC cluster ($n = 51$)	CSQ:ECWC scale	High vs. Low: $d = 1.40$ (95% CI = 1.02 – 1.78);

	Low Deviance SOC cluster ($n = 89$) NO ($n = 81$)		High vs. NO: $d = 0.62$ (95% CI = 0.26 – 0.98); Low vs. NO: $d = -0.77$ (95% CI = 0.46 to 1.08)
Mandeville-Norden & Beech (2009)	SOC Cluster 1 (Social Adequacy deficits; $n = 85$) SOC Cluster 2 (Victim Empathy deficits; $n = 225$) SOC Cluster 3 (Global Problems; $n = 125$)	CSQ:ECWC scale	Cluster 3 vs. 2: $d = 0.62$ (95% CI = 0.39 – 0.84); 3 vs. 1: $d = 1.02$ (95% CI = 0.73 – 1.31); 2 vs. 1: $d = 0.47$ (95% CI = 0.22 – 0.72)
Underhill et al. (2008)	SOC-EMV ($n = 49$) SOC-EFV ($n = 109$) SOC-I ($n = 182$) SOA ($n = 99$)	CSQ:ECWC scale	SOC-EMV scored significantly higher than SOC-EFV ($d = 0.46$), SOC-I ($d = 0.60$), and SOA ($d = 0.39$)
Thornton (2002)	Repeat SOC ($n = 54$) First offence SOC ($n = 104$)	CSQ:ECWC scale	Repeat offenders scored higher than the first offence SOC ($d = 0.51$, 95% CI = 0.18 – 0.85)
Beech & Ford (2006)	SOC ($n = 51$) NO ($n = 81$)	CSQ:ECWC scale	SOC vs. NO: $d = 0.55$ (95% CI = .16 – 0.93)

Based on these, and previous findings (i.e., Wilson, 1999), emotional congruence with children was included as a stable dynamic risk factor for the Stable-2007, a dynamic recidivism risk prediction instrument (Hanson, Harris, Scott, & Helmus, 2007). Emotional congruence with children had a nonlinear, significant relationship with sexual recidivism. SOC who scored highest on the factor had a sexual recidivism and sexual breach rate of 24.3%, compared to a base rate of 9.5%. These findings offer further support that the construct is predictive of sexual recidivism.

There appears to be indirect evidence that SOC who exhibit high levels of emotional congruence, as measured by psychometric measures, have higher rates of male and unrelated victims, which are considered to be two offence characteristics that are behavioural indices of

paedophilic interest (Seto & Lalumière, 2001). As such, the relationship between emotional congruence with children and indices of paedophilic interest appears to be important to examine.

The past research using self-report measures of emotional congruence with children indicate SOC with higher levels sexual recidivism risk, who are deviant in terms of victim characteristics, and have deficits in a number of domains exhibit high levels of the construct and that for these offenders, children may be a primary sexual and emotional outlet (Beech, 1998). These offenders evaluate children more positively and identify themselves more strongly with children, as indicated by scores on the measures. In addition, intrafamilial offenders report much lower levels of emotional congruence and this may be a mitigating factor in their offending pattern, as a “normal” level of identifying with the needs of children may be a characteristic of a sensitive, non-abusive parent (Beech et al., 1998). Much of this research has used psychometrically derived deviance typologies to classify SOC in which emotional congruence with children is only one construct out of many that contribute to the classifications. However, there is evidence to suggest this construct provides a high level of discriminatory power between high and low deviance SOC (Beech & Ford, 2006).

Meta-Analysis of Previous Emotional Congruence with Children Research

Meta-analyses were conducted to provide aggregate effect size estimates of differences between sexual offenders against children subtypes and multiple comparison groups on measures of emotional congruence with children. The aforementioned methods of assessing the construct are included in the meta-analyses and a single aggregate estimate may included samples assessed with the CIS-R, CSQ:ECWC, MTC:CM3 and the Stable-2007, including other methods judged to be assessing the construct (i.e., Grant-Hall, 1988). Research studies that provided sample means after grouping participants according to Beech’s Deviance cluster analysis were excluded

from analysis to prevent potentially misleading inflation of effect sizes. A number of the analyses include less than three studies, which is less than a commonly accepted minimum number of included studies to compute a meta-analytic effect size estimate (Borenstein, Hedges, Higgins, & Rothstein, 2009). It appears informative to present aggregate estimates for group differences that have been reported in less than three studies to provide the broadest scope of group differences that exist in the literature. In addition to the group comparison analyses, a cumulative estimate of the predictive relationship between emotional congruence with children and sexual recidivism was computed by adding the results of Hanson et al. (2007) to an existing aggregate estimate (Hanson & Morton-Bourgon, 2004, 2005).

Table 3 presents the results of the meta-analyses and Table 4 provides a list of the references for the studies that contributed to each aggregate effect size. Readers will note that a single study may contribute to multiple aggregate results; this is due to the original research providing information for multiple group comparisons (i.e., both SOC-E vs. SOC-I and SOC-E vs. NSO comparisons). Effect size estimates can be interpreted as small ($d = 0.30$), medium ($d = 0.50$), and large ($d = 0.80$; Cohen, 1988) and confidence intervals of aggregate effect sizes that include zero indicate a nonsignificant difference between group means.

A few trends can be found in the meta-analyses results. First, measures of ECWC generally produce small to medium effects between SOC-E groups and non-SOC groups. Second, sexual offenders with intrafamilial child victims generally report similar or lower levels of ECWC than the non-SOC groups assessed on this construct. Third, within SOC subtypes, SOC-I report significantly lower levels of ECWC than other SOC with unrelated male victims and SOC with both intra- and extrafamilial victims, but do not significantly differ from SOC with unrelated female victims. Fourth, Babchishin, Hanson, and Hermann (2010) found that online and contact

offenders did not differ significantly on ECWC. Fifth, within extrafamilial SOC samples, those offenders with any male victims reported significantly greater levels of ECWC than those offenders with only female victims ($d = 0.51$). Finally, with the addition of a new dataset, ECWC has a significant and medium sized predictive relationship with sexual recidivism. The research studies included consistently show that SOC with extrafamilial victims, especially male victims, report the highest levels of ECWC, with exception of the comparison to non-offenders. These results suggest that high levels of ECWC may be a factor that contributes mainly to the offending patterns of extrafamilial SOC.

To summarize the salient points of the theoretical work and empirical research involving emotional congruence with children in SOC, the construct appears to be important in this type of offending behaviour for the following reasons. First, it may play a role in the aetiology of child sexual abuse (Finkelhor, 1984); second, ECWC meaningfully discriminates between various subtypes of SOC & non-SOC; third, ECWC is predictive of sexual recidivism (Hanson et al., 2007; Hanson & Morton-Bourgon, 2004; Thornton, 2002). Finally, this construct has been assessed mainly with self-report measures that focus on explicit cognitions or overt behaviours, which may leave a gap in the empirical understanding of the multifaceted nature of ECWC.

Issues with Self-Report

Self-report measures have limitations that are particularly salient in the forensic context. One of the main limitations of self-report measures is susceptibility to self-presentation strategies such as social desirability and impression management (Asendorpf, Banse, & Mücke, 2002; Greenwald et al. 2002). This concern is important in forensic contexts because incarcerated sex offenders may have a vested interest in using deception to manipulate the results of an assessment (Gray, Brown, MacCulloch, & Smith, 2005; Horley, 2008; Seto, 2004; Tan & Grace,

2008). Past research has also shown that inmates are able to successfully fake good adjustment and maladjustment on self-report measures (Gendreau, Irvine, & Knight, 1973). Due to these reasons, offenders' ability and motivation to disassemble a measure and its intentions should be assessed and is a potential limitation for the use of self-report measures (Horley, 2000; Nunes, Firestone, & Baldwin, 2007; Quinsey, 1986; Walters, 1988). However, empirical data provides a caveat to this critique. Research findings suggest that self-report measures can be used to accurately predict nonviolent recidivism, violent recidivism (Loza, MacTavish, & Loza-Fanous, 2007) and institutional adjustment (Walters, 2006). Self-report methodology has shown to accurately classify different types of SOC in terms of sexual preference (Laws, Hanson, Osborn, & Greenbaum, 2000). Specific self report scales for forensic populations have demonstrated resistance to impression management in situations when socially desirable response sets are expected to skew participant responding. Loza, Loza-Fanous, and Heseltine (2007) demonstrated that the Self Appraisal Questionnaire (SAQ; Loza, 2005) is more resistant to socially desirable response sets when participants completed the SAQ for stated research purposes compared to completing the measure for early release decisions. These findings indicate that the above stated factors may affect responses on self-report measures, but this limitation to self-report methodology with forensic populations may not be severe enough to invalidate these types of measures (Loza et al., 2007).

A second limitation to self-report is there may be some information that is not accessible to introspection (Asendorpf, Banse, & Mücke, 2002; Greenwald, McGhee, & Schwartz, 1998; Greenwald et al., 2002). This may be a function of the necessary limitations that all approaches to measurement have (Kazdin, 2003). For example, information unfavourable or containing threatening evaluations of self may not be readily accessible to the individual at the time of

assessment and may not be reported on self-report methodologies. Using methodological triangulation as a research strategy to assess the psychological variables in SOC may be appropriate to further the empirical understanding of emotional congruence with children beyond that provided by self-report methodology.

Methodological Triangulation as a Research Strategy

Using methodological triangulation to assess emotional congruence with children appears to be an advisable and useful research strategy, as it is rare that a single method can completely capture a construct (Kazdin, 2003). Administering multiple assessment methods is a means of gaining breadth and depth in understanding a construct of interest (Fielding & Fielding, 1986). Emotional congruence with children has been measured using self-report questionnaire methodology, which may have the effect of limiting our understanding of this construct to a single modality (Kazdin, 2003; Meyer et al., 2001), when it is apparent that the construct is indeed multifaceted (Finkelhor, 1984; Wilson, 1999). Additional assessment methodologies may extend the empirical understanding of this construct by contributing unique information that is not provided by or accessible via a single assessment method (Flick, 2004; Meyer et al., 2001). In psychological research, a potential benefit of adopting this research strategy would be that if various sources of data (i.e., multiple measures) provide evidence for a hypothesis, the confidence that the construct is being assessed increases (Kazdin, 2003). However, Fielding & Fielding (1986) argue that employing multiple measures does not necessarily increase validity and provide agreement between measures, but may add depth and range to the empirical information gained by the research. This research strategy may provide a more complete understanding of emotional congruence with children in SOC and more accurate prediction of

behaviour (Kazdin, 2003). Indeed, Webster and Marshall (2004) argue that using multiple methodologies can do nothing but expand and reinforce our knowledge of sex offenders.

Implicit and Explicit Cognition

Before moving into a full discussion of implicit cognition and how it can relate to emotional congruence with children, it is prudent to discuss the differences between implicit and explicit cognition. Implicit cognition includes implicit attitudes, stereotypes, and self-esteem (Greenwald & Banaji, 1995). Implicit cognitions are judgements and evaluations about social information, social groups, self, and others that are automatically activated by social stimuli and are outside of conscious awareness (Greenwald & Banaji, 1995). The key assumption is that implicit cognitions are not readily accessible to introspection or conscious awareness, whereas we are consciously aware of, are able to introspectively reflect upon and have access to explicit attitudes at the time they are accessed (Fazio, 2001). Implicit cognitions are commonly assessed using response time measures (Greenwald & Banaji, 1995; Greenwald, McGhee, & Schwartz, 1998).

Measures that evaluate implicit and explicit cognitions have demonstrated the ability to assess criterion variables, but account for different aspects of the predicted variance. In a recent meta-analysis, implicit and self-report measures showed incremental predictive validity by predicting unique variance in a behavioural criterion that was not predicted by the other type of measurement (Greenwald, Poehlman, Uhlmann, & Banaji, 2009). For example, explicit attitudes towards condom use were predictive of condom use in situations that allow more deliberate thinking and implicit attitudes predicted condom use when automatic processes were more influential (Czopp, Monteith, Zimmerman, & Lynam, 2004). Other research has shown these two types of attitudes to be incrementally predictive of anxiety (Egloff & Schmuke, 2002) and

different types of sexual orientation-related behaviour (Jellison, McConnell, & Gabriel, 2004). Another finding of interest is that the social sensitivity of the attitudes under assessment (e.g., racial discrimination) decreased the predictive validity of self-report measures (Greenwald et al., 2009). Given that the two types of measures have differing predictive validities, the two types of measurement may be measuring related, yet distinct aspects of psychological constructs (Hofman, Gawronski, Gschwender, Le, & Schmitt, 2005), and using both methods to assess emotional congruence with children may provide a more complete understanding of the construct.

The Implicit Association Test

The Implicit Association Test (IAT; Greenwald, McGhee, & Schwartz, 1998) was developed as a measure of implicit associations between object and evaluative categories. Its intended purpose is to measure the automatic judgements and evaluations that underlay implicit cognitions. Specifically, the IAT measures the relative strength of cognitive associations between two target concepts (e.g., CHILD and ADULT) and attribute categories (e.g., positive and negative). For example, a child evaluation IAT would assess whether an individual associates the target concept of CHILD with the attribute positive more strongly than they associate either CHILD with negative, or ADULT with positive.

The IAT is a categorization task that measures participants' response latencies for judging membership of visual stimuli into dichotomous categories via pressing one of two response keys (Greenwald et al., 1998). The visual stimuli could be pictures of faces or objects to be categorized or words that semantically belong in one of the categories (happy = positive, abuse = negative). When two sets of categories are involved in the task, the participant sorts stimuli into the four categories accordingly. At different stages of the task two categories share a response

key (e.g., CHILD and positive), while their opposite categories share another response key (e.g., ADULT and negative). Another stage requires participants to do the task with the categories reversed (CHILD and negative, ADULT and positive). The strength of the association between the paired categories is inferred from the response time of participants when sorting stimuli into the categories. The shorter the latency, the stronger the association is assumed to be, and the longer, the weaker the association. If response latencies for categorization of stimuli are shorter when CHILD and positive share a response key than when CHILD and negative share a response key, this is assumed to be indicative of a stronger implicit association of CHILD with positive.

Recent meta-analytic evidence shows that the IAT measures are useful predictors across nine domains related to social behaviour and judgement (Greenwald et al, 2009). In domains that were socially sensitive, such as interracial behaviour, the IAT had significantly greater predictive validity of these types of behaviour than self-report measures. As has been suggested in previous research using the IAT (see Brown, Gray, & Snowden, 2009; Nunes, Firestone, & Baldwin, 2007), this assessment measure may be of utility with forensic populations due to its resistance to self-presentation strategies and provide a sensitive measure of attitudes on socially sensitive topics that participants may be reluctant to express (Greenwald et al., 2009). Recently, the IAT has been applied in research settings involving sex offender populations (see Table 4). A meta-analysis of studies using IAT measures of sexual interest in children reports that children are implicitly associated with sex more so than adults are associated with sex by SOC compared to non-SOC samples ($d = .70$, $k = 7$, Babchishin, 2009). This meta-analysis provides preliminary evidence that the IAT may be a sensitive measure of constructs relevant to child sexual abuse.

Table 5

Summary of IAT Research with Sex Offender Populations

Study	Group	IAT Measure	Results
Babchishin (2009)	SOC ($n = 35$) NSO ($n = 21$)	Sexual Attraction to Children IAT	There was a non-significant difference between groups ($d = 0.43$, 95% CI = $-0.12 - 0.98$)
Banse, Schmidt, & Clarbour (2010)	SOC ($n = 38$) NSO ($n = 37$) NO ($n = 38$)	Boys-Men sex IAT Girls-Women sex IAT Men-Women sex IAT	The girls-women, men-women, and averaged children adults IATs produced group main effects with SOC having stronger child-sex associations than non-SOC participants
Brown, Gray, & Snowden (2009)	Pedophile SOC ($n = 54$) Hebephile SOC ($n = 21$) NSO ($n = 49$)	Abbreviated <i>child</i> -SEX IAT	Stronger associations of <i>child</i> with SEX for pedophile SOC group ($d = 0.92^a$)
Gray et al. (2005)	SOC ($n = 18$) Non-SOC ($n = 60$)	Child-Sex Association IAT	The SOC showed a stronger association of child with sex than the non-SOC group ($d = 0.84^a$)
Kessous (2009)	SOC ($n = 34$) NSO ($n = 21$)	Attitudes toward Child Sexual Abuse IAT	SOC did not show more tolerant attitudes toward CSA ($d = .08$)
Milhailides, Devilly, & Ward (2004)	SOC ($n = 25$) NSO ($n = 25$) Male control ($n = 25$) Female control ($n = 25$)	<i>sex</i> -CHILDREN IAT <i>sex</i> -CONTROL IAT sexual entitlement IAT	Stronger association of <i>sex</i> with CHILDREN ($d = 0.63$), losing control ($d = 0.82$), and entitlement ($d = 0.69$) for SOC compared to other groups
Nunes, Firestone, & Baldwin (2007)	SOC ($n = 27$) NSO ($n = 29$)	<i>pleasant</i> -SELF IAT <i>powerful</i> -SELF IAT <i>sexy</i> -SELF IAT <i>pleasant</i> -CHILD IAT <i>powerful</i> -CHILD IAT <i>sexy</i> -CHILD IAT RRASOR, Static-99	Stronger association of <i>sexy</i> with CHILD for SOC ($d = 0.66$). <i>sexy</i> -CHILD IAT correlated with Static-99 ($r = .43$, $p < .05$)
Steffens et al.	SOC ($n = 16$)	Child-erotic IAT	SOC reported a

(2008)	non-SOC ($n = 30$)	Humiliation-erotic IAT	significantly stronger association of child with erotic compared to the non-SOC group ($d = 0.53^a$). There were no group differences for the humiliation-erotic IAT
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Note. ^a Denotes an effect size estimate reported in Babchishin (2009).

