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ORIGINAL ARTICLE

Examining the Criminal History and Future Offending of Child Pornography Offenders: An Extended Prospective Follow-up Study

Angela W. Eke · Michael C. Seto · Jennette Williams

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Abstract We examined police occurrence and criminal records data for a sample of 201 registered male child pornography offenders originally reported by Seto and Eke (Sex Abus J Res Treat 17:201–210, 2005), extending the average follow-up time for this sample to 5.9 years. In addition, we obtained the same data for another 340 offenders, increasing our full sample to 541 men, with a total average follow-up of 4.1 years. In the extended follow-up of the original sample, 34% of offenders had new charges for any type of reoffense, with 6% charged with a contact sexual offense against a child and an additional 3% charged with historical contact sex offenses (i.e., previously undetected offenses). For the full sample, there was a 32% any recidivism rate; 4% of offenders were charged with new contact sex offences, an additional 2% of offenders were charged with historical contact sex offenses and 7% of offenders were charged with a new child pornography offense. Predictors of new violent (including sexual contact) offending were prior offense history, including violent history, and younger offender age. Approximately a quarter of the sample was sanctioned for a failure on conditional release; in half of these failures, the offenders were in contact with children or used the internet, often to access pornography again.

Keywords Child pornography · Criminal history · Recidivism · Child victims · Risk factors

The number of child pornography cases faced by police, other justice professionals, and clinicians is increasing (Bates & Metcalf, 2007; Motivans & Kyckelhahn, 2007; Wolak, Finkelhor, & Mitchell, 2009). Wolak and her colleagues observed that arrests for child pornography offenses doubled in the United States from 2001 to 2006. This increase likely reflects dramatic growth in the number of people using the internet, the availability of child pornography online, and policing resources focused on investigating and charging child pornography offenders. Tied to this rise in number of cases, there is increasing public and professional concern about individuals who view child pornography, in particular because of the risk they might pose to directly sexually offend against a child (also referred to as "offline" offending).

Many child pornography offenders are likely to be pedophilic or hebephilic, and thus may indeed pose a risk to children because of their sexual interests in prepubescent or pubescent children (Seto, Cantor, & Blanchard, 2006). The key question is whether offenders who look at or collect child pornography images also directly offend against children. This question can be broken down into two parts: Whether offenders have a history of contact sexual offending against children and whether they will, in the future, sexually assault a child. A recent meta-analysis conducted by Seto, Hanson, and Babchishin (in press) found that approximately half of online offenders (offenders who used the internet and/or related

A. W. Eke (✉) · J. Williams
Research Unit, OSOR Behavioural Sciences and Analysis Services, Ontario Provincial Police, 777 Memorial Avenue, Orillia, ON L3V 7V3, Canada
e-mail: angela.eke@ontario.ca

J. Williams
e-mail: jennette.williams@ontario.ca

M. C. Seto
Royal Ottawa Health Care Group, Brockville Mental Health Centre, PO Box 1050, Brockville, ON K6V 5W7, Canada
e-mail: michael.seto@rohcg.on.ca

technologies to sexually solicit children they meet online or commit child pornography offenses) admit to committing a contact sex offense against a child, in the six studies with self-report data, and approximately one in eight online offenders have an official criminal record for committing a contact sexual offense against a child in the larger set of 21 studies. For recidivism, Seto et al.'s (in press) second meta-analysis of nine samples found 4.6% of online offenders were known to have committed a new sexual offense, with 2.0% committing contact sexual offenses and 3.4% committing another child pornography offense after average follow-up times ranging from 1.5 to 6 years (unweighted average of 3.4 years). These results suggest child pornography offenders are unlikely to subsequently commit a detected contact sexual offense, though ongoing follow-up of large samples is needed using multiple methods for assessing new offending (e.g., collecting extensive official data, using offender self-report). The fact that child pornography offenders as a group appear relatively low in risk for detected sexual reoffending does not mean, however, that offenders are homogeneous with regard to risk. We need research on the factors that predict recidivism in this population.

The Present Study

We reported the first published follow-up of child pornography offenders and found that criminal history was a significant predictor of all types of future offending (Seto & Eke, 2005). The base rate of new officially documented contact sexual offending we reported was 4.5%, after an average follow-up time of approximately 2.5 years. In the present study, we have extended the follow-up time for the Seto and Eke sample to 5.9 years. We have also added another 340 offenders placed on the provincial sex offender registry since our initial follow-up, for a total sample of 541 adult male child pornography offenders (these offenders are included in the meta-analysis by Seto et al., in press). In Seto and Eke (2005), we counted all new charges for contact sexual offending as recidivism. We are now better able to separate charges for new offenses from new charges for offenses that occurred in the past but were not reported to police until after the child pornography charge or conviction (what Harris and his colleagues have described as "pseudo-recidivism"; Harris, Phenix, Hanson, & Thornton, 2003), making this extended follow-up more specific regarding newly detected historical offenses and true recidivism. In this follow-up, we were also able to break down recidivism information based on whether it occurred while the offender was on bail for the child pornography offense or after the child pornography conviction.

We predicted that, consistent with our previous follow-up results and with many studies of offenders more generally, contact sexual offending would be predicted by criminal history. We also examined other known general risk factors, such as offender age and failure on conditional release (e.g., Barbaree, Blanchard, & Langton, 2003; Hanson & Morton-Bourgon, 2005). We examined failures of conditional release as an outcome in detail as failures are of interest to police and other criminal justice professionals in considering release decisions (e.g., bail) and the protection of potential victims; we discuss the types of failures reported and the behaviors associated with these failures.

Method

Sample

The study sample consisted of individuals on the Ontario Sex Offender Registry (OSOR) for convictions relating to the possession, accessing (added to the Criminal Code of Canada in 2002, making it illegal to intentionally access child pornography material online, even if it is not downloaded and saved), making, or distribution of child pornography. In Canada, these offenses pertain to sexually explicit visual depictions of someone who is (or is presented as being) under the age of 18, similar to state and federal laws in the United States. Unlike American law, shared written material that advocates or counsels sexual activity with someone under the age of 18 is also illegal in Canada, as in the case of explicit stories describing sexual interactions with children.

Beginning in April 2001, convicted sex offenders living in the province of Ontario are required to register annually with the OSOR, including juvenile offenders who are sentenced in adult court and individuals found Not Criminally Responsible on Account of Mental Disorder (comparable to Not Guilty By Reason of Insanity statutes in the U.S.). Sex offenders must also report to police within 15 days of moving to Ontario, changing their residence, or moving out of the province. Information maintained by the registry includes a physical description and picture of the offender, address history, sexual offenses related to registration, and registration requirements. Registration is required annually for either a 10-year period or for life, depending on the length of the offender's index sentence and number of sexual offenses. Offenders are removed from the registry if they successfully appeal their sexual offense conviction or if they receive a pardon for their sexual offense(s). Additional information about the OSOR, the criteria sexual offenses and who must register is available at http://www.mcscs.jus.gov.on.ca/english/police_serv/sor/sor/sor.html.

For offenders who had multiple convictions for child pornography offenses, the first conviction that placed them on the registry was considered to be their index offense. Thus, the index offense is defined as the first child pornography conviction that led to the offender's requirement to register with the OSOR; the OSOR became active in April 2001 and all individuals serving a sentence at that time (e.g., a conditional sentence, probation) for a criteria sex offense or were convicted after this date were required to register. Criminal history was therefore considered to be any charges and convictions for offenses (including child pornography offenses) that took place prior to the index offense resulting in registration, and recidivism included all criminal charges or convictions that took place after the index offense. We refer to criminal charges for offenses that occurred at the same time as the index offense as concurrent offending.

Our sample consisted only of individuals who were 18 years of age or older at the time of their index offense. Offenders were excluded from the study if they had been convicted of "obscene material"[1] but it could not be determined if the material involved child pornography (11 cases, all from the original sample selection). In the current follow-up, 11 offenders were deceased and four were known to have moved out of the country. Three offenders were later given a legal designation resulting in an indeterminate prison sentence and lifetime supervision on parole if released or a designation resulting in a period of supervision of 10 years after release from custody. All of these offenders had some time at risk in the community and therefore remained in the sample, but with a censored time at risk.

Two female offenders were excluded from the sample to maintain homogeneity of the sample with regards to gender; both had co-offended with a male partner. We also excluded two offenders deported upon completion of a period of incarceration, because they had no time at risk in Canada. There were 17 offenders who had no time at risk in the community because they remained incarcerated after their child pornography conviction when we conducted our follow-up. We excluded them from the main analyses: 15 of these offenders had contact sex offenses in their history and five recidivated either while on bail for the child pornography charges or while incarcerated (e.g., committed an assault in jail, incurred a new child pornography charge).

A total of 541 convicted adult male child pornography offenders made up our sample. Similar to other adult male sex offenders (Hanson & Morton-Bourgon, 2005), the average age of offenders at the time of their index conviction was 39.4 years ($SD = 12.6$) and average age at first criminal charge or conviction was 33.2 years ($SD = 13.5$). We also coded offender age at release from charge and from conviction; we knew offender age at release from the index charge in 237 cases, 38.3 years ($SD = 12.2$) and for the full sample for release after conviction, 39.7 years ($SD = 12.7$).

Procedure

The current study used the same procedures and coded the same outcome variables as reported by Seto and Eke (2005), with the addition of new variables regarding failure on conditional release and characteristics of child victims (described below). We continued to distinguish between nonviolent offenses, defined as those that did not involve direct contact with a person (e.g., theft, possession of a narcotic, noncontact sex offenses) and violent offenses, defined as those involving physical contact with a person (e.g., assault, contact sexual offending). As well as including sexual offenses in the nonviolent and violent outcome variables described above, we also examined noncontact sexual offenses (e.g., indecent exposure, invitation to sexual touching, child pornography) and contact sexual offenses (e.g., sexual assault, sexual interference) separately. As in our original study, we also examined child pornography recidivism as a separate outcome.

We accessed the same police databases described in Seto and Eke (2005), including national criminal records maintained by the Canadian Police Information Centre (CPIC), with greater police occurrence report information. As we accessed official data, information on offending is limited to crimes reported to police, and is therefore an underestimate of both criminal history and reoffending. We refined our coding of recidivism by examining new charges both post-arrest for the child pornography offense (which may be of interest for considering bail, as new offenses can occur while someone is released on bail and awaiting trial) as well as post-conviction. We also found, and report, cases of historical contact sexual offending: Historical offenses involve new criminal charges or convictions for sexual assaults that occurred prior to the index child pornography conviction (pseudo-recidivism). For example, previous child victims came forward with allegations of being sexually assaulted by an individual recently identified as a child pornography offender. We differentiate these from new sexual offenses committed after the index child pornography charge and conviction.

To present a comprehensive picture of sexual offending, we report contact sexual offending based on whether it was pre-index, concurrent, historical (pseudo-recidivism), or post-index. We again defined recidivism as new charges or

[1] In Canada, obscene material charges were used in relation to child pornography offenses prior to specific child pornography offenses (possession, making, distribution, and accessing) being included in the Criminal Code.

convictions, but we found instances of new offending that did not result in a criminal charge but did result in an alternate legal response such as revocation of conditional release or court orders; we included these cases in our recidivism outcomes. For example, some offenders were returned to custody for failures on conditional release (without a new charge for this failure). It is worth noting that some charges were also dealt with in this way (e.g., a peace bond in lieu of a conviction). As well, there were cases in which an offender was charged with a new offense (e.g., child pornography) that occurred while they were on conditions of release (e.g., bail, probation) although there was no specific charge relating to a failure on conditional release; we provide separate information on these release failures.

We also recoded some of the original sample's data based on new information. For example, one offender originally appeared to have no sexual history in CPIC but during the most recent follow-up we found he had prior sexual offenses in his record. Such events may occur due to a number of reasons including a gap in time between a conviction and the information being entered on criminal justice databases or due to prior offenses being removed from the criminal record after a pardon and then the record being reinstated following new charges.