As with most measures of unobservable psychological constructs, the IAT has undergone criticism and critique since its development. One of the major critiques of the IAT is that the interpretations of IAT effects need to be tempered and not extended beyond the empirical and conceptual evidence of what these effects may represent (Blanton & Jaccard, 2008; Fiedler, Messner, & Bluemke, 2006; Gawronski, 2009; Gawronski, LeBel, & Peters, 2007). From these critiques, it appears prudent to restrict the interpretive claims (i.e., the IAT is not a lie detector; Gawronski, 2009) that one places on the IAT effects produced in the context of a single research study (Nosek, Greenwald, & Banaji, 2007). Other critiques discuss the issues relating to the psychometrics of IATs and the arbitrary nature of IAT metrics (Blanton & Jaccard, 2006, 2008). However, recent meta-analyses provide summaries of the research literature on predictive and convergent validity and indicate that the IAT has value in these and other validity domains (Greenwald et al., 2009; Greenwald, Nosek, & Sriram, 2006; Hofman et al., 2005). In addition, the effects of extraneous influences and methodological variations on IAT response latencies have been raised (Fiedler et al., 2006). An improved algorithm has been developed to account for some extraneous influences on IAT effects (Greenwald et al., 2003). To provide guidelines for the development of novel IATs, IAT researchers have produced a set of standards for IAT methodology development for assessing specific hypotheses (Lane et al., 2007). Although a number of critiques have been made of the IAT, this technique has shown to be useful in

predicting behaviour in social psychology research and assessing known-groups validity in sexual offenders against children research (Babchishin, 2009). Despite these limitations, it may be reasonable to explore the potential of this measure in assessing risk factors, such as emotional congruence with children, in sex offender samples.

The Repertory Grid Technique

Webster and Marshall (2004) support the use of triangulation in research with sex offenders. Using qualitatively oriented methods in addition to quantitative methods can lead to surprising discoveries and can strengthen the validity of theoretical propositions and empirical results. A technique that nominates itself to provide a measure of the potential qualitative-interpretive aspects of emotional congruence with children is the Repertory Grid (Rep Grid; Kelly, 1955). Recently, Horley (2008) has argued that the Rep Grid and IAT share similarities that make them potentially comparable techniques. The Rep Grid provides an interpretive dimension to the analysis of individuals' understanding of their social world (Fransella & Bannister, 1977). This technique allows individuals to provide qualitative content to the perceived similarities between themselves and social others, such as children or adults. The data provided by participants is amenable to quantitative analysis in order to provide a measure of a psychological construct comparable to the outcomes of the other assessment measures in a research design. Incorporating a qualitative, interpretive technique into a design will provide a multi-faceted approach to more fully assess the construct of interest (Craig, Thornton, Beech, & Browne, 2007).

The Rep Grid (Appendix E) is a sorting task that requires participants to categorize others on the basis of a number of bipolar constructs and is theoretically derived from personal construct theory (PCT; Adams-Webber, 1990; Fransella & Bannister, 1977; Kelly, 1955). In PCT, elicited

personal constructs are verbal indications of how an individual understands others (Kelly, 1955). The Rep Grid elicits an individual's bipolar constructs via asking her to provide descriptions about how groups or individuals are similar to each other and different from others using a triadic-discrimination method. Participants are asked to consider a triad of individuals they know and use evaluative statements to describe how two out of the set are similar to each other, yet different from a third individual. This technique provides an understanding of how an individual, or group of individuals, perceives others they encounter.

The approach to assessment of the Rep Grid provides unique information from that provided by other self-report measures (Fransella & Bannister, 1977; Kelly, 1955). Kelly (1955) outlines this difference in approach. A limitation of questionnaires is that they are designed using a researcher's yardstick of professional constructs and participants are plotted along the specified measurement scale depending on their responses to a series of true/false or Likert-type questions. These quantitative yardsticks are not necessarily salient for the respondents. In contrast, the Rep Grid assumes that the participants have their own yardsticks (i.e., constructs) for understanding events, others, and themselves and is a method of eliciting these constructs. The data provided by participants on the Rep Grid is qualitative in nature, but a strength of this technique is that these elicited responses can be quantitatively analyzed and used for group comparisons. This is important in the current research because group scores on the dependent measures will be compared with one another. The statistical analysis that is available for the Rep Grid will allow the findings on this technique to be directly compared with the other measurement methods used in the design (see Method). As suggested earlier, qualitative and quantitative methodologies can validate each other in a specific research context (Milner & Webster, 2005). Though the assumptions behind Rep Grid and questionnaire methodology may be divergent, the methods

may be combined to provide a more in-depth understanding of a construct of interest (Kazdin, 2003). Stemming from the triangulation argument presented above and the empirical association of emotional congruence with children with sexual recidivism, this construct has only been assessed with questionnaire methodology and there is an empirical need to determine whether these research findings are restricted to one method of assessment (Kazdin, 2003). If multiple methodologies corroborate a research hypothesis, then confidence is increased in the findings; however, divergent findings with multiple methods may make interpretation of results complex and is a potential drawback to this approach.

The Rep Grid, like the IAT, is also a flexible measurement technique that can be amended to specific research contexts to discern group differences on certain constructs of interest (Fransella & Bannister, 1977; Widom, 1976). For example, the Rep Grid has been adapted as a measure of sex role identification in males and females (Giles & Rychlak, 1965), or to examine how primary psychopaths interpret various interpersonal situations compared to secondary psychopaths and controls (Widom, 1976; see Table 3). The form of the Rep Grid remains constant (i.e., asking participants to provide personally relevant bipolar constructs), however, the people that participants are asked to categorize are changeable, depending on the construct of interest to the research (Fransella & Bannister, 1977).

Two drawbacks of the Rep Grid are that research with sex offender populations has produced equivocal results, and it has not been used as a measure of emotional congruence with children. However, like the IAT, this latter limitation may be less of a concern because previous research using the Identification form of the Rep Grid to differentiate sex role identification between males ($d = 0.99$) and females ($d = 0.43$) has provided evidence for the criterion validity of the Identification form (Giles & Rychlak, 1965). This form of the Rep Grid has also been applied in

social cognition research to examine evaluations of self and social others (for review see Adams-Webber, 1990). A robust finding in Rep Grid research is various populations report a self-positivity bias, including depressed patients (Neimeyer & Feixas, 1992; Space & Cromwell, 1980), psychiatric outpatients (Badesha & Horley, 2000), and adolescents (Adams-Webber, 1985).

Repertory Grid Research with Sex Offenders

Howells (1979) administered a set of General form Rep Grids to examine the social cognitions of extrafamilial SOC to gain an understanding of what makes a child an attractive or viable partner for this population. The SOC group, compared to non-sex offender participants, described adults as more dominant/controlling and described self or child victims as submissive. Howells concluded that children may play the role of a sexual partner for these offenders due to the perceived domineering characteristics of adults, whereas children are more submissive, and the offender can exert dominance and control over them. For this sample of SOC there was an important social component to their construal of child victims.

A subsequent replication of Howells (1979) claimed the former's results may have been due to statistical artefact of conducting multiple *t*-tests (Horley, 1988). The dominant-submissive construct was not found to be prominent for SOC when construing social others. This discrepancy may have been due to the presumed homogeneity of the groups used in either study and grouping participants (i.e., based on victim characteristics) may produce group differences. As Horley (1988) notes, SOC are a heterogeneous population and examining differences between subgroups is an important issue in research design (see also Knight, Carter, & Prentky, 1989).

Other research has provided partial support for the sensitivity of the Rep Grid as a measure of SOC's cognition (Horley & Quinsey, 1995; Horley, Quinsey, & Jones, 1997). Horley and Quinsey (1995) found that SOC with female victims used more external appearance constructs to describe self and social others, whereas SOC with both male and female victims used more self-sufficiency and emotional-expression constructs. A second study showed paraphilic SOC (i.e., those who show and report deviant sexual preference for children) used more sexual constructs to describe children than the non-paraphilic SOC. This finding lends partial support for the previous research findings. The Rep Grid has been utilized to analyze the amount of identification with children employed by regressed and fixated SOC (Pfenninger, 1990). Fixated SOC had more victims, were more likely to have younger and male victims, and have a history of sexual abuse compared to regressed offenders, who were more likely to be intrafamilial SOC. The fixated SOC were found to report stronger identification of their selves with children, and this group had greater linkage of their psychological identity to children. This research provides some preliminary evidence that the Rep Grid is a sensitive measure for measuring identification with children in SOC.

One major limitation to these past research efforts that may have had an effect on the equivocal results found is the form of the Rep Grid that was employed to assess group differences. The General form of the Rep Grid that was used is open-ended without sufficient constrictions of the figures or statistical analysis used to assess specific psychological constructs. However, for the stated purpose of these researchers, the General form was the correct choice. In the current research project, the construct of interest requires a more concise and focused form of the Rep Grid, both in procedure and statistical analysis. The Identification form offers this

specificity and as stated above, appears to be an appropriate assessment tool to assess emotional congruence with children.

The Rep Grid nominates itself due to its flexibility (Fransella & Bannister, 1977; Widom, 1976), theoretical underpinnings that help guide empirical interpretation (Kelly, 1955), and the qualitative and personally relevant information that participants provide that is inaccessible to questionnaires and the IAT (Alexander & Loggarensberg, 2005; Bannister & Mair, 1968). Assessing the construct with an additional methodology may provide further understanding of this construct that has theoretical importance in the aetiology of sexual offending (Finkelhor, 1984) and sexual recidivism (Hanson et al., 2007; Hanson & Morton-Bourgon, 2004). An additional theoretical reason for the inclusion of the Rep Grid in the design is a perceived similarity between the bipolar discrimination responding in both the IAT and the Rep Grid, albeit approached from different methodologies (Horley, 2008). Within the forensic research context and the challenging populations assessed, Widom (1976) suggested the Rep Grid is a candidate technique because participants are unlikely to discern the measure's scoring procedure and find the procedure somewhat interesting compared to normal questionnaire responding, which may serve to increase participant involvement. As Howells (1983) suggests, the Rep Grid may be most useful with this type of offender because it allows the participant to explicate the means through which they interpret the world, themselves, and others, producing a fuller, richer picture of the cognitions surrounding sexually abusive behaviour.

Present Study

The main purpose of the present study is to examine the differences between SOC and non-SOC groups when assessed on the Implicit Association Test, Child Identification Scale-Revised, Children and Sex Questionnaire's Emotional congruence scale, and the Repertory Grid. In

addition, the relationships between these measures are examined to provide preliminary data on whether the dependent measures are assessing a common construct. For the SOC group, the relationship between the dependent measures and risk of sexual recidivism, as assessed by validated measures of recidivism, will be examined.

Hypotheses

Primary Hypotheses. It was expected that SOC-E will associate themselves more strongly with children and will view children as more positive when compared to non-SOC-E on the IAT measures. It was expected that SOC-E will self-report higher levels of emotional congruence with children when compared to non-SOC-E.

Secondary Hypothesis. It was expected that measures of emotional congruence with children will share positive, linear relationships with each other. It was expected that higher levels of implicit and explicit emotional congruence with children were associated with greater risk of sexual recidivism for SOC.

Method

Participants

One hundred and one adult males were recruited to participate in the current research project. Of the 101, 13 were extrafamilial SOC, 8 were intrafamilial SOC, 9 were sexual offenders against adults, 17 were non-sexual offenders, and 54 were students. Participants were inmates at federal penitentiaries in Ontario, patients at a maximum security forensic hospital in Ontario, and Carleton University undergraduate psychology students. The extrafamilial SOC group is comprised of offenders with at least one index or prior sexual offence against a child under the age of 14 years and had at least one unrelated victim. Participants were classified as intrafamilial SOC if they had at least one index or prior sexual offence against a child under the age of 14 and had no unrelated victims. NSO and SOA participants were collapsed into a single group for the analyses, as the meta-analysis presented in the introduction showed these groups to have similar sized differences with SOC groups on measures of ECWC. Participants were classified as NSO/SOA if they had committed a criminal offence, but did not have any official record or self-reported sexual offences against a child 14 years of age or younger. Carleton University students formed the non-offender, student group.

Approximately 97 offenders and patients and 64 students were solicited to participate in the current research. Of those approached, 106 agreed to participate and completed the research procedure. Three participants that self-reported previous sexual offending against a minor, but had no evidence of such offences in their official record were excluded from the analysis. Participation was voluntary and informed consent was given by all participants. Ethical approval for this study was granted by Carleton University's Ethics Committee for Psychological Research with Human Participants (Appendix A) and the Research and the Research Ethics

Committee at the maximum security forensic hospital. Permission to conduct the study in the federal penitentiaries was granted by the Correctional Service of Canada (CSC). The offender participants were not compensated for their participation. Participants recruited at the maximum security forensic hospital received \$5 remuneration for participating in the research. The nonoffender student participants received 1.5 percentage points of course credit for participation. Once the offender and patient participants completed the procedure, offence information was gathered using the Offender Management System (OMS) of the CSC or patient hospital records.

Table 6 presents sample demographic, offence, and victim characteristics and tests of the differences between groups for these characteristics.

Measures

IAT. As described in the introduction, the Implicit Association Test (IAT; Greenwald et al., 1998) is a method of assessing associations between various concepts in memory. The strength of associations between concepts is measured by participants' response latencies when categorizing stimuli into various concept-categories. The current design included two different IAT procedures, a child-identification IAT and child-evaluation IAT. The child-identification IAT is designed to measure the strength of the association of self with two social groups, children or adults. The child-evaluation IAT is designed to measure the associative strength of these social groups with the evaluative categories *positive* and *negative*.

The IAT procedure is composed of 7 blocks of trials, or sets of stimuli categorization trials. In the first block of trials of the child-identification IAT, participants categorized a set of stimulus words (Appendix B) into the categories *self* or *other* that are displayed on the left and right side of the computer screen. The first block of trials had 20 practice trials to familiarize participants with the stimulus words used and to which category they belong. The list of

stimulus words was selected from a set of words used in research with a sex offender sample (see Nunes, Firestone, & Baldwin, 2007). The second block of 20 trials is also a practice block in which the categories CHILD or ADULT are displayed on the left and right side of the computer screen and computer composite images of adult or child male faces are categorized by the participants. The pictures used in the design are computer altered so that the images are composites of multiple individuals' faces, but are not a likeness of any one individual (Pacific Psychological Assessment Corporation, 2004). These images have been used in previous IAT research with SOC populations and previously conducted pre-screening testing has shown that this population correctly identifies what categories the images belong to (Babchishin, 2009). In the third block of 20 trials, the categories of *self* and CHILD shared the left side of the screen while *other* and ADULT appear on the right side of the screen (see Figure 1). In this block, stimuli for both pairs of categories (i.e., words and images) were presented for categorization. The fourth block has the same category configuration as block 3, but presented 40 trials for the participants to categorize.

Figure 1. Placement of categories in 3rd and 4th blocks of the child-identification IAT.

In the fifth block, the position of one pair of categories was reversed on the computer screen (if *self* was on the left side of the computer screen in Blocks 1, 3, and 4, it will now appear on the

right side of the computer screen) while the keys used to assign the stimuli to a category remain constant and stimuli are categorized according to this new arrangement. These 40 trials are practice to allow participants to become familiar with the new arrangement of the categories on the screen. In the sixth block, *self* was paired with ADULT and *other* was paired with CHILD and participants categorized 20 trials of stimuli for both pairs of categories (i.e., words and pictures). The seventh block repeats this category placement and participants categorized 40 trials (see Figure 2). Within the IAT design, participants were randomly assigned and completed the IATs in the order described above, or they completed the 5th, 6th, and 7th blocks before the 2nd, 3rd, and 4th blocks. Counter-balancing within the IAT procedure helps to identify and allows for statistical removal of possible order effects that have biased performance in the second-performed combined block in previous research (Greenwald et al., 1998; Nosek, Greenwald, & Banaji, 2007).

Figure 2. Placement of categories in 6th and 7th blocks of the child-identification IAT.

The same procedure is repeated for the child-evaluation IAT, but the categories *positive* and *negative* were substituted for *self* and *other* and a list of stimulus words were categorized as *positive* and *negative* (Appendix B). This list of stimulus words was selected from a list of words previously used in IAT research (Kessous, 2009; Greenwald et al., 1998). Sex offenders

were able to correctly identify the category membership of the stimulus words almost perfectly in past research (Kessous, 2009). This provides support that the population of interest in the current research clearly identifies what category the stimulus words belong to and response times are not artificially prolonged by stimulus-category ambiguity. For the child-evaluation IAT, the child and adult image stimuli included both female and male faces. The inclusion of images of adult and child female faces is to provide a more general category CHILD that contains male and female children.

To obtain an IAT effect score for both the child-identification and child-evaluation IATs used in the procedure, a standard scoring algorithm was used (Greenwald et al., 2003). The mean of correct response latencies from blocks 3 (combined practice trials in Figure 3), 4 (combined test trials), 6 (reverse-combined practice trials), and 7 (reverse-combined test trials) were computed; every error response latency is replaced with the mean of the block plus an additional 600 msec. The pooled standard deviation was computed for all trials in blocks 3 and 6, as well for all trials in blocks 4 and 7. Two mean differences were computed ($M_{\text{block 6}} - M_{\text{block 3}}$) and ($M_{\text{block 7}} - M_{\text{block 4}}$); these mean differences were then divided by their associated pooled standard deviations to produce a D score for the two sets of blocks. The final step in obtaining the IAT effect was computing the average of these two ratios. In the present procedure, the child identification IAT is designed to assess how strongly a participant associates himself with children versus adults. If the resulting IAT effect is positive, this reflects a view of self being more strongly associated to children than adults. For the child-evaluation IAT, if a positive IAT effect is obtained, this reflects a more positive view of children. Conversely, for both IATs, a negative IAT effect value reflects a view of adults as positive or self being more strongly associated with adults.