We also coded victim–offender relationship in cases where the offender was reported as ever committing a contact sexual offense against a child (defined as a person under the age of 16, consistent with Canadian law).[2] Relationship was categorized as: Biological parent; step-parent (including parental common-law relationships); other family member (e.g., uncle, cousin); acquaintance (e.g., including parental dating partners, neighbors known to the victim, teachers); or stranger (an individual the victim did not know prior to the offense). For each known victim, we coded age, gender, and whether the offender lived with the victim. Recidivism data were collected over a 3-month period, from mid-January to mid-March, 2008.

The Cormier–Lang System for Quantifying Criminal History (Quinsey, Harris, Rice, & Cormier, 2006) was used to quantify the number and severity of prior offenses. This system was developed using charges from the *Criminal Code of Canada* and provides an empirically derived weight for each stated charge. For example, if a person has a criminal history with a charge for "mischief over," they would get a score of five for that charge. When there are multiple counts of a charge, the score for the specific charge is multiplied (e.g., three common assault charges would be $3 \times 2 = 6$). In some cases a charge is listed only as "assault" or as "mischief" with no further information. In these cases the charge is given the lowest weighted score in its group (e.g., assault would be coded as common assault and given a score of two, mischief would be coded as mischief under and given a score of one; Quinsey et al., 2006). The total score is obtained by summing across the scores. Some charges had to be scored at the lowest weight because there was no descriptive information about them (e.g., criminal record indicates "assault"), therefore an offender's overall score on the Cormier–Lang is conservative.

Time at risk was coded in the same manner as in the original study. We first calculated the time difference between the index child pornography conviction and a new offense or, for nonrecidivists, the end of data collection. Any time spent in custody was subtracted from that total, so time at risk refers to the total time the offender was at risk in the community. The average time at risk in the community was 4.1 years ($SD = 1.9$ years) and the average duration of the follow-up, from index to the last follow-up date, was 4.7 years ($SD = 2.1$ years).

We compared the age, criminal history, and index offending of the original sample of 201 offenders with the additional sample of 340 offenders to see if there were cohort differences on these variables. The two samples were similar in age and index offending, but differed in criminal history; 56% of the original sample had any prior offenses compared to 41% of the new sample, $\chi^2(1) = 10.3$, $p < .01$ (95% CI for proportions = .49–.63 vs. .36–.47). This difference could be due to changes in the way child pornography offenders are identified. For example, many offenders are identified in newer cases through the use of their computer (e.g., accessing certain sites, trading, material found on a work computer, family members locating the material) as opposed to the child pornography being found during an investigation of another offense, such as a sexual assault, that would increase the likelihood of prior criminal involvement. As well, child pornography material may now be easier for individuals to find and access, including those who are relatively low in criminal risk factors.

A randomly selected set of 98 cases (18% of the sample) was coded by the first author and the third author, at the beginning, middle, and then at the end of the coding phase. We later coded the type of child pornography offenses committed by offenders and again 18% of the sample was coded by the first author and an OSOR research assistant. The child victim data were coded jointly by the first and third authors. No reliability drift was evident across the coding and all reported variables met a minimum interrater reliability coefficient: Pearson $r = .80$ or higher for

[2] As previously mentioned, the child pornography laws in both Canada and the United States encompass anyone under the age of 18. The legal age of sexual consent in Canada and many American States is 16. This makes it legal for someone aged 16 or 17 to consent to sexual activity yet illegal to possess images or an explicit written description of that same activity.

continuous variables and $\kappa = .80$ or higher for categorical variables. Any disagreements in coding were resolved through consensus.

Results

Extended Follow-up of Seto and Eke (2005) Sample

The recidivism results for the original sample, now at an average 5.9 years of follow-up, are similar in pattern to the 2005 (average 2.5 years) follow-up. Table 1 summarizes officially documented recidivism outcomes for the original sample and the new larger sample. In Seto and Eke (2005), we counted all new charges for contact sexual offending as recidivism, removing from the total those that we knew to be historical in nature. We now separate out charges for new offenses versus charges for historical offenses and we report on each individually.

Criminal History and Index Offending

Almost half of the full sample (47%; 253 offenders) had any prior criminal charges; 40% had a nonviolent offense history, 27% had a violent offense history, 18% had a prior contact sexual offense history, and 21% had both nonviolent and violent offenses in their history. Descriptive statistics on criminal history are provided in Table 2. There were 347 offenders (64% of the sample) who had solely child pornography offenses at index. Of the remaining 194 offenders, 109 (56%) were also concurrently charged with a violent offense, with 101 of these 109 offenders being concurrently charged for a contact sexual offense. We also combined criminal history and index offense information to create three groups: 228 (42%) offenders documented solely for child pornography offenses in their history or index; 107 (20%) with child pornography offenses plus other nonviolent offending (e.g., theft, break and enter); and, 206 (38%) with child pornography plus violent offenses (e.g., assault, armed robbery, contact sexual offending).

A fifth of offenders were convicted of multiple child pornography offenses with the majority, 434 (80%) of the offenders, convicted of one index child pornography offense. Overall, 454 (84%) were convicted at index of possession of child pornography, 81 (15%) of distribution, 66 (12%) of making, and 9 (2%) of accessing. The percentages add up to greater than 100% because of offenders with multiple child pornography convictions.

We coded disposition information for the index conviction for each offender; there were three cases for which we did not know the full sentence. Most offenders received a term of probation along with another disposition (e.g., conditional sentence), although 19 offenders (3%) received either probation only or probation along with a fine. There were 47 offenders (9%) who received a suspended sentence, 199 (37%) who received a conditional sentence (conditions can include house arrest, reporting to police once a week, etc.), 32 (6%) received an intermittent sentence they served on weekends, 52 (10%) received a custodial sentence of 3 months or less, 45 (8%) received a custodial sentence of 3–6 months, 45 (8%) received 6 months to a year, 46 (9%) received 1–2 years, and 53 (10%) received 2 years or more. Some jail sentences included time spent in pre-sentence custody.