In order to reduce the effects of response artefacts, such as random responding or anticipating prior to stimuli presentation on the validity of the IATs, participants with more than 10% of trials with response latencies less than 300 msec were removed. To reduce the effects of response bias, such as inattention, trials with response latencies greater than 10,000 msec were deleted (Greenwald et al., 2003).

Children and Sex Questionnaire: Emotional Congruence with Children Scale. The Emotional Congruence scale of the Children and Sex Questionnaire (CSQ:ECWC; Beckett, 1987; Appendix C) is a 15 item self-report scale that is designed to assess an individual's level of emotional congruence with children. All items are rated on a 5-point Likert-type scale ranging from "Very true", "Somewhat true", "Somewhat untrue", "Very untrue", and "Don't know" with the responses scored as 4, 3, 1, 0, and 2, respectively. Scores range from 0 to 60 and all items are summed to obtain the emotional congruence score for a participant. Emotional congruence with children is defined as how much an individual can understand or identify with what they believe to be the thoughts and feelings of children (Beech et al., 1998). Midrange scores are considered to be a normal level of emotional congruence with children, which may be expected of certain groups, such as parents, because this represents sensitivity to a child's needs. Extreme high or low scores reflect higher or lower emotional congruence with children and have been found in extrafamilial and intrafamilial SOC groups, respectively (Beech et al., 1998). The Emotional Congruence with Children scale has shown moderate test-retest reliability in research with 47 untreated offenders ($r = 0.63$, in Beech et al., 1998; Beech, 1998). The CSQ has also been shown to have a high internal consistency in previous research ($\alpha = .90$, personal communication, quoted in Mandeville-Norden & Beech, 2009; $\alpha = .87$, Underhill et al., 2008). Recently, the CSQ:ECWC has been found to have a three factor structure (Waldron et al., 2006).

The factors are: Positive Affect from Children, which includes items relating to being cheered up by children and beliefs that children have special feelings for the individual; Special Relationship with Children, which includes beliefs that individual is better at understanding and getting along with children; and Preference for Relationships with Children, which includes items describing feeling more comfortable with children and preferring to spend time with children.

Child Identification Scale-Revised. The Child Identification Scale-Revised (CIS-R; Wilson, 1999; see Appendix D) is a self-report measure that has 40 true-false questions that load onto 8 factors to assess emotional congruence with children, as defined by Finkelhor (1984). The factors are start life over, immaturity, mentoring, isolation, enjoys children's activities, longing for childhood, empathy for children, and abused as a child. The CIS-R has demonstrated high internal consistency and criterion validity in research with sex offender samples ($\alpha = .87$, Wilson, 1999).

Repertory Grid. The Repertory Grid (Rep Grip; Kelly, 1955) is an assessment technique that provides an understanding of how individuals perceive others in their social world. The Rep Grid allows participants to provide constructs that are descriptions of how they see themselves as similar and different from people in their lives. The constructs given by a participant provide an idiographic map of the ways in which the individual view themselves and others. Although the Rep Grid was originally designed as an assessment tool for use in therapeutic settings (Kelly, 1955), it has been used to assess group differences in research with schizophrenic populations (Bannister, 1960, 1962) and self-construal in normal and psychiatric populations (Adams-Webber, 1978, 1999; Badesha & Horley, 2000).

The Rep Grid is a matrix with various role titles across the top X-axis and two columns for the participants' constructs to be written in on the right side (Appendix E). For each role

title, the participants were asked to provide the initials of a person in their life that fits the description provided. Underneath the role titles in the matrix are markers that indicate which three individuals (a triad) to be compared and contrasted in each trial. In the current form of the Rep Grid, the “Self” role title, one Child role title, and one Adult role title was used for comparison in every triad. For every trial, the participants were asked “Think about these three people, in what important way are two of these people alike that distinguishes them from the third person?” (see Appendix E for more detailed instructions). The way in which the participant construed two of the role titles as similar was recorded in the “Way Alike” column and the two corresponding circles were crossed out. The participants were then asked to provide what they thought is the opposite characteristic to the similarity characteristic they provided. This opposite characteristic was recorded in the “Contrast” column. The participants were then instructed to think about each person in the list and indicate with a ‘+’ sign the individuals that could be described as sharing the characteristic listed in the “Way Alike” column and a ‘-’ sign for those who could be described with the characteristic listed in the “Contrast” column. The participants completed 10 trials, all of which follow the above described procedure. After completing the trials, the participants were instructed to consider each construct they have provided in the “Way Alike” and “Contrast” columns and indicated with a check mark those characteristics they think are good or positive characteristics for an individual to possess and an ‘X’ those characteristics that they considered to be bad or negative characteristics for a person to possess. Characteristics that were not judged as evaluative by the participants were left blank.

In the current research project, choosing role titles that are relevant to emotional congruence with children was necessary to assess this construct using the Rep Grid. A form of the Rep Grid that mirrors the current research design is the Identification form originally proposed by Kelly

(1955) and adapted by researchers to investigate specific hypotheses and constructs of interest (Adams-Webber, 1985; Badesha & Horley, 2000; Benjafield & Adams-Webber, 1976; Giles & Rychlak, 1965; Jones, 1961; Kahgee, Pomeroy, & Miller, 1982; Space & Cromwell, 1980). The Identification form consists of the 'self' role title (i.e., how participant construes themselves at the current time) which is contrasted with multiple other figures. In the current design, the following set of child and adult figures was used to assess the level of emotional congruence with children: self, a neighbourhood child I know/knew, father, an older male relative, self when I was 12 years old, an adult male neighbour, ideal child, a close male adult friend, a male child relative, and a close friend from childhood. By using this specific form of the Rep Grid, qualitative information was collected regarding how participants perceive themselves in relation to children and adults, whether this trend of identification is different between groups, and if children and adults were construed positively or negatively. This form of the Rep Grid was adapted from similar Identification Rep Grids used in past research (Giles & Rychlak, 1965; Jones, 1961).

The Rep Grid data was used to compute two main indices, an Identification and Evaluation difference score. The Identification difference score provides a relative measure of how much an individual identifies himself as being more similar to children relative to adults. Positive values indicate the individual categorizing himself as being more similar to children relative to adults and negative values indicate the individual as categorizing himself as sharing more characteristics with adults relative to children. The Evaluation difference score provides a relative index of how the individual attributes positive characteristics to children relative to adults on the task. Positive values indicate the individual attributing more positive characteristics to children relative to adults and negative values indicate the individual attributing

more positive characteristics to adults relative to children (see Appendix F for difference score computations). These scores were computed to provide conceptual and statistical similarity between the Rep Grid and the two IATs administered to participants.

In previous research involving SOC samples, the Rep Grid has shown acceptable inter-rater reliability ($k = .74$, Horley, 1996; $k = .80$, Pfenninger, 1990). In terms of test-retest reliability, the personal constructs provided on the Rep Grid are dynamic in nature and should be considered to necessarily vary between testing sessions. Despite this expected variability, the Rep Grid has shown moderate levels of test-retest shared content in both sex offender and normal samples (64%, Horley, 1996; 58%, Sperlinger, 1976).

Semantic Differentials. The semantic differential (Appendix G) provides bipolar adjectives on which participants evaluate various concept categories. For the current project, four concept categories were evaluated by participants as a measure of emotional congruence with children analogous to the IATs to be used in the procedure. The categories are: Self, Others, Adults, and Children. The bipolar adjectives used to evaluate Self, Others, Children, and Adults are provided in Appendix G. Two indices were computed to present results in a manner that corresponds with the IAT measures. The *Self Identification* score is the difference of the average of the Self semantic differentials and the average for the Others semantic differentials. A positive score indicates ratings of Self as more immature or child-like than others; a negative score indicates ratings of Others as more immature or child-like than Self. The *Child Evaluation* score is the difference of the average Children semantic differentials and the Adults semantic differentials. A positive score indicates more positive ratings of Children relative to Adults; a negative score indicates more positive rating of Adults relative to Children.

Static-99. The Static-99 is an actuarial risk assessment tool that uses static predictors in a sex offender's past to provide a measure of sexual recidivism risk (Hanson & Thornton, 2000; Appendix H). The items in the Static-99 are as follows: male victims, never married, noncontact sex offences, unrelated victims, stranger victims, prior sex offences, current nonsexual violence, prior nonsexual violence, more than 4 sentencing dates, and age 18-25 years. The items are scored by the presence or absence of these data in a sex offender's history. The range of scores on the Static-99 is 0-12.

The Static-99 has shown high predictive accuracy (ROC area = .71, Hanson & Thornton, 2000). In a comparison with the Rapid Risk Assessment for Sex Offense Recidivism (RRASOR) and the Structured Anchored Clinical Judgement (SACJ), the Static-99 was more accurate than either assessment tools in predicting sexual and violent (including sexual) recidivism across a number of samples ($N = 1208$). In a recent meta-analysis, the Static-99 was identified as a significant predictor of sexual and violent recidivism for sex offenders across a number of samples (sexual recidivism average $d = 0.70$, $N = 13,288$; violent recidivism average $d = 0.58$, $N = 10,166$, in Hanson & Morton-Bourgon, 2007).

Stable-2007. The Stable-2007 is a sexual recidivism risk assessment measure. The Stable-2007 assesses an offender's standing on multiple dynamic risk factors that are characteristics related to recidivism and amenable to change over the course of months or years (Hanson, Harris, Scott, & Helmus, 2007; Appendix I). There are 13 factors in the risk assessment that are scored based upon an interview conducted with an offender. The offenders are given a score of "0 - no problem", "1 - some concern/slight problem", or "2 - present/definite concern" on each factor, based upon a structured scoring manual that the rater follows. These ratings are baseline estimations of an offender's typical level of functioning on the factors.

The Stable-2007 has shown high predictive accuracy for extrafamilial SOC (ROC AUC = .77) and low-moderate predictive accuracy for intrafamilial offenders (ROC AUC = .58; Hanson et al., 2007). The Stable-2007 Emotional Identification item was also recorded for each SOC participant.

Procedure

Eligible offender and patient participants were approached by the principal investigator and two co-investigators⁵ and invited to participate in the study. If a participant expressed an interest in participating, the researcher read him a brief script and gave him a consent form (Appendix J and K) to read and sign. In other instances, interested participants were read the brief script and the researcher scheduled a time for the offender to complete the research procedure. The offender was given a consent form to keep and the researcher retained a signed copy. Non-offender student participants were recruited via the Carleton University SONA online psychology research website and were read the script and signed a consent form (Appendix L) upon arrival at a research lab at Carleton University. All participants individually completed the child-identification and child-evaluation IATs, CSQ:ECWC, CIS-R, Semantic Differentials, Rep Grid, and demographic questionnaire in one session, which lasted between 0.75 to 1.75 hours.

Two between measures counterbalancing procedures were used to randomly assign participants (see Table 7). Offender and patient participants received a version of the demographic questions that included questions specific to past offending history and treatment programmes they may have completed during their incarceration (Appendix M).

⁵ Co-investigators were two Masters level research students conducting data collection for the present study and two other research projects.

Table 7

Counter-balancing procedures.

Procedure	Measures	Order
1	Child-Identification IAT	Counterbalanced
	Child-Evaluation IAT	Counterbalanced
	CSQ:ECWC	Counterbalanced
	CIS-R	Counterbalanced
2	Rep Grid	Counterbalanced
	CSQ:ECWC	Counterbalanced
	CIS-R	Counterbalanced
	Child-Identification IAT	Counterbalanced
	Child-Evaluation IAT	Counterbalanced
	Rep Grid	Counterbalanced

After the offender and patient participants completed the research procedure, a file review was conducted using the Offender Management System or hospital case files. Information coded from offender and patient files included: age, ethnicity, number of index and prior sexual offences, number of index and prior non-sexual violent offences, number of index and prior non-sexual non-violent offences, number of index and prior female victims, number of index and prior male victims, age of index and prior sexual offence victims, relationships to index and prior sexual offence victims, highest level of educational achievement, marital status, number of children the individual helped to raise, Static-99, Stable-2007, and Stable-2007 Emotional Identification scores. Classification of offences as sexual, non-sexual violence, and non-sexual non-violent offences and relationship to victims followed the Static-2002 coding rules (Phenix, Doren, Helmus, Hanson, & Thornton, 2008).

Materials and Apparatus

The child-identification and child-evaluation IATs, CSQ:ECWC, CIS-R, Semantic Differentials, and demographic questions were administered on a Dell Inspiron laptop computer via an interface and response-time measurement program, E-prime 1.0 (Psychological Software Tools, 2002; Schneider, Eschman, & Zuccolotto, 2002). The Rep Grid was completed via paper and pencil method by the participants. Analyses were completed using PASW Statistics 18.0.1 for Windows, Comprehensive Meta-Analysis (v.2.0), G-Power 3.0.10 (Faul, Erdfelder, Lang, & Buchner, 2007), and a Microsoft Excel file authored by K. Nunes.

Results

Presentation of Results

Group comparisons between extrafamilial SOC and each of the three comparison groups are reported for all of the main dependent measures and scale factors where appropriate. The extrafamilial SOC group is always presented as the reference group and effect sizes and confidence intervals are estimates of the magnitude of the difference of dependent measure scores between the extrafamilial SOC group and each of the comparisons groups. A cumulative meta-analysis presents the results of incorporating the group difference effect size estimates from the current research project into the aggregate effect sizes computed from the existing research literature. Finally, the correlations between the dependent measures, scale factors, and sexual recidivism measures are presented.

Data Screening

Three participants were excluded from the current analyses because they did not meet the grouping inclusion criteria. Additionally, NSO/SOA and a student participant were excluded due to self-reporting having committed a sexual offence against a minor. For the two IAT measures,

two NSO/SOA offender participants had greater than 10% of trials in which the response latency was less than 300 ms and were excluded from the IAT analyses (Greenwald et al., 2003). Prior to conducting the main analyses, all variables were screened for violations of the assumptions associated with the statistical tests used. In cases of severe violations of normality, linear transformations were applied to data. When this was necessary, analyses were performed using both the untransformed and transformed data. If the results were comparable, the results from the untransformed data were reported. When transformed data results are presented, the transformation is noted in the table notation.

A variable that was expected to differ between the offender and student groups was assessed as a possible covariate that may have an effect on the dependent measures. This variable was selected to assess the plausibility of a potential alternate explanation of results that the student group may show high levels of emotional congruence due to their proximity to children in terms of age. Correlations between age and all the dependent measures used in the procedure were assessed for significance. Age was not significantly related to the dependent measures. Subsequently, this variable was not entered as a covariate.

Internal Consistency

Internal consistency for the IAT measures was computed by following the method outline in Nosek, Greenwald, & Banaji (2005). In this procedure, D scores are computed for the mean difference between Blocks 6 and 3 and the mean difference between Blocks 7 and 4 in the IAT. The D scores are then correlated. For the child identification IAT, the internal consistency was $r(99) = .45, p < .001$; for the child evaluation IAT, the internal consistency was $r(99) = .54, p < .001$.

The internal consistency of the CSQ:ECWC, CIS-R, and semantic differential indexes are presented in Table 8. The internal consistency of these scales respective factors are also reported as this is a means of more accurately estimating the reliability of a measure with a multidimensional structure (Schmitt, 1996). It is apparent from the computed co-efficient alphas that unreliability may be a possible confound for the CIS-R factors five, seven, and eight. For the semantic differentials, the individual semantic differentials that contributed to the mean child evaluation, adult evaluation, self identification, and other identification scores were intercorrelated with each other to produce an estimate of internal consistency for the semantic differential identification and evaluation difference scores.

Child-Identification and Child-Evaluation IATs

It was hypothesized that extrafamilial sexual offenders against children would show greater implicit identification with children and a greater level of implicit positive evaluation of children. On the child identification IAT, extrafamilial SOC were found to score significantly higher than intrafamilial SOC, $t(19) = 2.82, p = .01$. The difference between the extrafamilial SOC and the NSO/SOA produced a medium effect and approached significance, $t(35) = 1.78, p = .09$. A similar result was observed for the difference between the extrafamilial SOC and student groups, $t(65) = 1.95, p = .06$. On the child evaluation IAT, the extrafamilial SOC group did not score significantly higher than the intrafamilial SOC, $t(19) = 1.33, p = .20$; the NSO/SOA group, $t(35) = .25, p = .81$; or the student group, $t(65) = .53, p = .60$. Table 9 provides sample sizes, means, and standard deviations for the groups on the two IAT measures; in addition, Cohen's d effect size estimates and 95% confidence intervals are provided as a means of assessing the magnitude of the difference between the mean scores of the extrafamilial SOC group and the three comparison groups.

Children and Sex Questionnaire: Emotional Congruence Scale and Factors

Groups were compared on the CSQ:ECWC scale total score and the Positive Affect from Children, Special Relationship with Children, and Preference for Relationships with Children factors identified by Waldron et al. (2006). Table 10 presents means, standard deviations, and Cohen's *d* effect size estimate for group comparisons; results presented for the CSQ:ECWC total score use square root transformed data. The extrafamilial SOC group scored higher than the intrafamilial SOC group on three comparisons, $t_{\text{CSQ:ECWC total score}}(19) = 2.93, p = .009$, $t_{\text{CSQ:ECWC Factor One}}(19) = 3.32, p = .004$, $t_{\text{CSQ:ECWC Factor Three}}(19) = 2.6, p = .02$; and was not significantly different from this group on the CSQ:ECWC Factor Two, $t(19) = .84, p = .41$. When compared to the NSO/SOA, group differences approached significance on the CSQ:ECWC Factor Three, $t(37) = 1.94, p = .06$; however, differences on the other three CSQ:ECWC scale comparisons did not reach significance, $t_{\text{CSQ:ECWC total score}}(37) = 1.04, p = .31$, $t_{\text{CSQ:ECWC Factor One}}(37) = .96, p = .35$, $t_{\text{CSQ:ECWC Factor Two}}(37) = .00, p = 1.00$. When compared to students, extrafamilial SOC scored significantly higher on two factors, $t_{\text{CSQ:ECWC Factor One}}(65) = 2.41, p = .02$, $t_{\text{CSQ:ECWC Factor Three}}(65) = 4.17, p < .001$; the groups were not significantly different for the other two comparisons, $t_{\text{CSQ:ECWC total score}}(65) = 1.55, p = .13$, $t_{\text{CSQ:ECWC Factor Two}}(65) = -0.39, p = .71$.

Child Identification Scale-Revised and Factors

When the groups were compared on the CIS-R total score, scores discriminated between extrafamilial SOC and students, $t(65) = 3.02, p = .004$. Relatively consistent with past research findings, Factor One: Start Life Over, Factor Two: Immaturity, and Factor Four: Loner were able to discriminate between groups. Scores on Factor One: Start Life Over were statistically significant when extrafamilial SOC were compared with intrafamilial SOC, $t(19) = 2.65, p = .02$; NSO/SOA, $t(37) = 2.24, p = .03$; and students, $t(65) = 4.42, p < .001$. On Factor Two:

Immaturity, scores showed statistical significance when extrafamilial SOC were compared with NSO/SOA, $t(37) = 2.63, p = .02$; and students, $t(65) = 3.64, p = .003$. Scores on Factor Four: Loner were significant when extrafamilial SOC were compared with NSO/SOA, $t(37) = 4.60, p < .001$; and students, $t(65) = 6.12, p < .001$. A final result of interest is that extrafamilial SOC reported higher levels of abuse as a child than students, $t_{\text{CIS-R Factor Eight}}(65) = 5.10, p < .001$; with the difference approaching significance when compared to intrafamilial SOC, $t_{\text{CIS-R Factor Eight}}(19) = 1.83, p = .08$. Sample sizes, mean scores, standard deviations, and Cohen's d effect size estimates are presented in Table 11.

Rep Grid Identification and Evaluation Difference Scores

The results for the Rep Grid difference scores did not generally support the primary hypotheses that extrafamilial SOC would show higher levels of explicit identification with children and more positive explicit evaluation of children. In a number of instances, extrafamilial SOC reported significantly less identification with children when compared to intrafamilial SOC, $t(16) = -3.42, p = .003$; NSO/SOA, $t(25) = -2.85, p = .01$; and students, $t(59) = -2.52, p = .01$. In addition, SOC-E also showed significantly less identification with children relative to adults when compared with SOC-I on the identification difference score, $t(16) = -2.41, p = .028$. Extrafamilial SOC reported significantly more positive evaluations of children when compared to the student group, $t(58) = 3.57, p = .001$. The two indexes that provide an estimate of identification and evaluation of children relative to adults did not discriminate between groups. Table 12 provides group means, standard deviations, and Cohen's d effect size estimates for group comparisons on the six indexes computed from the Rep Grid data.

Semantic Differential Difference Scores

For the self evaluation semantic differential score, which represents how mature participants rated themselves to be, the extrafamilial SOC rated themselves as significantly more immature than the NSO/SOA group, $t(37) = 2.15, p = .04$; and the student group, $t(65) = 2.10, p = .04$. Extrafamilial SOC were the only group to rate themselves as less mature than others, as indicated by the positive mean self identification score for this group. For the evaluation of children score, extrafamilial SOC scored significantly higher than intrafamilial SOC when rating children as more positive than adults, $t(19) = 2.20, p = .04$. All other comparisons were nonsignificant. Table 13 presents group mean scores, standard deviations, and Cohen's d effect size estimate values for the two semantic differential indexes.

Cumulative Meta-Analysis

The findings from the current study were incorporated into the aggregate estimates presented in the introduction. Specifically, the SOC-E comparisons with the SOC-I, NSO/SOA, and student groups were added to the original aggregate estimates. In addition, the SOC-I comparisons with the NSO/SOA and student groups were also added to the original aggregate estimates. To comply with the independence of effects assumption of meta-analysis, the effect sizes from the IAT, CSQ:ECWC total score, CIS-R total score, and semantic differential immaturity difference score were collapsed to provide a single effect size for each comparison mentioned above. The Rep Grid index of identification with children was included in the cumulative summaries. The findings on the Rep Grid were in an opposite direction than expected and it is possible that this index is assessing an aspect of this construct that the a priori conceptualization did not account for. Including this index may falsely counteract the other, more straightforward effect sizes. In cumulative meta-analysis, Q_{Δ} quantifies the total change in variability produced by incorporating a new study into a meta-analysis and is distributed as χ^2

with one degree of freedom (Formula 7, Hanson & Broom, 2005, p. 361). If a significant Q_{Δ} is found, the new study may belong to a different population of studies.

Table 14 presents the results of the cumulative meta-analyses incorporating the current results into the previous literature. Incorporating the current results into the aggregate estimates did not produced a significant increase in variability for any of the group comparisons and it can be assumed that the current results are from a similar population of studies as that sampled in the original meta-analysis. The SOC-E with NSO comparison was found to be medium in magnitude and differences between these groups on measures of ECWC are expected to range from small to large ($d = 0.35, 0.84$). The SOC-E with SOC-I comparison effect size was also medium in magnitude and appears to be relatively robust, given eleven studies contribute to the aggregate effect size estimate. The difference between SOC-E and non-offenders remained nonsignificant in the cumulative effect size estimate. The latter two effects mentioned were derived from a random-effects model of computing aggregate effect estimates. The random-effect model's statistics were presented as the confidence intervals account for between-study variability beyond what is expected due to sampling error alone. Theoretically and empirically this appears justified for the following reason. The SOC-E with SOC-I aggregate effect size includes samples of extrafamilial offenders with male or female victims. As shown in Table 3, there appears to be a medium sized and significant effect size estimates between extrafamilial SOC with male victims and SOC-I, whereas the effect between extrafamilial offenders with female victims and SOC-I is negligible and nonsignificant. In order to capture potentially two different population effect estimates within the single estimate, the more conservative effect size and confidence intervals given by the random-effects model are provided. The same reasoning and expectations apply to the SOC-E with NO comparison, as it would be expected that the

differences between SOC-E and non-parent non-offenders would be larger in magnitude than differences between SOC-E and parent non-offenders (see Fisher et al, 1999).

The cumulative meta-analytic results show that SOC-I are not significantly different from NSO samples on measures of ECWC. With the addition of the current study's results, the SOC-I with NO comparison resulted in a small, negative, and significant aggregate effect size estimate. This finding indicates that SOC-I score significantly lower than non-offender samples on measures of ECWC.

Relationships between Dependent Measures

Dependent measures used in the research were correlated with one another to assess convergent validity. Factors of the CSQ:ECWC and CIS-R that demonstrated the ability to distinguish between groups were included in these analyses. The two IAT measures were significantly correlated with each other, but did not show a significant relationship with the other measures in the procedure. A pattern of results emerged that shows measures sharing a similar assessment methodology show significant correlations. Table 15 provides a summary of the between measures correlations.

Relationships between Dependent Measures and Recidivism Risk

Table 16 presents the relationships between the dependent measures and measures of sexual recidivism for participants who have been convicted of a sexual offence against children. For the Stable Emotional Identification item, this variable contains participants scored on the Stable-2000 or 2007, as both versions of the item share major conceptual and scoring similarities (Hanson et al., 2007; Harris, 2009).

The IAT measures were not significantly related to the measures of sexual recidivism. To further explore these findings that did not support the secondary hypotheses, the same

correlations were analyzed separately for the SOC-E and SOC-I groups. For the SOC-E participants, the child identification IAT had a small, positive relationship with the Static-99 total score, $r(10) = .23$; a negative, medium relationship with the Stable-2007 total score, $r(9) = -.41$; and a small, positive relationship with the Stable Emotional Identification item, $r(9) = .11$. For the SOC-I participants, the same relationships ranged from negative and small ($r_{\text{Static Total}}(6) = -.10$) to negative and large ($r_{\text{Stable Total}}(6) = -.51$; $r_{\text{Stable EID}}(4) = -.68$, *ns*). The CSQ:ECWC total score had a significant relationship with the Stable-2007 total score, $r(18) = .54$; and a correlation with the Static-99 total score that approached significance, $r(20) = .41$. The CIS-R total score showed a significant positive relationship with the Stable Emotional Identification item, $r(12) = .57$. The Rep Grid identification difference score showed a significant negative relationship with the Static-99, $r(19) = -.60$; and a significant positive relationship with the Stable Emotional Identification item, $r(12) = .59$. All other correlations between the dependent and risk measures were nonsignificant.

Discussion

The main purposes of this research were to assess the ability of the IAT measures to differentiate SOC-E from three comparison groups and the correlations between the IAT and other self-report measures of emotional congruence with children. The results of this multi-method study partially supported the primary hypotheses that sexual offenders against children with extrafamilial victims will report higher levels of implicit and explicitly assessed emotional congruence with children. The pattern of results followed previously reported research findings on this construct and appear to be from the same population of studies as those in the original meta-analytic summary provided in the introduction. The secondary hypotheses were not strongly supported overall, however, measures that shared the same assessment methodology

were found to be significantly correlated. The relationships between the measures of ECWC and sexual recidivism risk varied greatly, with some measures showing a large, positive relationship with recidivism risk and other measures showing a small, negative relationship.

For the child identification IAT, SOC-E reported significantly stronger implicit association of self with children relative to adults when compared to the SOC-I. This finding fits with past research that has compared these groups using self-report measures of ECWC (i.e., Stirpe, 2003; Underhill et al., 2008). One aspect of this finding that is noteworthy is the magnitude of the mean difference between the SOC group scores on the child identification IAT ($d = 1.36$, 95% CI = 0.38, 2.33), which can be interpreted as exceeding a large mean difference between groups (Cohen, 1988). The previous research findings produced an aggregate effect size estimate that ranged from small to medium (aggregate $d = 0.52$, 95% CI = 0.32, 0.72). This result provides positive support that the child identification IAT is sensitive to SOC subtype differences, based on offenders' relationship to their victims. However, caution must be taken when interpreting the precision of the magnitude of group differences due to the small sample size and the correspondingly wide confidence intervals.

When the SOC-E participants were compared to the NSO/SOA and student participants on the child identification IAT, medium effects were found, $d = 0.59$ and 0.58 respectively, but neither reached significance ($ps < .10$). The failure to reach statistical significance may have been a function of low statistical power to detect group difference due to the size of the sample. Comparing these effect sizes with those previously found for similar group comparisons, the current results are comparable to those findings for past SOC-E and NSO comparisons (aggregate $d = 0.61$), while the current results appear to be slightly higher for the SOC-E and students than previously observed (Beech, Fisher, & Beckett, 1998; Beech & Ford, 2006). This

latter result may have been due to the student group having a small proportion of participants being fathers, which appears to have a positive relationship with the level of ECWC reported by non-offenders (Beech, 1998).

Given the cross-sectional specificity design of the current research, it appears plausible that a strong implicit association of self with children is a unique characteristic of the SOC-E sample. The results indicate that the implicit association of self with children is a unique characteristic of sexual offenders with children with unrelated child victims. These data cannot produce evidence for the causality of emotional congruence in sexual offending for these individuals, but they do suggest that this construct is consistent with this type of sexual offending (Garber & Hollon, 1991). The IAT results are suggestive that implicit self identification with children may contribute to the cognitive processes for individuals placing themselves in high risk situations (Harris & Hanson, 2010; Mann, Hanson, & Thornton, 2010; Ward & Siegert, 2002). The implicit or unconscious association of self with children, whether due to a desire to be around children, an immature perception of self, or identifying more with children than adults, may be a plausible motivating factor for these individuals approaching and establishing friend-like relationships with children, which are high risk situations for individuals who have committed past sexual offences against children or have a sexual interest in children. Implicit identification with children may be a factor that contributes to the offending pathway for some SOC-E or differentially contributes to the patterns of offending for SOC subtypes (Ward & Siegert, 2002). This research provides preliminary evidence that the IAT may be a useful tool in more fully assessing this psychologically meaningful risk factor.

The results for the child-evaluation IAT did not support the hypothesis that SOC-E would report stronger implicit association of children with positive than comparisons. The child

evaluation IAT results suggest that the extrafamilial SOC were the only group to show a stronger implicit association of children with positive compared to adults. For the SOC-E and SOC-I comparison, the non-significant result may have been due to low statistical power to reject the null hypothesis (observed power = .35). However, the comparisons between the SOC-E group and the NSO/SOA and student groups appear to have produced negligible differences.

The child evaluation IAT results are generally consistent with the results found for the semantic differential indices of evaluation of children relative to adults and past IAT results (Nunes, Firestone, & Baldwin, 2007). On the semantic differential evaluation difference score, SOC-E participants scored significantly higher positive evaluation of children than adults when compared to SOC-I ($d = 0.59$), but the differences between the other two groups were small and negative. Nunes, Firestone, and Baldwin (2007) found that SOC did not significantly differ from NSO when evaluating children, relative to adults, as pleasant or unpleasant. The evaluative categories in both studies are different (i.e., pleasant/unpleasant and positive/negative), however, both may be assessing how general evaluative categories are applied to children and adults. These findings suggest that the association between self and children, as found on the child identification IAT, and evaluation of a self-associated group may follow different patterns than those expected by in-group evaluation hypotheses (Greenwald, Banaji, Rudman, Farnham, Nosek, & Mellott, 2002) for the SOC-E group. That SOC-E did not evaluate children more positively than the non-SOC groups on the child evaluation IAT may not be surprising given the situation the SOC-E participants were in when tested. These participants had been convicted of a sexual offence against a child and this may have had a negative effect on their evaluation of children if the offenders place blame of the victim for their current predicament. A reasonable explanation of these results appears to be that individuals, regardless of whether they show high

levels of association of self with children or if they are convicted of sexual offences against children, see children in a relatively positive light because children are held in a fairly positive light in society.

The Child Identification Scale-Revised (Wilson, 1999) mainly supported the primary hypotheses and produced results similar to findings in previous research. Sexual offenders with unrelated child victims were found to score significantly higher than all three comparison groups on the Start Life Over factor, which indicates dissatisfaction with life as an adult and a wish to go back and live life over again. This result may not be surprising given that the SOC-E participants are currently serving federal prison terms, however, that this group differed from other incarcerated participants and more specifically, other offenders against children makes this finding noteworthy. This group of SOC-E appear to be characterized by the desire to start over and to be young again. These data are partially supportive of Stirpe's (2003) finding that SOC-E reported the highest scores on this factor; however the past findings failed to reach significance, which may have been due to low statistical power (i.e., observed power range = .15).

On the Immaturity factor, medium to large effect sizes were found between groups; the SOC-E and SOC-I comparison not reaching significance, but this may be a result of low statistical power given the obtained sample sizes (observed power = .40). These findings are congruent with both studies included that have tested SOC samples on the CIS-R (Stirpe, 2003; Wilson, 1999). It would appear to be a replicable finding that SOC-E, those with male victims in particular (Wilson, 1999), report having been in love with a child, finding it difficult to act like an adult, and enjoying themselves most and feeling like a child when they are around children. The semantic differential difference score that provided a measure of evaluating self as more

immature and child-like than others found a similar trend, identifying the SOC-E as the only group that evaluated self as more immature than NSO/SOA and student groups.

The SOC-E participants were also more likely to report being a loner as a child and not having many friends in adulthood than the NSO/SOA and student samples. This was not found in Wilson (1999), but is convergent with theory (Marshall, 1989) and past meta-analytic evidence that SOC samples report higher levels of loneliness than NSO and non-offenders (Whitaker et al, 2008). A final factor that produced group differences was the Abused as a Child factor. SOC-E reported significantly higher rates of abuse than students. None of the other factors significantly differentiated between groups, which is consistent with past research findings (i.e., Wilson, 1999).

The nonsignificant results for the majority of factors in the CIS-R may suggest that these factors are not a unique aspect of how sexual offenders perceive children and childhood. The factors that did not produce group differences in both the current study and Wilson's (1999) research aim to assess enjoyment of participating in children's activities, perceiving children as being too easily dismissed by adults, and conveying a longing for childhood. The last factor mentioned appears to be related to the desire to start life over again, but this may be in name rather than in practice, as the items that load onto this factor relate to the individual feeling that their memories from childhood are their best memories. Given that the SOC-E group endorsed higher levels of being a loner as an adult and a child and reporting generally higher levels of abuse as a child, this finding that childhood does not hold the best memories may not be surprising. The CIS-R contains multiple subscales that are theoretically relevant to ECWC (Wilson, 1997) but have been unable to meaningfully discriminate between SOC and non-SOC samples in the current and previous research (Wilson, 1999). Stirpe (2003) also did not include

many of the subscales due to this reason and the current findings appear to support this decision for research purposes.

When considered in conjunction with the child identification IAT results, the CIS-R factors that differentiated between groups contextualize and support the IAT results. Two factors, Start Life Over and Immaturity, had small and positive relationships with the child identification IAT measure ($r(99) = .18$, *ns*, for both factors). Taken together, these results indicate that SOC-E may associate themselves more strongly with children and this is weakly associated with a desire to return to childhood and a perception of self as immature or feeling closer to children than adults. In this instance, these two methods of assessing this construct provide complimentary and non-redundant information about the nature of the construct of interest and suggest that there are related explicit and implicit dimensions to emotional congruence with children that are unique to SOC-E.

The CSQ:ECWC results generally supported the primary hypothesis that SOC-E participants would report higher levels of explicit emotional congruence with children. SOC-E scored higher than the SOC-I on the CSQ:ECWC total score ($d = 1.42$), while the other group differences did not reach significance (NSO/SOA $d = 0.52$; students $d = 0.13$). This set of findings is convergent with past research that has found medium to large differences between SOC-E and NSO samples (Beech, Fisher, & Beckett, 1998). Since this study is the first to evaluate group differences on the CSQ:ECWC factors identified by Waldron et al. (2006), these data cannot be readily tied into existing literature. SOC-E reported higher levels of receiving positive affect from children, such as being cheered up by children, feeling that children prevent loneliness, and being reminded of themselves by children, than SOC-I ($d = 1.49$) and students ($d = 0.74$). The Preference for Relationships with Children factor produced medium to large effects for all the

group differences. The medium sized difference between the SOC-E and NSO/SOA group approached significance, however, this nonsignificant result may likely be due to low statistical power of the statistical test (observed power = .60, $d = 0.66$). This factor assesses how comfortable the individual is around children compared to adults and whether the individual prefers to spend time with children. This factor appears to be related to the Immaturity factor ($r(101) = .35$) of the CIS-R and may represent a prototypical aspect of emotional congruence with children, the desire to be around children and a preference for the company of children.