Table 1 Recidivism outcomes for child pornography offenders based on sample

Recidivism outcomes: percentage and cell size	Seto & Eke (2005) $N = 201$ FU = 2.5 years	Extended $N = 201$ FU = 5.9 years	Full sample $N = 541$ FU = 4.1 years
Any reoffenses	16.9%, $n = 34$	33.8%, $n = 68$	32.3%, $n = 175$
Any failure on conditional release[a]	10.0%, $n = 20$	23.4%, $n = 47$	24.0%, $n = 130$
Any violent reoffense	5.5%, $n = 11$	10.0%, $n = 20$	6.8%, $n = 37$
Any contact sexual reoffense	4.5%, $n = 9$	6.0%, $n = 12$	3.9%, $n = 21$
Any noncontact sexual reoffense	6.5%, $n = 13$	11.0%, $n = 22$	8.5%, $n = 46$
Any child pornography reoffense	6.0%, $n = 12$	9.5%, $n = 19$	6.8%, $n = 37$
Historical sexual offense[b]	See note	3.0%, $n = 6$	2.4%, $n = 13$

Note: *FU* follow-up

[a] We expected failure rates to be higher for the longer follow-up. The similarity in percentages might reflect an increase in police and probation efforts to monitor offender adherence to conditions, as well as our greater access to police reports, wherein failures are more commonly noted. Also, only failures resulting in a charge are included here

[b] Historical offenses are counted separately from new contact sexual offenses. They are pseudo-recidivism because the offender is adjudicated for a sexual offense he committed prior to his index child pornography conviction. In the original follow-up, these were excluded as contact sexual reoffending, however, we relied on a national criminal records database to record recidivism and this information is limited; we now can better separate out these offenses through the use of police occurrence reports generated at the time of arrest and we specifically report this data

Table 2 The criminal histories of child pornography offenders

Criminal history	Full sample ($N = 541$)	Any prior criminal history ($N = 253$)
Mean # prior nonviolent offenses	3.2 (9.3)	6.8 (12.6), $n = 218$
Mean # prior violent offenses	1.1 (2.8)	2.3 (3.7), $n = 147$
Mean # prior contact sexual offenses	.7 (2.3)	1.5 (3.2), $n = 95$
Mean # prior noncontact sexual offenses	.4 (1.8)	.8 (2.5), $n = 65$
% Prior child pornography offenses	6.8	14.6, $n = 37$

Note: Standard deviations are reported in parentheses

Offenders who had multiple types of index offenses (i.e., had more than child pornography offenses) were more likely to receive a sentence involving incarceration, χ^2 (1) = 92.5, $p < .001$ (95% CI for proportions = .73–.84 vs. .30–.40). Fifty (9%) offenders with a single child pornography offense at index received some jail time but none received a sentence of 2 years or more in custody. Seventy (13%) offenders with multiple child pornography offenses at index received some jail time and 153 (28%) offenders with multiple types of offenses received custody as part of their sentence. The longest index custodial sentence was under 7 years, however, two offenders were later deemed to be a *Dangerous Offender* under Canadian law and were thereafter serving indeterminate sentences.

Recidivism

As shown in Table 1, a third of the 541 offenders (32%) had a documented reoffense of any kind. This general recidivism is similar to what has been found in other research with contact sex offenders (36% in Hanson & Morton-Bourgon, 2005); the general recidivism rate was 45% for the 162 offenders with a documented prior or index contact sex offense. Half the recidivists had a new offense reported within 274 days, 60% within a year, and 85% within 2 years. With regards to charges, half (50%) had a new criminal charge within 296 days, 55% within a year, and 78% within 2 years (reoffense and charge both have a range of 0–2,198 days). We were able to break down the recidivism information based on whether it occurred while the offender was on bail for the index child pornography offense or whether it occurred after their index conviction.

Approximately a quarter (30%) of the recidivists (52 offenders or 10% of the total sample of offenders) had a new offense documented after arrest for their index child pornography offense but before conviction, so they reoffended when they were in the community on some form of conditional release. The most common charges during this time were failures on conditional release (e.g., failure to appear in court, failure to abide by conditions). Time at risk for these post-arrest offenses ranged from 0 (an offender violated his conditions the same day he was released from custody) to 720 days ($M_{\text{days}} = 232.6$, $SD = 233.1$). Over a third (20 offenders, 38%) of these bail violators (approximately 4% of the entire sample of offenders) were reported as having recidivated a second or third time by also committing a new offense after their index conviction.

In total, 34 offenders (6.3%) were charged with contact sexual offenses after their index child pornography offense; of these, 21 (3.9%) offenders were charged for recidivism, meaning offenses that occurred after the index offense, and 13 (2.4%) were charged for historical sex offenses. One offender incurred new charges for both historical and new contact sexual offenses, and was counted as a true recidivist; half (six offenders, 46%) of those charged with historical offenses also had some type of other recidivism (e.g., failure, noncontact sex offense). The historical offenses were not included in any of the following analyses of recidivism.

Violent recidivism, which included both nonsexually violent and contact sexual offenses, was our primary outcome of interest. Some sexual offenses may be pled at conviction as nonsexual (e.g., an attempted sexual assault might be pled as an assault) and there is evidence that some ostensibly nonsexual charges are filed for crimes that may be sexually motivated when the details are examined (Rice, Harris, Lang, & Cormier, 2006). As well, contact sexual offenses may be criminally processed as ostensibly noncontact such as invitation to sexual touching (e.g., sex with minors leading to convictions of invitation to sexual touching, a Canadian crime pertaining to inviting or inciting a minor to touch another person for sexual purposes). In order to capture all potential contact sexual offending, we created a binary sexual recidivism outcome combining contact and noncontact sexual offenses, excluding child pornography offenses: The combined sexual recidivism percentage for the full sample was 5.2%. If new child pornography charges are included, the total sexual recidivism percentage was 11.0%.