The Special Relationships with Children factor proposed by Waldron et al. (2006) did not differentiate between groups, with effect sizes ranging from small and negative to small and positive in magnitude. The factor analytic model proposed by Waldron et al. appears to contain a factor identifying a latent variable that does not differentiate SOC-E from other groups. This may be due to validity issues in the proposed factor structure of the CSQ:ECWC, the items included in the factor are not related to ECWC as it is presented by SOC-E, or the differences between the current sample and the sample used in the factor analysis study. The items in this factor assess if the individual believes children prefer to be with them as opposed to their parents, that children seek them out and look at them in special ways, and that they are better than others at understanding and getting along with children. These items may have an intellectual history in the self-report of sexual offenders in clinical settings (Wilson, 1997) that make them intuitively seem as though assessing an important aspect of ECWC. However, the items may have a large degree of ambiguity due to the phrasing and failed to differentiate groups as parents would presumably respond affirmatively to a number of these items (Fisher, Beech, & Browne, 1999).

The Rep Grid identification difference score did not support the primary hypothesis. The identification difference score attempted to represent the degree to which the participants applied similar characteristics to themselves and children relative to adults that they know and have had interpersonal relationships with. Higher values on the identification score indicate attributing greater similarity between the characteristics they construe themselves and children possessing compared to the amount of similarities between themselves and adults. The SOC-E reported construing themselves as sharing more characteristics with adults than children, as evidenced by a negative mean value (see Table 12). This finding is surprising given the expectation that SOC-E would attribute more similar characteristics to themselves and children than the comparison groups. This expectation was not supported and it appears that SOC-E do not perceive themselves as sharing similar characteristics with children. Considering this finding in relation to the other measures used in the design, the Rep Grid identification difference score may show that viewing self as similar to children in terms of personality characteristics is not a part of ECWC.

To explore in more depth the possible meaning of the findings on the Rep Grid, a pragmatic approach to the data provided by participants on the Rep Grid will be used to triangulate what the identification score may be measuring. Briefly, a pragmatic approach to research design and data evaluation involves the revision or addition of design or statistical analysis in light of unexpected or ambiguous findings (Feilzer, 2010). The findings on the Rep Grid suggest that the SOC-E participants construed themselves and children as less similar than the SOC-I group. The SOC-E group did construe children in a more positive fashion than adults, a finding that mirrors the findings on the child evaluation IAT, which would not be expected given the adults might be considered an in-group if they are the individuals a participant views as more similar to himself

(see Greenwald et al., 2002). Further, the correlation between the mean child identification and mean child evaluation scores for the SOC-E group, $r(12) = -.31, p = .32$, shows that identification with children and evaluation of children have a negative relationship for this group. Whereas, the same relationship is positive and large for the other three groups, indicating that as the participants described children as being more similar to them, they also evaluated this group more positively.

To understand why SOC-E saw children as having different characteristics than themselves, the CIS-R factors may also help to partially explain this trend. For the Start Life Over factor, SOC-E scored significantly higher than the comparison groups. This factor indicates a desire to restart life or regain childhood. Presumably, someone who construes himself as not being a child anymore would see himself as having aged past childhood. If this is the case, then it would be expected that the Start Life Over factor would be negatively related to the Rep Grid index of identification of self with children. This explanation has some support in the current data, as the relationship between these two variables is negative and medium in size for the SOC-E, $r(12) = -.34, p = .28$. The identification score of the Rep Grid may be providing an estimate of a perceived distance or discrepancy between self and a desired state, childhood. A clinical case study provides an illustrative example on this point, “‘I’m attracted to the innocence of youth, the way I used to be. I guess I’m searching for my own childhood by approaching children’” (Bell & Hall, 1971, p. 36). As one SOC-E participant described himself as “inactive”, “overweight”, and “bald” and construed the other adults in a similar light; however, children were seen as “active”, “slim”, and having a “full head of hair”, all characteristics the participant described as positive.

Past research using the Rep Grid indicates that indexes capturing the distance assigned between self and others may be indicative of being discontent with self (Schoeneich & Klapp, 1998), individuals in negative affective states (Adams-Webber & Rodney, 1983; Lefebvre et al., 1986), or depressive states (Space & Cromwell, 1980) are more likely to distance themselves from others on the Rep Grid. To more fully capture how self is construed by SOC-E participants, future research may provide estimates of the perceived distance between self, ideal self, and others and how these indexes relate to strength of ECWC as it stands to reason that those who are discontent with themselves as adults would report higher levels of identifying with children. This line of research would provide a partial test of the relationship low self-efficacy (i.e., discontent with self) and higher ECWC are proposed to have in theory (Finkelhor, 1984). However, it remains an open question whether this form of the Rep Grid can be adequately and accurately described as measuring emotional congruence with children, instead of measuring self-concept more generally.

There was weak evidence of convergent validity between the child identification IAT and the CIS-R and CSQ:ECWC. The correlations between the IAT measure and the self-report total and factor scores were small and positive ($r = .03$ to $.19$), which, given past meta-analytic results for the relationship between IAT measures and self-report measures assessing similar underlying constructs ($\rho = .177$, $k = 74$ in Hofmann et al., 2005), may be the expected magnitude and direction for these relationships. Although the correlations between the child identification IAT and the Preference for Relationships with Children factor of the CSQ and the Start Life Over and Immaturity factors of the CIS-R approached significance. The lack of strong relationships between the child IAT measures and the self-report measures may be due to explicit and implicit cognition being distinct constructs.

The secondary hypothesis that measures of ECWC would be positively correlated was supported for the self-report measures. There was strong evidence for the convergent validity of the CSQ:ECWC and the CIS-R. The two total scores were significantly correlated with each other ($r(101) = .65, p < .001$) and the relationships between the two scales' factors ranged from small to large in magnitude. The evidence for convergent validity between the two self-report measures of ECWC increases confidence that these scales are assessing the same construct but are not so highly related that they are providing redundant information (Campbell & Fiske, 1959; Kazdin, 2003).

The child identification and child evaluation IATs were not related to the maintenance of sexual offending. This raises concerns regarding the ability of these measures to predict sexual recidivism. This concern requires future prospective research designs to provide more definitive answers. The two established self-report measures of ECWC showed evidence of a relationship with the maintenance of sexual offending. The CSQ and recidivism measures findings are convergent with past research findings that groups that sexually re-offend score higher on the emotional congruence (Thornton, 2002) and those SOC that score highest on the CSQ:ECWC (i.e., High Deviance SOC) also score higher on assessments of static sexual recidivism risk (Beech, Fisher, & Beckett, 1998). This is supported by the medium to large significant correlations the CSQ:ECWC total score had with the Static-99 and the Stable-2007 total scores. These findings suggest that the CSQ:ECWC may be assessing risk relevant aspects of emotional congruence with children. The CIS-R was significantly correlated with the Stable Emotional Identification item, this finding suggest that the CIS-R is associated with risk for sexual recidivism and provides a measure of convergent validity between the two indexes of ECWC. The Rep Grid identification score evidenced a similar positive relationship with the Emotional

Identification item of the Stable. This finding suggests that this index is related to sexual recidivism risk as well.

The results from the child identification IAT, CSQ:ECWC total score, and CIS-R total score were added into the existent literature using cumulative meta-analysis. There are a few important findings that are noteworthy. First, all of the effects added to the literature did not change the between-study variability to an extent that was beyond that expected due to chance alone. Second, with the addition of the current results, the mean difference between SOC-I and NO samples reached statistical significance, as the new estimate's confidence intervals do not include zero. This effect suggests that intrafamilial SOC generally score lower than NO on measures of ECWC. However, the effect size estimate should be interpreted as small and negative ($d = -0.25$) and ranging from negligible to medium in magnitude. Third, the results for the SOC-E group comparisons re-affirm previous trends in the research. Namely, SOC-E score higher than SOC-I and NSO samples, but show less of a difference from non-offenders. SOC-E and SOC-I may have pathways to offending or offence chains that are marked by different levels of ECWC (Ward & Siegert, 2002; Ward, Louden, Hudson, & Marshall, 1995).

Horley (2000) stated that the thoughts of sexual offenders against children regarding themselves are generally unknown. The measures used in the current research that directly assessed implicit and explicit domains of self-concept shed some light on this gap in the research. The child identification IAT shows that SOC-E, but not SOC-I, associate themselves with children more strongly than with adults. The Immaturity score computed from semantic differential data indicates that SOC-E view themselves as more immature and child-like than others, and this score differentiated this group from the non-SOC comparisons. On the Rep Grid, when participants responded freely to questions regarding the personality characteristics that

they share with others, SOC-E were significantly less likely to construe themselves as sharing the same characteristics with children than the three comparison groups. All three measurement methods contribute unique information regarding self-concept of SOC and suggest future lines of research to elaborate and construct more narrow meanings of these results.

Mann, Hanson, and Thornton (2010) have recently argued that for a construct to be considered a psychologically meaningful risk factor for sexual offending, it needs to have a plausible link to an offender being in high-risk situations (see also Harris & Hanson, 2010). As mention above, the findings regarding implicit and explicit emotional congruence with children and the meta-analytic summary support theoretical notions that sex offenders differ on the pathways or offence chains that they follow leading up to an offence. Ward et al. (1995) propose that in the initial stages of the offence chain, SOC engage in activity that places them in proximity with children, either knowingly or unconsciously. For SOC-E, high levels of ECWC may act as mediating cognitions (i.e., I desire to be young again, I really enjoy being around children, children seem to like having me around) that contribute to these offenders pursuing situations which they are in contact with children. The current research suggests it is plausible that even if a SOC is not consciously expressing these cognitions, there may be a set of implicit cognitions that contribute to an offender approaching these higher risk situations. In addition, further on in the offence chain, these SOC might report a “mutual focus”, in which they perceive a friendship between themselves and the child and that sexual contact was mutually satisfying, which contributes to the maintenance of the abusive relationship. This description is congruent with expectations of Interpersonal type offenders on the MTC:CM3 who are expected to have higher numbers of sexual contacts with a victim and report mutual satisfaction in the relationship (Knight et al., 1989). Approach type offenders, or those who have goals and knowingly enact

behaviour relevant to deviant sexual activity with children (Ward & Hudson, 1995), have also been shown to report higher levels of ECWC and are more likely than other types of offenders to have male victims (Bickley & Beech, 2002). This line of reasoning appears to be supported by the meta-analytic results in that high ECWC may explain why SOC-E, who presumably do not have their own children and thus must seek access to victims by other means, come into contact with children and how they construe their offending. Future research may assess the relationship between behavioural outcomes related to offence patterns, such as those described in the MTC:CM3 or qualitative methods used by Ward et al. (1995), and implicit and explicit measures of ECWC to more fully understand how this construct contributes to the offence process and if specific pathways are associated with increased levels of ECWC. Future research would expand the understanding of this construct by assessing behavioural correlates, or further, predictive relationships between behavioural, implicit, and explicit measurement methods.

The current research results and meta-analytic summary provide strong evidence that SOC-I display significantly lower levels of emotional congruence with children than SOC-E and non-offenders. This accumulated evidence suggests that, when assessing or conceptualizing ECWC, SOC-I may be treated separately than other types of SOC. Past theory has suggested that intrafamilial offenders are distinct in some ways from other SOC (Finkelhor, 1984; Langevin, 1983) and the current research provides a possible construct on which SOC-I can reasonably be expected to differ. It may be the case that this trend represents a differential influence of ECWC on offending behaviour for different types of offenders, as there is some evidence that ECWC has a curvilinear relationship with sexual recidivism (Hanson et al., 2007). Individuals that offend against children whom they assume some type of care-giving role with may be at higher risk if they are less attached to the child and the child's needs, as evidenced by lower levels of

some aspects of ECWC, and are unsatisfied with the adult relationship they are currently involved in (Seto, 2008). The results may provide evidence that SOC-I are less likely to enter into friendship-type relationships with potential victims as a means of gaining access and opportunity to offend, but rather will offend in a more opportunistic manner caused by various situational precursors (Landbolt, Lalumière, & Quinsey, 1995; Seto, 2008). One main implication for the assessment of ECWC reaffirms Wilson's (1997) statement that the current measures of ECWC indicate a deficit for this group but may not be adequately assessing how this construct is expressed by intrafamilial offenders.

Limitations

There are a number of limitations with the current study. First, the large number of statistical comparisons made (65^+) may have led to unacceptably high and spurious Type One error rates. However, given findings in literature review and original meta-analysis, the number of participants, and the exploratory nature of the implicit measures used in the study, it was prudent to conduct all of the group differences without adjusting the alpha for all comparisons. Future studies employing the same measures may want to introduce statistical controls for the false discovery rate (Benjamini & Hochberg, 1995); however, upon further study, chance findings become less likely (Kazdin, 2003).

Second, for a number of comparisons, lack of statistical power due to small sample sizes is a plausible alternative explanation for the nonsignificant result. Multiple nonsignificant effects were medium in magnitude ($\sim d = 0.50$), this explanation bears weight since slightly larger samples would have produced statistically significant comparisons and increased confidence that the results were not due to chance factors.

Third, a potential limitation in this study was the student comparison group. The student sample differed from the main comparison group, SOC-E, on a number of characteristics that may be related to the construct under study. Students were younger than the offender groups, are likely to be heavily engaged with achieving a similar aged peer group, and are pursuing socially desirable achievements (i.e., university degrees). Due to these differences, it is not surprising that this group reported lower levels of wanting to start life over and feeling like a loner. Students were also less likely to be parents, which appears to have been a factor in determining non-offenders' standing on ECWC (Fisher, Beech, & Browne, 1999). Fisher et al. propose that elevated levels of ECWC is to be expected from caring and attached parents who are attentive to their child's needs and derive positive affect from their role as a parent. Due to these reasons, the student group may be a less than ideal comparison group when attempting to generalize these results to expected differences between SOC groups and non-offender populations. Matching on parental status, age, and socio-economic status (Marshall et al., 1995) may increase the confidence that results on measures of ECWC are not confounded with the effects of various demographic characteristics. Future research that matches SOC-E and comparisons on these demographic characteristics may provide further evidence that ECWC is a characteristic unique to SOC-E. Evidence to the contrary would suggest the mediating influence of another risk factor for the SOC-E to cause sexual offending.

Implications for Assessment and Treatment

Mann et al. (2010) argue that someone who has the propensity to move toward or seek out situations that increase the chances of offending, would be expected to have a higher long-term risk to re-offend compared to others who do not tend toward these situations. Since offenders with victims under the age of 14 are the only offenders who would be assessed on an emotional

identification item on the Stable-2007, these data appear to have future implications for clinical practice given the ability of the IAT to detect differences between sub-types of offenders. Also, this provides a partial explanation of why SOC would gravitate toward more risky situations, such as having children as their friends. Presumably, if one views oneself as being more like children, then it is justifiable to assume that this individual would pursue interactions with children and by achieving these relationships, the offender also achieves a sense of satisfaction. Strong implicit emotional congruence with children, if this is what is measured by the IAT, is a plausible factor that would increase the probability that an offender would seek out these situations. This may present a practical problem for treatment providers working to minimize the effect of these cognitions on offenders' future behaviour. The problem being, SOC-E may self-report lower levels of ECWC post-treatment, however, there may still be entrenched implicit associations between self and children that could act as an influence on future CSA oriented behaviour (i.e., grooming children through friendships). If the child-identification IAT is assessing a similar or related construct as the CSQ:ECWC and CIS-R, then it would appear that a future development in clinical assessment would be to assess both the explicit self-report statements of SOC and how strongly they implicitly associate themselves with children. This would provide valuable information on how much an offender has changed during the course of treatment on both types of cognition. There is evidence that implicitly assessed cognitions related to violence change from pre- to post-treatment for high risk violent offenders, change is related to risk for future violent offending, and implicit measures add unique contribution to the prediction of post-treatment recidivism risk beyond that provided by explicit measures (Polaschek, Bell, Calvert, & Takarangi, 2010). However, research would first have to show the relationship between the CSQ:ECWC, CIS-R, and IAT with sexual re-offence and the effects of

treatment change on subsequent offending. This interpretation does suggest testable hypotheses, such as, these measures of ECWC are/are not related to sexual recidivism rates in SOC; implicitly assessed ECWC is/is not amenable and sensitive to change in treatment; and those offenders who show change on both implicit and explicit measures of ECWC will/will not re-offend at a lesser rate than those that show no change or change on only one measurement type.

The current cross-sectional and meta-analytic findings also suggest that offender treatment programmes and clinical assessments may be justified in tailoring approaches as a function of relationship to victims and gender of victims when targeting emotional congruence with children to maximize risk assessment, treatment effectiveness, and resource management (McGrath, 1991; Seto, 2008).

Conclusions

The current research is a specificity design that tested whether emotional congruence with children, as measured by multiple methodologies, is a characteristic unique to a group of extrafamilial sexual offenders against children. These findings cannot produce evidence for the causality of emotional congruence with children in sexual offending for these individuals, but they do suggest that this construct is consistent with this type of sexual offenders (Garber & Hollon, 1991). These data support trends found in past research and, further, suggest that alternative methods of assessing the construct may be valuable in providing unique information regarding how these offenders associate themselves with children. This research was an important exploratory step in expanding the measurement of this risk factor by including the IAT as a measure of implicit ECWC.

For a factor to be a psychologically meaningful risk variable, it must predict sexual recidivism, be linked to high risk situations, be amenable to change through intervention, and

changes on the factor should be associated with changes in recidivism risk (Harris & Hanson, 2010; Mann et al., 2010). Which of these does the current study contribute to, in terms of our understanding of ECWC as a risk factor? It provides further support for the predictive relationship explicit ECWC has with sexual recidivism through a cumulative meta-analytic summary; it provides support that this risk factor is generally unique for SOC-E; and theory indicates a plausible link between high levels of ECWC and high risk situations (Finkelhor, 1984; Knight & Prentky, 1990; Ward et al., 1995; Ward & Siegert, 2002). For the last two criteria, these findings only provide suggestions for how treatment change could be measured in the future. Future treatment evaluations may benefit from assessing implicit and explicit ECWC to provide a more complete picture of an offender's pre- to post-treatment change on this risk factor.

Overall, the current study suggests that a) implicitly assessed identification with children may be a unique feature of sexual offenders with extrafamilial child victims b) these offenders implicitly or explicitly evaluated children as more positive than adults, but not significantly greater when compared to other samples c) self-report measures of ECWC generally differentiate SOC-E from comparisons d) self-report measures of ECWC show strong relationships with each other e) the explicit measures of ECWC show stronger relationships with sexual recidivism risk than implicit measures of ECWC. These results provide preliminary evidence that the IAT is a sensitive measure of an implicit aspect of ECWC and may be an assessment method to complement the existing methods of assessing this construct.

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Table 1

List of Acronyms Used in Text and their Full Phrasings

Acronym	Full Phrase
CIS-R	Child Identification Scale-Revised
CSQ:ECWC	Children and Sex Questionnaire's Emotional Congruence with Children Scale
ECWC	Emotional Congruence with Children
IAT	Implicit Association Test
ITSO	Integrated Theory of Sexual Offending
MTC:CM3	Massachusetts Treatment Center: Child Molester Typology 3
NO	Non-offenders
NSO	Non-sexual offenders
NSO/SOA	Mixed group of non-sexual offenders and sexual offenders against adults
SOA	Sexual offenders against adults
SOC	Sexual offenders against children
SOC-E	Sexual offenders with extrafamilial child victims
SOC-I	Sexual offenders with intrafamilial child victims
SOC/SOA	Sexual offenders with both child and adult victims

Table 3

Meta-Analysis of Group Differences on Emotional Congruence with Children and Cumulative Meta-Analysis of Relationship between

ECWC with Sexual Recidivism

SOC Group (n)	Comparison Group (n)	k (SOC n/Comparison n)	d	Lower limit	Upper limit	Z-value	Q-value (p)	Studies included
SOC-E	SOC-I	10 (667/848)	0.56 ^a	0.36	0.76	5.52	24.21(.004)	A1, A2, A5, A8, A9, A10, A11, A12, A14, A15
	SOA	5 (328/325)	0.51 ^a	0.14	0.87	2.74	10.54(.03)	A9, A10, A11, A12, A15
	SOA/SOC	2 (316/56)	0.33	0.04	0.62	2.24	1.31(.25)	A11, A14
	NSO	3 (129/111)	0.61	0.35	0.87	4.53	5.20(.07)	A7, A9, A12.1
	NO	2(128/127)	0.18 ^a	-0.57	0.92	2.05	8.31(.004)	A1, A4
SOC-EMV	SOC-I	3 (153/245)	0.75	0.51	0.99	6.16	2.21(.33)	A2, A11, A12.1
	SOC-EFV	3 (101/163)	0.51	0.24	0.77	3.73	1.60(.45)	A3, A11, A12
SOC-EFV	SOC-I	2 (133/228)	0.08	-0.13	0.30	0.75	0.65(.42)	A11, A12
SOC-I	SOA	4(272/172)	0.02	-0.17	0.22	0.24	6.14(.11)	A9, A11, A12, A15
	SOA/SOC	2(319/46)	-0.01	-0.33	0.31	-0.08	0.49(.48)	A11, A14
	NSO	2 (84/61)	0.23	-0.11	0.57	1.35	0.51(.48)	A9, A12
	NO	2 (140/101)	-0.22	-0.48	0.04	-1.64	2.94(.09)	A1, A6
SOC-M	SOC-E	2(70/199)	-0.11	-0.39	0.18	-0.79	0.02(.90)	A1, A11
	SOC-I	2(38/242)	0.53	0.19	0.88	3.02	0.88(.35)	A1, A11
	NO	1(12/18)	0.63	0.02	1.25	2.02	-	A1
Online SO	Offline SO	4(718/635)	0.13 ^{ab}	-0.23	0.49	-	11.60	-

Cumulative Sexual Recidivism Estimate	4(892)	0.47	0.24	0.71	3.91	A13, A14
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Note. SOC-E = Sexual offenders against children with extrafamilial victims. SOC-I = Sexual offenders against children with intrafamilial victims. SOC-EMV = Sexual offenders against children with extrafamilial male victims. SOC-EFV = Sexual offenders against children with extrafamilial female victims. SOC-M = Sexual offenders against children with extrafamilial and intrafamilial victims. SOA = Sexual offenders with adult victims. SOA/SOC = Sexual offenders with both adult and child victims. NSO = Non-sexual offenders. NO = Non-offenders.

^aEffect size estimate derived from random-effects model; fixed-effects *Q*-value and associated *p*-value included to facilitate interpretation of between-study variability. ^bAdapted from K. M. Babchishin, R. K. Hanson, and C. A. Hermann, 2010, *Sexual Abuse: A Journal of Research and Treatment*. Advanced online version.

Table 4

Meta-Analysis Study Codes and References

Study Code	Reference
A1	Beech, Fisher, & Beckett (1999)
A2	Bickley & Beech (2002)
A3	Eher et al. (2001)
A4	Elsegood & Duff (2009)
A5	Fisher, Beech, & Browne (1999)
A6	Grant-Hall (1988)
A7	Nunes, Firestone, & Baldwin (2007)
A8	Pfenninger (1990)
A9	Stirpe (2003)
A10	Sullivan, Beech, Craig, & Gannon (2010)
A11	Underhill, Wakeling, Mann, & Webster (2008)
A12	Wilson (1999)
A12.1	Wilson (1997)
A13	Hanson & Morton-Bourgon, 2004
A14	Hanson, Harris, Scott, & Helmus (2007)
A15	Nunes & Cortoni (2007)

Table 6
Sample Descriptives

	SOC-E		SOC-I		NSO/SOA		Students		<i>F</i> or χ^2
	<i>N</i>	<i>M</i> (<i>SD</i>) or <i>n</i> (%)	<i>N</i>	<i>M</i> (<i>SD</i>) or <i>n</i> (%)	<i>N</i>	<i>M</i> (<i>SD</i>) or <i>n</i> (%)	<i>N</i>	<i>M</i> (<i>SD</i>) or <i>n</i> (%)	
Age ^a	13	40-44 ^b	7	40-44 ^b	26	25-29 ^b	54	18-19 ^b	128.35*** ^c
Education – Highest grade completed	13	9.85(2.12)	8	10.75(1.39)	23	9.48(2.42)	-	-	.99
Race	10		8		10		-	-	1.53 ^c
Caucasian		8(80)		6(75)		6(60)			
Other		2(20)		2(25)		4(40)			
Sexual orientation ^a	13		7		26		54		5.91 ^c
Heterosexual		10(69)		6(86)		23(88.4)		53(98)	
Homosexual		3(31)		1(14)		2(7.7)		1(2)	
Source of sample	13		8		26		-	-	
CSC institution		10(77)		8(100)		13(50)			
Forensic Hospital		3(23)		0		13(50)			
# of treatment programmes	10	1.20(.79)	8	.63(.74)	7	.86(1.22)	-	-	.91
% ever married ^a	13	1(7.7)	7	2(25)	26	3(11.5)	-	-	17.78*** ^c
Helped raise child ^a	13		7		26		54		13.92***
Yes		6(46)		6(86)		9(35)		11(20)	
No		7(54)		1(14)		17(65)		43(80)	
# of children helped to raise	13	.46(1.39)	7	2.13(1.81)	26	.26(.92)	54	.48(1.40)	6.78**
SIR-R1 Total Score	8	2.75(6.67)	8	10.50(8.01)	8	-7.75(7.07)	-	-	12.69***
Static-99 Total Score	10	5.8(2.10)	6	2.67(1.03)	4	4.5(3.11)	-	-	4.24*
Stable-2007 Total Score	9	11.78(3.73)	6	9.5(3.14)	3	11.67(3.06)	-	-	.85
Indeterminate Sentence	10		8		10		-	-	2.85 ^c
Yes		4(40)		1(12.5)		5(50)			
No		6(60)		7(87.5)		5(50)			

# of index sex offence convictions	13	4.85(7.52)	8	5(4.57)	23	1.09(4.10)	-	-	2.77†
# of index non-sexual violence convictions	13	.08(.25)	8	0	23	1.17(1.58)	-	-	5.28**
# of prior sexual offence convictions	13	6.85(11.26)	8	.25(.71)	23	.30(.67)	-	-	5.38**
# of prior non-sexual violence convictions	13	.69(1.25)	8	.13(.35)	23	3.44(5.07)	-	-	3.54*
# of sex offence victims							-	-	
Male Victims	9	4.22(8.83)	7	.71(1.11)	7	.29(.76)			1.21
Female Victims	10	2.9(2.64)	7	1.57(1.62)	7	1.57(1.51)			1.17
Male victim	12		8		9		-	-	2.81† ^c
Yes		9(69.2)		3(37.5)		1(11)			
No		3(23.1)		5(62.5)		8(89)			

^aData derived from participant self-report information. ^bMode age category for each group. ^cNote that these Chi-square tests involve more than 20% of cells with a minimum cell count of 5 participants and the associated *p*-value should be interpreted with caution (DeCoster, 2004).

†*p* < .10. **p* < .05. ***p* < .01. ****p* < .001.

Block 1				Block 2				Block 3 and 4	
CHILD	20 trials practice	ADULT	<i>self</i>	20 trials practice	<i>other</i>	CHILD	20 trials practice	ADULT	
	Adult face	•		they	•	<i>self</i>	40 trials test	<i>other</i>	
•	Child face		•	myself			they	•	
•	Child face		•	we		•	Child face		
	Adult face	•		them	•	•	we		
•	Child face		•	my			Adult face	•	
	Adult face	•		theirs	•	•	my		

Block 5				Block 6 and 7	
<i>other</i>	20 trials practice	<i>self</i>	CHILD	20 trials practice	ADULT
•	they		<i>other</i>	40 trials test	<i>self</i>
	myself	•	•	they	
	we	•	•	Child face	
•	them			we	•
	my	•		Adult face	•
•	theirs			me	•

Figure 3. Blocks of trials in child-identification IAT procedure.

Table 8

Internal Consistency of Self-Report Measures

Measure	Items	<i>N</i>	α
CSQ:ECWC Total	15	101	.91
CSQ:ECWC Factor One	8	101	.85
CSQ:ECWC Factor Two	5	101	.83
CSQ:ECWC Factor Three	2	101	.55
CIS-R Total Score	40	101	.85
CIS-R Factor One	8	101	.76
CIS-R Factor Two	8	101	.79
CIS-R Factor Three	9	101	.70
CIS-R Factor Four	4	101	.76
CIS-R Factor Five	8	101	.57
CIS-R Factor Six	2	101	.86
CIS-R Factor Seven	3	101	.14
CIS-R Factor Eight	3	101	.37
Semantic Differential Child Evaluation	5	101	.88
Semantic Differential Adult Evaluation	5	101	.87
Semantic Differential Self Identification	3	101	.80
Semantic Differential Other Identification	3	101	.78

Table 9

Child Identification IAT and Child Evaluation IAT Group Comparisons

Group	Child Identification IAT			Child Evaluation IAT		
	<i>n</i>	<i>M(SD)</i>	Cohen's <i>d</i> (95% CI)	<i>n</i>	<i>M(SD)</i>	Cohen's <i>d</i> (95% CI)
SOC-E	13	.35(.32)		13	.02(.46)	
SOC-I	8	-.06(.27)	1.36** (0.38, 2.33)	8	-.22(.30)	0.59 (-0.31, 1.49)
NSO/SOA	24	.11(.41)	0.59† (-0.10, 1.28)	24	-.02(.51)	0.08 (-0.59, 0.76)
Students	54	.11(.41)	0.58† (-0.04, 1.19)	54	-.05(.43)	0.16 (-0.45, 0.77)

Note. IAT = Implicit Association Test. CI = Confidence interval. SOC-E = Sexual offenders against children with extrafamilial victims. SOC-I = Sexual offenders against children with only intrafamilial victims. NSO/SOA = Incarcerated offenders who do not have any child victims. All *d* values are derived from comparing the SOC-E group with the corresponding group.

† $p < .10$. ** $p < .01$.

Table 10

Children and Sex Questionnaire: Emotional Congruence with Children Scale and Factors Group Comparisons

Measure	SOC-E (<i>n</i> = 13)	SOC-I (<i>n</i> = 8)	NSO/SOA (<i>n</i> = 26)		Students (<i>n</i> = 54)	
	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	Cohen's <i>d</i> (95% CI)	<i>M</i> (<i>SD</i>) Cohen's <i>d</i> (95% CI)	<i>M</i> (<i>SD</i>)	Cohen's <i>d</i> (95% CI)
CSQ: ECWC Total Score ^a	5.08 (1.55)	2.81 (1.99)	1.42** (0.44, 2.40)	4.42 (2.01) (-0.16, 1.19)	4.50 (1.13)	0.13 (-0.48, 0.73)
CSQ: ECWC Factor One	16.23 (8.27)	4.75 (6.58)	1.49** (0.50, 2.48)	13.15 (10.00) (-0.34, 0.99)	11.26 (6.26)	0.74* (0.13, 1.36)
CSQ: ECWC Factor Two	6.85 (6.63)	4.5 (5.53)	0.38 (-0.51, 1.26)	6.85 (6.16) (-0.67, 0.67)	7.59 (4.08)	-0.16 (-0.77, 0.45)
CSQ: ECWC Factor Three	4.00 (2.65)	1.13 (2.10)	1.17* (0.22, 2.11)	2.46 (2.18) (-0.02, 1.34)	1.65 (1.58)	1.29** (0.64, 1.93)

Note. All *d* values are derived from comparing the SOC-E group with the corresponding group. CI = Confidence interval. SOC-E = Sexual offenders against children with extrafamilial victims. SOC-I = Sexual offenders against children with only intrafamilial victims. NSO/SOA = Incarcerated offenders who do not have any child victims.

^aSquare root transformed data results reported.

Factor One: Positive Affect from Children; Factor Two: Special Relationship with Children; Factor Three: Preference for Relationships with Children.

†*p* < .10. * *p* < .05. ***p* < .01.

Table 11

Child Identification Scale-Revised and Factors Group Comparisons

Measure	SOC-E (<i>n</i> = 13)		SOC-I (<i>n</i> = 8)		NSO/SOA (<i>n</i> = 26)		Students (<i>n</i> = 54)	
	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	Cohen's <i>d</i> (95% CI)		<i>M</i> (<i>SD</i>)	Cohen's <i>d</i> (95% CI)	<i>M</i> (<i>SD</i>)	Cohen's <i>d</i> (95% CI)
CIS-R	21.31	16.63	0.66		18.04	0.43	15.76	0.93**
Total	(6.73)	(7.74)	(-0.25, 1.56)		(8.09)	(-0.25, 1.10)	(5.75)	(0.31, 1.56)
Score								
CIS-R	5.16	2.63	1.19*		3.42	0.76*	2.39	1.37***
Factor	(2.03)	(2.26)	(0.24, 2.15)		(2.39)	(0.08, 1.45)	(2.02)	(0.72, 2.02)
One								
CIS-R	4.08	2.25	0.65		1.73	1.00*	1.11	1.76***
Factor	(2.87)	(2.71)	(-0.25, 1.55)		(2.07)	(0.29, 1.70)	(1.27)	(1.09, 2.44)
Two								
CIS-R	3.54	3.75	-0.09		3.23	0.13	4.46	-0.44
Factor	(2.37)	(2.19)	(-0.97, 0.79)		(2.44)	(-0.54, 0.79)	(2.00)	(-1.05, 0.17)
Three								
CIS-R	3.23	2.38	0.67		1.65	1.36***	0.94	1.89***
Factor	(0.83)	(1.77)	(-0.23, 1.58)		(1.29)	(0.63, 2.09)	(1.28)	(1.21, 2.58)
Four								
CIS-R	5.15	4.25	0.56		4.96	0.11	5.26	-0.06
Factor	(1.63)	(1.58)	(-0.34, 1.46)		(1.80)	(-0.56, 0.77)	(1.76)	(-0.67, 0.54)
Five								
CIS-R	0.54	0.88	-0.37		1.04	-0.55	0.61	-0.08
Factor	(0.88)	(0.99)	(-1.26, 0.52)		(0.92)	(-1.23, 0.13)	(0.88)	(-0.69, 0.53)
Six								
CIS-R	1.23	1.25	-0.02		1.42	-0.21	1.19	0.04
Factor	(0.93)	(0.89)	(-0.90, 0.86)		(0.90)	(-0.89, 0.45)	(0.89)	(-0.56, 0.65)
Seven								
CIS-R	1.85	1.13	0.82†		1.58	0.28	0.68	1.59***
Factor	(0.80)	(0.99)	(-0.09, 1.74)		(1.03)	(-0.39, 0.95)	(0.72)	(0.93, 2.25)
Eight								

Note. All *d* values are derived from comparing the SOC-E group with the corresponding group. CI = Confidence interval. SOC-E = Sexual offenders against children with extrafamilial victims. SOC-I = Sexual offenders against children with only intrafamilial victims. NSO/SOA = Incarcerated offenders who do not have any child victims.