Predictors of Recidivism

When offenders in the original sample of 201 were classified based on their officially documented prior criminal history, we found that the 62 child pornography offenders

with a violent prior offense in their history (including contact sexual offending) had new documented contact sexual offenses at a slightly higher percentage (16.1%) than the composite rate for sexual offenders against children examined in Hanson and Bussière's (1998) meta-analysis after a similar follow-up time (13% after an average 5–6 year follow-up). For the full sample, offenders with a prior criminal history, compared to those with no prior criminal history, recidivated significantly more frequently in relation to: any new offense, χ^2 (1) = 85.4, $p < .001$ (95% CI = .46–.58 vs. .11–.19); any failure on conditional release (charged), χ^2 (1) = 57.0, $p < .001$ (95% CI = .33–.45 vs. .08–.15); any violent reoffense, χ^2 (1) = 21.7, $p < .001$ (95% CI = .08–.16 vs. .00–.04); any contact sexual reoffense χ^2 (1) = 10.3, $p < .01$ (95% CI = .04–.10 vs. .00–.03); any noncontact sexual reoffense, χ^2 (1) = 8.7, $p < .01$ (95% CI = .08–.17 vs. .03–.08); and, any child pornography reoffense, χ^2 (1) = 8.9, $p < .01$ (95% CI = .07–.14 vs. .02–.06). We also examined outcome variables in relation to combined prior and index offending. In our sample, offenders documented with either prior or concurrent violent offenses (including contact sexual offenses) were significantly more likely to be charged with a contact sexual recidivism compared to other offenders (see Table 3).

We then compared potential predictors for each of our outcome variables (all coded binarily as yes or no): Any documented recidivism of any kind, any contact sexual offenses, any violent offenses (including contact sexual offenses), any noncontact sexual offenses (including child pornography), any child pornography reoffenses, any charged failure on conditional release, and any failure on conditional release (whether charged or not). Our potential predictors were limited to the criminal history information available. The results of the univariate analyses are reported in Table 4. The most consistent predictors across outcomes related to offender age and prior criminal history, particularly violent history. There was a negative relationship between offenders who had solely child pornography offenses in their criminal records (history and index combined) and recidivism outcomes. Five offenders with solely child pornography offenses documented in their criminal records went on to be charged for a contact sexual offense. Three related to new offenses and two offenders were charged for historical contact sexual offenses (e.g., victims came forward about offenses that occurred prior to the offenders child pornography conviction).

Failure on Conditional Release

A quarter (130 offenders; 24%) of the 541 child pornography offenders were charged with failures on conditional release; the failure percentage was 39% among child pornography offenders with a prior violent criminal history. Some offenders had multiple documented failures (33% of the 130 offenders had from 2 to 10 failures). Of the 130 offenders who were charged with failure on conditional release, a third failed within approximately 100 days of

Table 3 Recidivism outcomes of child pornography offenders distinguished according to their other criminal involvement (whether prior or concurrent)

Recidivism outcomes: percentage and cell size	Child pornography only ($N = 228$)	Other nonviolent offending ($N = 107$)	Other violent offending ($N = 206$)	χ^2 Significance
Any reoffense	15.4%, $n = 35$ (CI = .10–.20)	40.2%, $n = 43$ (CI = .30–.49)	50.5%, $n = 104$ (CI = .41–.55)	57.2, $p < .001$
Any failure on conditional release	10.5%, $n = 24$ (CI = .07–.15)	30.8%, $n = 33$ (CI = .22–.40)	35.4%, $n = 73$ (CI = .29–.43)	40.5, $p < .001$
Any violent reoffense	2.6%, $n = 6$ (CI = .01–.05)	5.6%, $n = 6$ (CI = .01–.10)	12.1%, $n = 25$ (CI = .08–.17)	15.5, $p < .001$
Any contact sexual reoffense	1.3%, $n = 3$ (CI = .00–.03)	1.9%, $n = 2$ (CI = −.01–.04)	8.7%, $n = 16$ (CI = .04–.12)	13.4, $p < .01$
Any noncontact sexual reoffense	5.3%, $n = 12$ (CI = .02–.08)	10.3%, $n = 11$ (CI = .04–.16)	11.2%, $n = 23$ (CI = .07–.16)	5.4, *ns*
Any child pornography reoffense	4.4%, $n = 10$ (CI = .02–.07)	8.4%, $n = 9$ (CI = .03–.14)	8.7%, $n = 18$ (CI = .05–.13)	3.8, *ns*

Note: 95% confidence intervals of the proportions are reported in parentheses

Only release failures resulting in a charge are included here

Nonviolent offending includes noncontact sexual offending (e.g., invitation to sexual touching), violent offending includes contact sex offending, and noncontact sexual recidivism includes child pornography recidivism

Table 4 Correlates (Pearson *r*) of recidivism

Predictor variable	Any reoffense	Conditional release failure (charge)	Conditional release failure (any)	Any violent reoffense	Any contact sexual reoffense	Any noncontact sexual reoffense	Any child pornography reoffense
Age at first offense	***r* = −.25***	***r* = −.21***	***r* = −.21***	***r* = −.13****	***r* = −.10***	***r* = −.12****	***r* = −.12****
	AUC = .66	AUC = .65	AUC = .65	AUC = .67	AUC = .66	AUC = .63	AUC = .64
	(CI = .61–.71)	(CI = .60–.71)	(CI = .59–.70)	(CI = .58–.76)	(CI = .54–.78)	(CI = .54–.72)	(CI = .55–.73)
Age at first offense: 24 years of age or younger	***r* = .25***	***r* = .21***	***r* = .21***	***r* = .15****	***r* = .12****	***r* = .12****	***r* = .10***
	AUC = .63	AUC = .61	AUC = .61	AUC = .64	AUC = .65	AUC = .60	AUC = .60
	(CI = .57–.68)	(CI = .56–.67)	(CI = .56–.67)	(CI = .54–.73)	(CI = .53–.77)	(CI = .51–.69)	(CI = .50–.69)
Age at release from charge	*r* = −.04	*r* = −.03	*r* = −.02	*r* = −.04	*r* = −.08	***r* = −.14***	*r* = −.11
	AUC = .51	AUC = .51	AUC = .50	AUC = .53	AUC = .67	AUC = .63	AUC = .61
	(CI = .44–.59)	(CI = .43–.59)	(CI = .43–.58)	(CI = .40–.66)	(CI = .48–.86)	(CI = .53–.73)	(CI = .51–.72)
Age at release from conviction	*r* = −.04	*r* = −.03	*r* = −.02	*r* = −.02	*r* = −.04	*r* = −.05	*r* = −.07
	AUC = .51	AUC = .51	AUC = .50	AUC = .52	AUC = .57	AUC = .56	AUC = .57
	(CI = .46–.57)	(CI = .46–.57)	(CI = .45–.56)	(CI = .43–.61)	(CI = .44–.70)	(CI = .47–.64)	(CI = .49–.65)
Any prior criminal history	***r* = .40****	***r* = .33****	***r* = .34****	***r* = .20****	***r* = .14****	***r* = .13****	***r* = .13****
	AUC = .71	AUC = .69	AUC = .69	AUC = .70	AUC = .68	AUC = .61	AUC = .63
	(CI = .67–.76)	(CI = .64–.74)	(CI = .64–.74)	(CI = .62–.78)	(CI = .57–.78)	(CI = .53–.70)	(CI = .54–.72)
Pre or index failure (charge)	***r* = .37****	***r* = .38****	***r* = .37****	***r* = .14****	*r* = .08	***r* = .13****	***r* = .12****
	AUC = .65	AUC = .67	AUC = .66	AUC = .61	AUC = .58	AUC = .59	AUC = .59
	(CI = .60–.71)	(CI = .61–.73)	(CI = .60–.71)	(CI = .50–.71)	(CI = .45–.71)	(CI = .50–.68)	(CI = .49–.69)
Any prior nonviolent history	***r* = .37****	***r* = .33****	***r* = .33****	***r* = .12****	*r* = .05	***r* = .12***	***r* = .12***
	AUC = .70	AUC = .68	AUC = .68	AUC = .62	AUC = .56	AUC = .59	AUC = .60
	(CI = .65–.75)	(CI = .63–.74)	(CI = .63–.73)	(CI = .52–.71)	(CI = .44–.69)	(CI = .50–.68)	(CI = .51–.70)
Any prior violent history	***r* = .31****	***r* = .22****	***r* = .26****	***r* = .23****	***r* = .20****	***r* = .14****	***r* = .12****
	AUC = .65	AUC = .62	AUC = .63	AUC = .70	AUC = .73	AUC = .61	AUC = .60
	(CI = .59–.70)	(CI = .56–.67)	(CI = .57–.68)	(CI = .61–.79)	(CI = .62–.85)	(CI = .52–.70)	(CI = .50–.70)
Number of prior nonviolent offenses	***r* = .25****	***r* = .23****	***r* = .23****	*r* = .06	*r* = .02	***r* = .09***	***r* = .10***
	AUC = .72	AUC = .71	AUC = .71	AUC = .64	AUC = .58	AUC = .60	AUC = .61
	(CI = .67–.77)	(CI = .65–.76)	(CI = .65–.76)	(CI = .54–.74)	(CI = .45–.71)	(CI = .51–.69)	(CI = .51–.71)
Number of prior violent offenses	***r* = .23****	***r* = .13****	***r* = .19****	***r* = .20****	***r* = .21****	***r* = .10***	***r* = .10***
	AUC = .65	AUC = .62	AUC = .63	AUC = .70	AUC = .73	AUC = .61	AUC = .60
	(CI = .60–.70)	(CI = .56–.68)	(CI = .58–.69)	(CI = .61–.80)	(CI = .62–.85)	(CI = .52–.70)	(CI = .50–.70)
Number of prior contact sex offenses	***r* = .17****	*r* = .06	***r* = .11***	***r* = .17****	***r* = .23****	*r* = .06	*r* = .06
	AUC = .58	AUC = .55	AUC = .56	AUC = .62	AUC = .73	AUC = .56	AUC = .55
	(CI = .53–.64)	(CI = .49–.60)	(CI = .50–.61)	(CI = .52–.73)	(CI = .61–.86)	(CI = .47–.65)	(CI = .45–.65)

Table 4 continued

Predictor variable	Any reoffense	Conditional release failure (charge)	Conditional release failure (any)	Any violent reoffense	Any contact sexual reoffense	Any noncontact sexual reoffense	Any child pornography reoffense
Cormier–Lang score for prior nonviolent offenses	**r = .20****	**r = .19*****	**r = .18****	r = .05	r = .02	r = .05	r = .06
	AUC = .67	AUC = .66	AUC = .66	AUC = .61	AUC = .55	AUC = .58	AUC = .59
	(CI = .62–.72)	(CI = .60–.72)	(CI = .60–.71)	(CI = .51–.72)	(CI = .42–.68)	(CI = .49–.67)	(CI = .49–.69)
Cormier–Lang score for prior violent offenses	**r = .19*****	**r = .09***	**r = .14****	**r = .20*****	**r = .25*****	r = .05	r = .05
	AUC = .65	AUC = .61	AUC = .62	AUC = .71	AUC = .74	AUC = .59	AUC = .57
	(CI = .59–.70)	(CI = .55–.67)	(CI = .57–.68)	(CI = .61–.80)	(CI = .63–.86)	(CI = .50–.68)	(CI = .47–.67)
Prior and index offending was CP only	**r = −.32*****	**r = −.27*****	**r = −.29*****	**r = −.14****	**r = −.11****	**r = −.10***	r = −.08
	AUC = .67	AUC = .66	AUC = .66	AUC = .64	AUC = .65	AUC = .59	AUC = .58
	(CI = .62–.72)	(CI = .61–.71)	(CI = .61–.71)	(CI = .56–.72)	(CI = .54–.75)	(CI = .51–.67)	(CI = .49–.67)

Note: 95% confidence intervals for the AUCs are reported in parentheses

Violent reoffenses include contact sex offending and noncontact sexual reoffenses include child pornography recidivism

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

Bolding is used for easier identification of significant findings

being released and 64% failed within a year. We realized while coding these data that these failure rates underestimated all violations of conditional release because some offenders who were charged with a new offense while on bail, probation and so forth were not additionally charged with a failure on conditional release; there were 22 of these cases, bringing the total number of failures to 152 (28% of the sample).