Factor One: Start Life Over; Factor Two: Immaturity; Factor Three: Mentoring; Factor Four: Loner; Factor Five: Enjoys Children's Activities; Factor Six: Longing for Childhood; Factor Seven: Empathy for Children; Factor Eight: Abused as a Child (Wilson, 1999).

†*p* < .10. **p* < .05. ***p* < .01. ****p* < .001.

Table 12

Child Identification Rep Grid Index and Child Evaluation Rep Grid Index Group Comparisons

Measure	SOC-E (<i>n</i> = 12)	SOC-I (<i>n</i> = 6)	NSO/SOA (<i>n</i> = 15)		Students (<i>n</i> = 49)	
	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	Cohen's <i>d</i> (95% CI)	<i>M</i> (<i>SD</i>)	Cohen's <i>d</i> (95% CI)	<i>M</i> (<i>SD</i>) Cohen's <i>d</i> (95% CI)
Mean Child Identification Score	1.89(.23)	2.29(.25)	-1.69** (-2.82, -0.57)	2.16(.26)	-1.09** (-1.91, -0.28)	2.06(.21) -0.79*
Mean Adult Identification Score	2.10(.36)	2.13(.25)	-0.09 (-1.07, 0.89)	2.19(.22)	-0.28 (-1.04, 0.49)	2.21(.28) -0.37
Identification Difference Score	-.21(.33)	.17(.25)	-1.24* (-2.3, -0.18)	-.03(.37)	-0.51 (-1.28, 0.26)	-.14(.37) -0.19
Mean Child Evaluation Score	2.35(.16)	2.47(.27)	-0.60 (-1.60, 0.40)	2.35(.28)	0.00 (-0.75, 0.75)	2.07(.25) 1.19**
Mean Adult Evaluation Score	2.31(.26)	2.25(.24)	0.20 (-0.78, 1.19)	2.31(.21)	0.00 (-0.75, 0.75)	2.28(.31) 0.07
Evaluation Difference Score	0.04(.35)	0.22(.36)	-0.51 (-1.50, 0.49)	0.04(.33) ^a	0.01 (-0.74, 0.76)	-0.21(.45) ^b 0.58 †

Note. All *d* values are derived from comparing the SOC-E group with the corresponding group. CI = Confidence interval. SOC-E = Sexual offenders against children with extrafamilial victims. SOC-I = Sexual offenders against children with only intrafamilial victims. NSO/SOA = Incarcerated offenders who do not have any child victims.

^a*n* = 16. ^b*n* = 48.

†*p* < .10. **p* < .05. ***p* < .01.

Table 13

Semantic Differential Indexes Group Comparisons

	SOC-E (<i>n</i> = 13)	SOC-I (<i>n</i> = 8)	NSO/SOA (<i>n</i> = 26)		Students (<i>n</i> = 54)		
Measure	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	Cohen's <i>d</i> (95% CI)	<i>M</i> (<i>SD</i>) Cohen's <i>d</i> (95% CI)	<i>M</i> (<i>SD</i>) Cohen's <i>d</i> (95% CI)	<i>M</i> (<i>SD</i>) Cohen's <i>d</i> (95% CI)	
Self	4.85	5.62	-0.47	5.21	-0.23	4.54	0.26
Immature	(1.79)	(1.30)	(-1.37, 0.42)	(1.41)	(-0.90, 0.43)	(1.03)	(-0.35, 0.86)
Score							
Adult	5.10	5.29	-0.15	4.32	0.52	5.17	-0.06
Immature	(1.36)	(1.08)	(-1.03, 0.73)	(1.57)	(-0.16, 1.19)	(1.05)	(-0.67, 0.54)
Score							
Immaturity	0.26	-0.33	0.36	-0.88	0.73*	-0.62	0.65*
Difference	(1.88)	(1.07)	(-0.53, 1.25)	(1.39)	(0.04, 1.41)	(1.21)	(0.03, 1.26)
Score							
Child	5.38	5.00	0.37	5.38	0.00	5.33	0.05
Evaluation	(1.02)	(1.03)	(-0.52, 1.26)	(1.46)	(-0.67, 0.67)	(1.04)	(-0.56, 0.65)
Score							
Adult	4.94	5.55	-0.55	4.65	0.20	4.85	0.09
Evaluation	(1.21)	(.89)	(-1.45, 0.34)	(1.58)	(-0.47, 0.86)	(1.01)	(-0.52, 0.69)
Score							
Evaluation	0.44	-0.55	0.99*	0.72	-0.26	0.47	-0.03
Difference	(0.78)	(1.30)	(0.06, 1.92)	(1.18)	(-0.93, 0.41)	(0.91)	(-0.64, 0.57)
Score							

Note. All *d* values are derived from comparing the SOC-E group with the corresponding group. CI = Confidence interval. SOC-E = Sexual offenders against children with extrafamilial victims. SOC-I = Sexual offenders against children with only intrafamilial victims. NSO/SOA = Incarcerated offenders who do not have any child victims.

**p* < .05.

Table 14

Cumulative Meta-Analysis Results

SOC Group (<i>n</i>)	Comparison Group (<i>n</i>)	<i>k</i> (SOC <i>n</i> /Comparison <i>n</i>)	<i>d</i>	Lower limit	Upper limit	Z-value	<i>Q</i> -value (<i>p</i>)	<i>Q</i> _{<i>A</i>} ^b value (<i>p</i>)
SOC-E	SOC-I	11 (680/856)	0.58 ^a	0.38	0.78	5.78	25.75(.004)	1.54(.21)
	NSO	4 (142/136)	0.59	0.35	0.84	4.72	5.35(.15)	0.14(.71)
	NO	3 (141/181)	0.32 ^a	-0.23	0.87	1.13	9.77(.01)	1.46(.23)
SOC-I	NSO	3(92/86)	0.13	-0.19	0.44	0.80	3.02(.22)	2.52(.11)
	NO	3(148/155)	-0.25	-0.50	-0.01	-2.01	3.57(.17)	0.63(.43)

Note. SOC-E = Sexual offenders against children with extrafamilial victims. SOC-I = Sexual offenders against children with intrafamilial victims. NSO = Non-sexual offenders. NO = Non-offenders.

^aEffect size estimate derived from random-effects model; fixed-effects *Q*-value and associated *p*-value included to facilitate interpretation. ^b *Q*_{*A*} has a χ^2 distribution with a *df* = 1.

Table 15

Summary of Convergent Validity of Measures of Emotional Congruence with Children

Measure	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Child ID IAT	-	.33** (99)	.11 (99)	.11 (99)	.19† (99)	.14 (99)	.18† (99)	.18† (99)	.03 (99)	.06 (82)	.17 (82)	.08 (99)	.07 (99)
2. Child Evaluation IAT		-	-.01 (99)	.05 (99)	.06 (99)	-.12 (99)	-.07 (99)	-.04 (99)	-.15 (99)	.20† (82)	.06 (82)	.01 (99)	.16 (99)
3. CSQ:ECWC Total Score			-	.92** (101)	.68** (101)	.65** (101)	.44** (101)	.54** (101)	.21* (101)	-.10 (82)	-.05 (82)	.11 (101)	.30** (101)
4. CSQ:ECWC Factor One				-	.60** (101)	.60** (101)	.40** (101)	.54** (101)	.21* (101)	-.11 (82)	-.03 (82)	.12 (101)	.35** (101)
5. CSQ:ECWC Factor Three					-	.63** (101)	.59** (101)	.35** (101)	.41** (101)	-.02 (82)	.04 (82)	.21* (101)	.15 (101)
6. CIS-R Total Score						-	.80** (101)	.77** (101)	.48** (101)	.05 (82)	.05 (82)	.15 (101)	.24* (101)
7. CIS-R Factor One							-	.76** (101)	.50** (101)	.00 (82)	-.02 (82)	.26** (101)	.15 (101)
8. CIS-R Factor Two								-	.55** (101)	.08 (82)	.03 (82)	.31** (101)	.18† (101)
9. CIS-R Factor Four									(101)	(82)	(82)	(101)	(101)
10. Rep Grid Identification Index									-	.01 (82)	.10 (82)	.17† (101)	.05 (101)
11. Rep Grid Evaluation Index										-	.48** (82)	.17 (82)	-.18 (82)
12. Semantic Differential Identification Index											-	.01 (82)	.09 (101)
13. Semantic Differential Evaluation Index												-	.04 (101)

Note. Sample sizes are in brackets. ^a Only factors that differentiated significantly between groups were included in these analyses.

† $p < .10$. * $p < .05$. ** $p < .001$.

Table 16

Relationship between Measures of Emotional congruence with Children and Measures of Sexual Recidivism Risk

Measure	Static-99		Stable 2007 Total		Stable 2000 & 2007 Emotional Identification Item	
	All SO	SOC-E	All SO	SOC-E	All SO	SOC-E
Child Identification IAT	.05 (20)	.23 (10)	-.22 (18)	-.41 (9)	-.22 (12)	.11 (9)
Child Evaluation IAT	.07 (20)	.31 (10)	.09 (18)	.40 (9)	-.11 (12)	.18 (9)
CSQ:ECWC Total Score	.41† (20)	.27 (10)	.54* (18)	.59† (9)	.23 (12)	.30 (9)
CSQ:ECWC Factor One	.44* (20)	.08 (10)	.60* (18)	.71* (9)	.16 (12)	.11 (9)
CSQ:ECWC Factor Three	.41† (20)	.38 (10)	.48* (18)	.19 (9)	.40 (12)	.44 (9)
CIS-R Total Score	.26 (20)	.41 (10)	.33 (18)	.33 (9)	.57* (12)	.51 (9)
CIS-R Factor One	.30 (20)	.25 (10)	.34 (18)	.41 (9)	.34 (12)	.19 (9)
CIS-R Factor Two	.21 (20)	.16 (10)	.35 (18)	.43 (9)	.47† (12)	.38 (9)
CIS-R Factor Four	-.01 (20)	-.23 (10)	.31 (18)	-.19 (9)	.41 (12)	.12 (9)
Rep Grid Identification Difference Score	-.60* (18)	-.28 (10)	.03 (17)	.52 (9)	.59* (12)	.44 (9)
Rep Grid Evaluation Difference Score	-.25 (18)	.10 (10)	-.20 (17)	.04 (9)	.07 (12)	.05 (9)
Semantic Differential Immaturity Score	-.02 (20)	-.56† (10)	.17 (18)	.45 (9)	.24 (12)	.09 (9)
Semantic Differential Evaluation Score	.04 (20)	-.15 (10)	.14 (18)	.11 (9)	.07 (12)	.11 (9)

Note. Sample sizes are in brackets. ^aSquare root transformed data were used in these analyses due to non-normal distributions.

† $p < .10$. * $p < .05$.

Appendix A: Carleton University Certificate of Ethics Approval

Department of Psychology

Ethics Committee for Psychology Research with Human Participants

Certificate of Ethics Approval

Principal Investigator

Department

Study Number

Ian McPhail

Psychology

09-195

Institution(s) where research will be conducted:

Carleton University and federal penitentiaries in Ontario

Co-Investigators and other researchers:

Researcher	Study Role	Position
Kevin Nunes	Faculty Sponsor	Faculty
Chantal Hermann	Other Research Personnel	Graduate Student
Rikki Sewell	Other Research Personnel	Graduate Student

Study Title:

Examining Implicit and Explicit Views of Self and Children in Child Sexual Offenders

Approval Date: 12/09/2009

Validity Term: 0 Until Aug 31st Next

Approval Type: Final

Submitted Date	Study Component	Approval Date

Comments:

Certification

The protocol describing the above-named project has been reviewed by the Committee for Ethics in psychology Research and the research procedures were found to be acceptable on ethical grounds for research involving human participants.

Chair, Ethics Committee for Psychology Research

This Certificate of Approval is valid for the above term provided there is no change in the research procedures.

Appendix B: Stimulus Words and Face Images Used in IAT

Self words. me, mine, I, my, myself

Other words. they, them, themselves, theirs, he

Positive words. happy, rainbow, smile, paradise, peace

Negative words. rotten, poison, sickness, vomit, cancer

Child Images.

Adult Images.

Appendix C: Children and Sex Questionnaire Emotional Congruence Scale (Beckett, 1987)

This questionnaire is concerning your experience of children and your feelings and thoughts about them. For the purpose of this questionnaire children means persons of 12 years and younger.

Instructions

Read each question carefully. Put a tick in the area which is closest to your view or direct experience.

1. I PREFER TO SPEND MY TIME WITH CHILDREN.

Very true / Somewhat true / Somewhat untrue / Very untrue / Don't know

2. I HAVE LOVED A CHILD AT FIRST SIGHT.

3. THINKING ABOUT CHILDREN MAKES ME FEEL GOOD.

4. I KNOW WHEN CHILDREN ARE INTERESTED IN ME.

5. SOMETIMES CHILDREN LOOK AT ME IN A SPECIAL WAY.

6. CHILDREN STOP ME FEELING LONELY.

7. CHILDREN ARE SPECIAL FOR ME.

8. CHILDREN REMIND ME OF MYSELF.

9. I FEEL MORE COMFORTABLE WITH CHILDREN THAN WITH ADULTS.

10. SOMETIMES I MEET A CHILD WHO I KNOW HAS SPECIAL FEELINGS ABOUT ME.

11. I AM BETTER THAN MOST PEOPLE AT UNDERSTANDING CHILDREN.

12. I AM BETTER THAN MOST PEOPLE AT GETTING ALONG WITH CHILDREN.

13. WHEN I FEEL LOW CHILDREN CHEER ME UP.

14. SOME CHILDREN PREFER TO BE WITH ME RATHER THAN THEIR PARENTS.

15. CHILDREN SEEM TO SEEK ME OUT.

Appendix D: Child Identification Scale-Revised (Wilson, 1999)

Child refers to someone under 12 years of age.

1. I often wish I could have remained a child and not grown up. T F
2. I prefer to socialize with people my own age. T F
3. I enjoy myself most when I am playing with children. T F
4. My family and friends cannot understand how I am so patient with children. T F
5. Adult responsibilities are just too stressful. T F
6. I like to treat children as equals. T F
7. I often find it difficult to act my age. T F
8. My family and friends think I am immature. T F
9. I have difficulty relating to adults. T F
10. I have been in love with a child. T F
11. I would like to work with children as a babysitter, camp counselor, or teacher. T F
12. Most parents are too strict with their children. T F
13. I feel closer to children than to adults. T F
14. I enjoy teaching children how to do new things. T F
15. I enjoy coaching sports with children. T F
16. I often wish I could be young again. T F
17. I like to organize activities for children, such as games or selecting toys for them. T F
18. I was an abused child. T F
19. When I am with children, I feel like I am one of them. T F
20. I often wish I could start my life over again. T F
21. I like to look through toy stores. T F

- 22. Childhood was a difficult time for me. T F
- 23. I love a good game. T F
- 24. I like to listen to children's music. T F
- 25. I wish I had fewer responsibilities. T F
- 26. There is nothing I like better than seeing a child having fun. T F
- 27. I am unhappy with my life as it is. T F
- 28. Adults should listen to children more. T F
- 29. Most of my best memories are from my childhood. T F
- 30. I am afraid of growing old. T F
- 31. I was a loner as a child. T F
- 32. When I was a child I always played with lots of other children. T F
- 33. I have had few friends as an adult. T F
- 34. I find children are a bother to have around when adults are trying to talk. T F
- 35. I dislike having children's toys around. T F
- 36. I secretly love re-visiting my favorite childhood surroundings. T F
- 37. My best memories are childhood ones. T F
- 38. You never outgrow amusement parks. T F
- 39. You are never too old for the roller coaster. T F
- 40. I hate playing children's games. T F

Appendix E: Instructions and Example Repertory Grid

Instructions. Below are a number of role titles of different people you may know and a series of trials below the role titles. When completing the test, follow these steps

1. For each role title, choose a person that you know or knew previously that fits the title best and write their name in the space beside the title. For any role title where you cannot think of a person that fits the title, substitute a person of the same gender and age group for the title or skip the trials involving this role title.
2. Below the role titles are a series of trials in which you are to compare three people with each other. The three people that you are to compare are indicated by an 'O'. For each trial, the researcher will ask you "In what important way are two of these people similar? How is the third person different from these two?".
3. Please indicate who you think is similar by putting an 'X' through the 'O's.
4. On the right-hand side of the sheet, write in a word, or a few words, how you think the two people you indicated are similar, and how these are different from the third in some important way.
5. After you have written in the description, please think about each of the people you have indicated at the top, and put an 'X' under each person that you think the similarity description you have written down applies to.

[illegible]

Appendix F: Repertory Grid Difference Score Computations

Identification difference score. For the Identification difference score, each data point was categorized by the principal investigator as one of the following:

- 1) Child-self identification: an instance where a child role title shares the same characteristic as the 'self' role title. (scored as 3)
- 2) Child-not self identification: an instance where a child role is indicated as having the opposite characteristic as the 'self' role title. (scored as 1)
- 3) Child neutral: an instance where a child role title is not categorized as having either the similarity or contrast characteristic. (scored as 2)

These values were summed and divided by the total number of child identification instances to produce a mean child-self identification score. Mean scores greater than 2 indicate greater perceived similarity between self and children; scores less than 2 indicate less perceived similarity between self and children.

- 4) Adult-self identification: an instance where an adult role title shares the same characteristic as the 'self' role title. (scored as 3)
- 5) Adult-not self identification: an instance where an adult role is indicated as having the opposite characteristic as the 'self' role title. (scored as 1)
- 6) Adult neutral: an instance where an adult role title is not categorized as having either the similarity or contrast characteristic. (scored as 2)

These values were summed and divided by the total number of adult identification instances to produce a mean adult-self identification score. Mean scores greater than 2 indicate greater perceived similarity between self and adult; scores less than 2 indicate less perceived similarity between self and adult.

The Identification difference score was computed by subtracting the mean adult-self identification score from the mean child-self identification score. Positive values indicate more perceived similarity with children, whereas negative values indicate more perceived similarity with adults.

Evaluation difference score. For the Evaluation difference score, each data point was categorized by the principal investigator as one of the following:

- 1) Child-positive evaluations: an instance where a positive characteristic is assigned to a child role title. (scored as 3)
- 2) Child-negative evaluations: an instance where a negative characteristic is assigned to a child role title. (scored as 1)
- 3) Child-neutral evaluations: an instance where neither a positive or negative characteristic is assigned to a child role title. (scored as 2)

These values were summed and divided by the total number of child evaluation instances to produce a mean child-evaluation score. Mean scores greater than 2 indicate greater positive evaluation of children; scores less than 2 indicate more negative evaluation of children.

4) Adult-positive evaluations: an instance where a positive characteristic is assigned to an adult role title. (scored as 3)

5) Adult-negative evaluations: an instance where a negative characteristic is assigned to an adult role title. (scored as 1)

6) Adult-neutral evaluations: an instance where neither a positive or negative characteristic is assigned to an adult role title. (scored as 2)

These values were summed and divided by the total number of adult evaluation instances to produce a mean adult-evaluation score. Mean scores greater than 2 indicate greater positive evaluation of adults; scores less than 2 indicate more negative evaluation of adults.

The Evaluation difference score was computed by subtracting the mean adult-evaluation score from the mean child-evaluation score. Positive values indicate more positive evaluation of children relative to adults, whereas negative values indicate more positive evaluation adults relative to children.

Appendix G: Semantic Differentials

		Self						
Child-like							Adult-like	
1	2	3	4	5	6	7		
Nice							Mean	
1	2	3	4	5	6	7		
Deceitful							Trustful	
1	2	3	4	5	6	7		
Positive							Negative	
1	2	3	4	5	6	7		
Immature							Mature	
1	2	3	4	5	6	7		

		Others						
Child-like							Adult-like	
1	2	3	4	5	6	7		
Nice							Mean	
1	2	3	4	5	6	7		
Deceitful							Trustful	
1	2	3	4	5	6	7		
Positive							Negative	
1	2	3	4	5	6	7		
Immature							Mature	
1	2	3	4	5	6	7		

		Children						
Nice							Mean	
1	2	3	4	5	6	7		
Positive							Negative	
1	2	3	4	5	6	7		
Like Me							Like Others	
1	2	3	4	5	6	7		
Deceitful							Trustful	
1	2	3	4	5	6	7		
Bad							Good	
1	2	3	4	5	6	7		

		Adults						
Nice							Mean	
1	2	3	4	5	6	7		
Positive							Negative	
1	2	3	4	5	6	7		
Like Me							Like Others	
1	2	3	4	5	6	7		

Deceitful					Trustful	
1	2	3	4	5	6	7
Bad					Good	
1	2	3	4	5	6	7

Appendix H: Static-99 Coding Form

STATIC-99 Coding Form

Question Number	Risk Factor	Codes	Score
1	Young (S9909)	Aged 25 or older Aged 18 – 24.99	0 1
2	Ever Lived With (S9910)	Ever lived with lover for at least two years? Yes No	0 1
3	Index non-sexual violence - Any Convictions (S9904)	No Yes	0 1
4	Prior non-sexual violence - Any Convictions (S9905)	No Yes	0 1
5	Prior Sex Offences (S9901)	Charges Convictions None None 1-2 1 3-5 2-3 6+ 4+	0 1 2 3
6	Prior sentencing dates (excluding index) (S9902)	3 or less 4 or more	0 1
7	Any convictions for non-contact sex offences (S9903)	No Yes	0 1
8	Any Unrelated Victims (S9906)	No Yes	0 1
9	Any Stranger Victims (S9907)	No Yes	0 1
10	Any Male Victims (S9908)	No Yes	0 1
	Total Score	Add up scores from individual risk factors	

Appendix I: STABLE-2007 Coding Form

STABLE-2007 Tally Sheet

Subject Name: _____

Place of Scoring: _____

Date of Scoring: _____ Name of Assessor: _____

Scoring Item	Notes	Section Total
Significant Social Influences		
Capacity for Relationship Stability		
Emotional ID with Children	(Only score this item for offenders with victims age 13 or younger)	
Hostility toward women		
General Social Rejection		
Lack of concern for others		
Impulsive		
Poor Problem Solving Skills		
Negative Emotionality		
Sex Drive		
Sex Preoccupation		
Sex as Coping		
Deviant Sexual Preference		
<u>Deviant Sexual Interests in Possible Remission</u> An offender who has scored a "2" based upon historical facts can have their Deviant Sexual Interest score reduced by one point if the following is present: The offender is involved in an age appropriate, consensual, satisfying sexual relationship of at least one year's duration while "at risk" in the community with the absence of behavioural indicators of Deviant Sexual Interest for 2 years. If the presence of this relationship has been confirmed by a credible, independent, collateral contact and the above condition applies you may enter and count a "negative 1" in this score box – reducing the offender's overall score by "1"		
Co-operation with Supervision		
Sum for Final Total (Out of 24 for those without a child victim)		26

Interpretive Ranges: 0 – 3 = Low, 4 – 11 = Moderate, 12+ = High

Adapted from "Assessing the risk of sexual offenders on community supervision: The Dynamic Supervision project," by R. K. Hanson, A. J. R. Harris, T. L. Scott, & L. Helmus, 2007, Public Safety and Emergency Preparedness Canada.

Appendix J: Consent Form for Forensic Psychiatric Hospital Patient Participants

An informed consent form is meant to tell you what the research project involves so that you can make an informed decision if you want to participate in the research. Consent forms also describe the procedure, any possible negative consequences of participating, and provide contact information if you wish to ask any questions or have any concerns about the research that cannot be answered by the researcher.

The purpose of this research is to understand how men who have sexually offended against children think about themselves and various social groups compared to men who have. You will be asked to complete questionnaires and grouping tasks that ask about how you view yourself and others in your life. You will be asked questions about your family background; sexual interests and history; your criminal history; and how willing you would be to sexually offend. Participation in this research will consist of a single meeting and will take around 75 minutes to complete. You will receive a \$5 compensation for your participation in this research.

You are also asked to allow the researcher to review information about your criminal history, psychological assessments, and programs in your institutional files. This information will be used by the researchers to see if there is a relationship between specific file information and the measures completed in the present study. Your file information will be used for the current study and may be used in future follow up studies for a period of 10 years from now for research purposes. Ethics approval from the mental health centre will be obtained before conducting any follow-up studies.

Your responses on the computer will NOT be shared with staff and will NOT be put on any of your hospital files. The contents of your files will be used for research purposes and your confidentiality will be respected and protected. You will NOT be identified as a participant in the publication or presentation of the results. Your name will NOT be written on the information you provide to protect your identity. All responses that you provide will be kept confidential on either a password protected computer and in a locked filing cabinet at Carleton University for a period of 10 years.

Because some of the activities deal with sensitive material, they may be embarrassing or offensive. You are free to withdraw from the project at any time, refuse to participate, and refuse to answer questions. Refusal to participate will NOT affect your treatment by hospital staff in any way and will NOT affect any administrative decisions concerning you.

This study has been approved by the mental health centre Research Ethics Board and the Carleton University Ethics Committee for Psychological Research. The research project is being conducted by Ian McPhail (Master's student, Department of Psychology, Carleton University, 613-520-2600 ext. 2649; imcphail@connect.carleton.ca) under the supervision of Dr. Kevin Nunes (Assistant Professor, Department of Psychology, Carleton University, 613-520-2600 ext. 1545; kevin_nunes@carleton.ca). If you have any questions or concerns regarding this project or want access to the final report of this study, please feel free to contact either Ian McPhail or Kevin Nunes, or Dr. X from the mental health centre.

If you are concerned about the ethics or have any other concerns about this study, please contact Dr. X, Chair of the mental health centre Research Ethics Board (phone number and email address), Dr. X, Chair of the Carleton University Ethics Committee for Psychological Research (phone number and email address) or Dr. X, Chair of the Psychology Department (phone number and email address).

For the purposes of this study, I permit the hospital to disclose personal health information about me from my clinical record to _____, and permit _____ to collect and use this personal health information for the purposes of the research study described above.

I have read and understood the above information. Any questions I had were answered to my satisfaction. My signature indicates that I am willing to participate in this research. There are two copies of the informed consent form, one that I may keep for future reference.

Participant Signature: _____

Date: _____

Researcher Signature: _____

Date: _____

Appendix K: Consent Form for Correctional Services of Canada Offender Participants

An informed consent form is meant to tell you what the research project involves so that you can make an informed decision if you want to participate in the research. Consent forms also describe the procedure, any possible negative consequences of participating, and provide contact information for people if you wish to ask any questions or have any concerns about the research that cannot be answered by the researcher.

The purpose of this research is to understand how men convicted of sexual offences think about themselves and social groups compared to men who have not been convicted of a sexual offence. You will be asked to complete a series of questionnaires and grouping tasks that pertain to how you view yourself and others in your life. You will be asked questions about your family background; sexual interests and history; your criminal history; and how willing you would be to sexually offend in the future. Participation in this project will consist of a single meeting time and should take approximately 90 minutes to complete. You will receive no compensation for participating in this research.

You are also asked to allow the researcher to review information about your criminal history, psychological assessments, and programs in your institutional files. This information will be used by the researchers to see if there is a relationship between specific file information and the measures completed in the present study. Your file information will be accessed for the current study and may be accessed in future follow up studies for a period of 10 years from now for research purposes. Because some of the activities deal with sensitive material, they may be embarrassing or offensive. You are free to withdraw from the project at any time, refuse to participate, and refuse to answer questions. Refusal to participate will NOT affect your treatment by CSC in any way. Participation in this study will NOT affect any administrative decisions concerning you, such as your institutional placement or parole.

Your responses on the computer will NOT be shared with Correctional Services of Canada (CSC) staff and will NOT be put on any of your institutional files. Outside of the computerized tasks, if you provide information that identifies the name of past or future victims that are unknown to authorities or plans to hurt yourself, the researcher is legally obligated to report this information to the appropriate authorities. The contents of your files will be used for research purposes and your confidentiality will be respected and protected. You will NOT be identified as a participant in the publication or presentation of the results. Your name or FPS number will NOT be written on the information you provide to protect your identity. All responses that you provide will be kept confidential on either a password protected computer or a locked filing cabinet at Carleton University for a period of 10 years.

This study has been approved by the Carleton University Ethics Committee for Psychological Research. The research project is being conducted by Ian McPhail (Master's student, Department of Psychology, Carleton University, 613-520-2600 ext. 2649; imcphail@connect.carleton.ca) under the supervision of Dr. Kevin Nunes (Assistant Professor, Department of Psychology, Carleton University, 613-520-2600 ext. 1545; kevin_nunes@carleton.ca). If you have any questions or concerns regarding this project, please feel free to contact either Ian McPhail or Kevin Nunes. If you are concerned about the ethics or have any other concerns about this study, please contact Dr. X, Chair of the Carleton University Ethics Committee for Psychological Research (phone number and email address) or Dr. X, Chair of the Psychology Department (phone number and email address).

I have read and understood the above information. My signature indicates that I am willing to participate in this research. There are two copies of the informed consent form, one that I may keep for future reference.

Participant Signature: _____

Date: _____

Experimenter Signature: _____

Date: _____

Appendix L: Consent Form for Carleton University Students

An informed consent form is meant to inform you what the research project involves so that you can make an informed decision if you want to participate in the research. Consent forms also describe the procedure, any possible negative consequences of participating, and provide contact information for people if you wish to ask any questions or have any concerns about the research, which cannot be answered by the researcher.

The purpose of this research is to understand how men convicted of sexual offences think about themselves and social groups compared to men who have not been convicted of a sexual offence. Participation in this project will consist of a single meeting time and should take approximately 45 minutes to complete. You will be asked to do a number of categorization tasks and complete questionnaires on a computer. The procedure also involves filling out a questionnaire on paper. These questionnaires and categorization tasks all deal with and attempt to measure different aspects of your thinking and judgments about others you know, as well as the various ways that you think about yourself in relation to others, and your sexual interests and history. By participating in this research, you will receive one percentage point of course credit.

All responses that you provide will be kept confidential on either a password protected computer or a locked filing cabinet at Carleton University for up to 10 years. As well, your responses will be confidential, that is, they will not be attached to your name, so you cannot be connected to your responses. The information you do provide will only be used for research purposes. If the results are published or presented, you will not be identified in any way as a participant.

The questions may relate to personal and sensitive information that you may not want to share. Due to the nature of the questions, you may feel discomfort from participating in this study. You are free to withdraw from the project at any point in the procedure, decline to participate, and refuse to answer any of the questions you are asked; there are no penalties or consequences related to non-participation. If you withdraw your participation after the procedure has begun, this will not affect you receiving one percentage point of course credit.

This study has been approved by the Carleton University Ethics Committee for Psychological Research. The research project is being conducted by Ian McPhail (Master's student, Department of Psychology, Carleton University, 613-520-2600 ext. 2649; imcphail@connect.carleton.ca) under the supervision of Dr. Kevin Nunes (Assistant Professor, Department of Psychology, Carleton University, 613-520-2600 ext. 1545; kevin_nunes@carleton.ca). If you have any questions or concerns regarding this project, please feel free to contact either Ian McPhail or Kevin Nunes. If you are concerned about the ethics or have any other concerns about this study, please contact Dr. X, Chair of the Carleton University Ethics Committee for Psychological Research (phone number and email address) or Dr. X, Chair of the Psychology Department (phone number and email address).

I have read and understood the above information. My signature indicates that I am willing to participate in this research. There are two copies of the informed consent form, one that I may keep for future reference.

Participant Signature: _____ Date: _____

Experimenter Signature: _____ Date: _____

Appendix M: Demographic Questionnaire

How old are you?

Are you right-handed or left-handed?

Do you speak English fluently?

Do you understand written English?

Do you understand spoken English?

Is English your first language?

Did you attend an English grade school (grades 1 to 8)?

Did you attend an English high school?

What is the highest grade you completed in school?

Did you take any college or university courses?

Did you complete a college or university degree?

Were you ever suspended or expelled from school between Grades 1 to 8?

Were you ever diagnosed with a learning disability?

Before your 13th birthday, were you ever knocked unconscious (for example, falling from a tree or hitting your head in a hockey game)?

After your 13th birthday, were you ever knocked unconscious (for example, in a car accident or in a sports injury)?

Before you came to prison (or hospital), how much money did you usually make in a year?

Did you live with your biological parents until you were at least 16 years old?

How many boys did your mother give birth to before she gave birth to you?

Have you ever been married?

What is the longest time you have lived with a sexual partner (for example, a wife, girlfriend, or boyfriend)?

At the time of your most recent offence were you married or living in a sexual relationship?

Do you have a child (or children) that you raised or helped to raise?

Not counting the offences that you're in prison (or hospital) for now, how many violent offences (for example, assault, robbery, making threats) have you been convicted of?

Not counting the offences that you're in prison (or hospital) for now, how many non-violent non-sex offences (for example, theft, break and enter, drug possession) have you been convicted of?

How many times have you been sent back to prison (or hospital) because you violated the conditions of your bail, probation, parole, statutory release, or other type of conditional release?

Who are you most sexually attracted to?

How many women have you had consenting sexual contact with?

How many men have you had consenting sexual contact with?

How old were you when you first had consenting sexual contact with a female?

How old were you when you first had consenting sexual contact with a male?

Do you get sexually turned on by hurting or humiliating other people?

Have you ever committed a sex offence?

If “yes” response to question above, then the following set of questions is presented:

How old were you when you committed your first sex offence?
older

How many of your sex offence victims were not related to you (not family)?

How many of your sex offence victims had you NEVER met and talked with at least 24 hours before the offence?

How many women aged 16 or older have you forced to have sexual contact with you when they didn't want to by using physical force or threats?

How many men aged 16 or older have you forced to have sexual contact with you when they didn't want to by using physical force or threats?

Have you ever had sexual contact with someone under the age of 16 when you were at least 5 years older than that person?

If “yes” response to question above, then the following set of questions is presented:

How many girls under the age of 16 have you had sexual contact with when you were at least 5 years older than them?

How many girls under the age of 14 have you had sexual contact with when you were at least 5 years older than them?

How many girls under the age of 12 have you had sexual contact with when you were at least 5 years older than them?

How many boys under the age of 16 have you had sexual contact with when you were at least 5 years older than them?

How many boys under the age of 14 have you had sexual contact with when you were at least 5 years older than them?

How many boys under the age of 12 have you had sexual contact with when you were at least 5 years older than them?

Have you ever looked at child pornography?

Have you ever done a sex offence that didn't involve contact, like flashing someone or child pornography?

Have you ever been charged or convicted for a sex offence?

If “yes” response to question above, then the following set of questions is presented:

Not counting the offences that you're in prison (or hospital) for now, how many sex offences have you been convicted of?

Have you ever been charged with a sex offence against someone aged 16 or older?

Have you ever been charged with a sex offence against someone between the ages of 12 and 15?

Have you ever been charged with a sex offence against someone under the age of 12?

Have you ever been charged with downloading, producing, or trafficking child pornography?

If you are currently in prison (or hospital) for sex offences, are you guilty of these sex offences?
In other words, did you actually do it?

Have you taken any treatment programs for sex offending since your most recent offence?

What is the likelihood that you would rape someone if you could be assured of not being caught and punished?

What is the likelihood that you would have sexual contact with a child under 12 years old if you could be assured of not being caught and punished?

CHILDHOOD SEXUAL VICTIMIZATION

The next two questions ask about sexual contact you may have had with older people when you were a child (under 12 years old). Examples of what we mean by sexual contact are someone else touching your penis or anus; having you touch their penis, vagina, or anus; oral sex; or sexual intercourse.

Before you were 12 years old, did you ever have sexual contact with a boy or man at least 5 years older than you at the time?

Before you were 12 years old, did you ever have sexual contact with a girl or woman at least 5 years older than you at the time?