We were able to obtain details regarding the failures of 114 of the 130 charged offenders, from the police information reported to support the failure charge. Approximately half of these 114 offenders (54%; 62 offenders) had release violations that included being alone with children or accessing the internet to contact children or download child pornography; 35 of the 114 offenders were charged with new sexual offenses while 27 offenders had no new sexual charges, but their failures suggested they were putting themselves in risky situations (e.g., chatting on-line with children, befriending single mothers with children). The other 46% of these offenders also demonstrated a willingness to break the rules of their release, violating requirements such as registration with police, using alcohol, or committing nonsexual offenses such as theft or driving while impaired.

Characteristics of Child Contact Sexual Offense Victims

We examined victim–offender relationship for pre-index, index, historical, and post-index contact sexual offenses. Across these different time frames, a total of 164 offenders (30% of the full sample) had a police documented contact sexual offense against a child, with a total of 372 child victims. Some (18 offenders, 11%) had child victims across more than one time frame (e.g., an offender with prior and concurrent child victims, who committed a new contact sexual offense against a child, and was also convicted for a historical contact sexual offense after his index child pornography conviction) for a total of 182 cases. Six offenders were solely charged for historical sexual offenses against child victims.

Most victims knew the offender. Acquaintances (107 cases, 59%) made up the largest group; examples include volunteers and neighbors. The second largest group involved relatives (including step-parents; 79 cases, 43%). In the few cases involving a stranger (7 cases, 4%), half of these offenders also offended against children who were known to them. None of the stranger cases involved abduction; in each case, the offender sexually assaulted a child he had just met (e.g., at a public pool). A slight majority of cases involved female victims (106, 58%) with 13 cases (7%) involving both males and females.

Discussion

Our results support and extend the results we obtained in our first follow-up study (Seto & Eke, 2005). With a longer time at risk, more of the offenders in our first sample have been detected for new offenses, including new contact sexual offenses. As before, contact sexual recidivism was predicted by criminal history, particularly violent offense history. This result was also obtained when examining our full sample, which has more than doubled in size, with an average follow-up time of slightly more than 4 years. Consistent with much offender research more generally, violent recidivism was significantly predicted by violent offense history and offender age at the time of their first detected criminal offense.

We were also able to examine failures on conditional release, especially when offenders placed themselves in a risky situation such as being alone with children. This information was identified as a priority for our colleagues in the criminal justice system because of their questions about the suitability of bail for persons accused of child pornography offenses and the supervision needs of offenders released on probation or parole. A quarter of our total sample was charged with failures on conditional release, consistent with failure rates observed among other Canadian samples of sex offenders (Barbaree, Seto, & Maric, 1996; Motiuk & Brown, 1993). Approximately half of the offenders charged with failure had breached conditions about being with children alone or by accessing the internet and contacting children or downloading (child) pornography. Other post-index violations included using alcohol, committing nonsexual offenses and not reporting to police, probation or parole, which may relate to a willingness to ignore rules and continue to engage in potentially risky behavior. As well, we found that offenders with a prior history of conditional release failures were more likely to reoffend, violently and nonviolently. Failure on conditional release is an established risk factor for future offending, including contact sexual reoffending (Hanson & Morton-Bourgon, 2005). Monitoring offenders for conditional release adherence may help prevent future offending by identifying at-risk individuals and directing interventions before new offenses can occur.

Our recidivism rates are comparable to those reported in the other follow-up studies that were also included in the meta-analyses by Seto et al. (in press). Approximately a third of the new charges we identified for contact sexual offenses were for historical events. Historical cases are likely reported in part because police look for additional victims and publicity about a case may encourage past victims to come forward. It is important to distinguish these new charges from recidivism in the sense of new offenses committed after index sentencing. Inclusion of these cases as true recidivism may affect the accuracy of prediction studies as well as the application of research findings for justice and social policy decisions. Further examination of the proportions of new criminal charges or convictions that are in fact pseudo-recidivism is needed. As well, it may be valuable to understand the nature and characteristics of historical cases on their own, as they provide a glimpse into previously undetected (unreported) child sexual abuse.

Our identification of offender age at time of first offense, prior offense history including violent offense history, and failure on conditional release as significant univariate predictors of violent and contact sexual recidivism among child pornography offenders is consistent with recent unpublished studies suggesting that established risk measures, with some modification, can rank child pornography offenders according to risk of recidivism. Barnett, Wakeling, and Howard (2010) found that a modified version of an actuarial risk measure, the Risk Matrix 2000 (Thornton, 2007; Thornton et al., 2003), significantly predicted contact sexual offending in a sample of 513 child pornography offenders followed for 2 years, even though the base rate of this outcome was quite low (1.4%). The original Risk Matrix 2000 incorporates items about offender age and sexual sentencing history; additional items are nonsexual sentencing history, ever having a live-in relationship, ever having a noncontact sexual offense, and whether any prior sexual victims were male or strangers. The modified version excluded the noncontact sexual offense and stranger victim items for those with only child pornography offenses in their criminal history; data were missing regarding the live-in relationship and male victim items for a large majority of the entire sample. Thus, offenders who were only known to have committed child pornography offenses received relatively low scores. The significant association of the modified Risk Matrix 2000 with contact sexual recidivism was driven by the fact that offenders in the very high risk category (which could only be possible if the individual had an extensive past criminal history) had much greater odds of committing contact sexual offenses than offenders in the three lower risk categories. These results are preliminary and require further follow-up because there were only 26 offenders in the very high risk category. A future possibility may also be a customized risk measure for this offender population.

Faust, Renaud, and Bickart (2009) examined a set of 30 potential risk factors in a sample of 870 child pornography offenders assessed by the Federal Bureau of Prisons between 2002 and 2005. The average follow-up time was 3.8 years and the sexual re-arrest rate was 5.7%. Five of the 30 variables were significant predictors of sexual rearrest: Lower education, being single, having non-internet child pornography, prior sexual offender treatment (possibly as a

proxy for prior sexual offending history, rather than as evidence of an iatrogenic effect of treatment), and not having depictions of adolescent minors (i.e., their child pornography collections focused on younger children). A recent meta-analysis by Babchishin, Hanson, and Hermann (2010) suggested that, while online offenders might exhibit greater sexual deviancy, some also differed in psychological variables which might protect them from committing contact sexual offenses (e.g., greater victim empathy, less emotional identification with children, fewer cognitive distortions).

Taken together, these follow-up results are consistent with contemporary models of sexual offending against children that conceptualize pedophilia as an important motivation for sexual contact with children and antisocial dispositions as facilitating acting on one's sexual interest in children (for reviews, see Seto, 2008; Ward, Polaschek, & Beech, 2006). Individuals who seek out child pornography are exhibiting their sexual interest in children in illegal behavior, but some of these individuals may not have the characteristics generally associated with a willingness or ability to engage in more serious illegal behavior involving direct contact with a victim who may show distress, resist, or disclose the sexual contact, resulting in severe personal and legal consequences. Detecting child pornography offenses is important and may help to reduce the demand for child pornography and reduce the victimization of children to produce this content. At the same time, understanding which offenders are more likely to commit contact sexual offenses would help prioritize law enforcement, clinical and criminal justice resources (e.g., treatment, custodial space, supervision intensity, registry searches, and requirements).

Limitations

As data were drawn from law enforcement databases, we were limited in the information we could access. For example, we did not have details about the child pornography collections seized by police, including the number of images or videos, the age and gender of children depicted, and whether it included explicit sexual activity. We are currently completing another follow-up study using police case files for an overlapping sample of 301 convicted child pornography offenders (Seto & Eke, 2008). These files contain police investigator notes, interviews with the offender, forensic computer analysis of the child pornography content, and any collateral information obtained during the investigation. Preliminary results again showed that criminal history variables predict contact sexual offending, as do other relevant variables such as substance use. In the current study, we did not have measures of antisocial personality traits, offense-supportive attitudes and beliefs, or other antisocial indicators (other than criminal history) to more directly test contemporary explanations of contact sexual offending.

Our reliance on official records for both criminal history and reoffending may have limited the strength of the association that we could find, as both are underestimates of true offending. Although our offense information was extensive, with the use of both police occurrence information and criminal record database information, there were still municipal, regional, provincial, and national police and other justice services that an offender may have contact with of which we were unaware. Also, not all charges or convictions are necessarily listed on, described, or submitted to, national criminal records (e.g., nonviolent cases involving diversion from the justice system, charges or convictions deleted after specified periods of time including some juvenile records, convictions removed after an offender receives a pardon) and they may be recorded or processed at different times. These limitations are not unique to this follow-up study and are considerations for all research involving criminal justice information.

Historical cases of sexual contact offenses, especially those committed by child pornography offenders who appeared to have no prior criminal history, may provide a window into undetected sexual offending; offenses that were not (at the time) reported to police or documented in file information. As we previously mentioned, 12% of child pornography offenders in the meta-analysis by Seto et al. (in press) had an official record of prior contact sexual offenses, but half of the child pornography offenders in the smaller subset of studies with self-report information admitted having sexual contacts with children.

Future Directions

Knowledge about future offending and risk from research with sex offender registry samples may improve the utility of those registries in relation to their goals of protecting the public and reducing unintended negative consequences for nonrecidivists. Understanding, and potentially recording on registries, known risk factors or specific offense characteristics might further assist police to prioritize individuals to monitor, or to interview in any new occurrence, and reduce police contact with other registrants.

To better test a motivation-facilitation model of sexual offending against children (Seto, 2008), which focuses on pedophilia as an important motivation for sexual offenses involving children and antisocial dispositions as facilitating the expression of pedophilic interests or other motivations (e.g., opportunistic sexual gratification), future studies could use more direct measures of sexual regulation (phallometrically assessed sexual arousal, sexual preoccupations) and antisocial dispositions in terms of personality

traits like impulsivity, offense-supportive attitudes and beliefs, and excessive substance use. Such research is also likely to identify additional risk factors that could be used to build a new risk assessment measure or support the modification of existing measures such as the Risk Matrix 2000. This work is critical because there may be many more potential child pornography cases than law enforcement agencies can investigate, even with many more officers and substantial increases in resources; for example, recently developed specialized software identified thousands of computers in Ontario alone that may be involved with trading child pornography images (Canwest News Service, 2009). Some form of prioritization by risk to reoffend may be helpful. Ideally, the factors would be readily available to police investigators and police threat analysts and would not require clinical interviews, diagnosis, or other more intensive sources of information. We are currently completing a project that has access to police investigation files that can further explore these ideas (Seto & Eke, 2008).

Though empirical research on the recidivism of child pornography offenders has only begun to appear in the past few years, our knowledge of risk assessment is gaining traction. As in the general sexual offender field, however, much less is known about effective treatment and management. A number of treatment models have been proposed, including internet or sexual compulsivity or addiction models (Carnes, Delmonico, Griffin, & Moriarity, 2007), adaptations of the relapse prevention model used for contact sexual offenders such as the internet sex offender treatment program described by Middleton, Mandeville-Norden, and Hayes (2009) and the Dunkelfeld Project described by Beier et al. (2009), and self-help models that combine relapse prevention and addictions concepts (croga.org). Almost no evaluation data have been reported to date; an exception is an uncontrolled study by Middleton et al. (2009), who found positive treatment changes on 11 of 12 measures of social-affective functioning, victim empathy, and offense-supportive attitudes and beliefs. A very important direction for future research is to better understand the origins of child pornography offending and to develop and evaluate treatment models that can reduce the likelihood of problematic behaviors and continued victimization such as failures on conditional release involving children, the further use of child pornography, and for a subgroup, the risk of contact sexual offending.

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