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The Psychological Profiles of Internet, Contact, and Mixed Internet/Contact Sex Offenders

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Abstract

A sample of 526 contact offenders, 459 internet offenders, and 143 mixed contact/internet offenders was compared on a range of self-report psychological measures assessing offense-supportive beliefs, socioaffective functioning, emotional management, and socially desirable responding. A multivariate general linear model found a mixed offender profile that was similar to internet offenders rather than contact offenders. The contact group demonstrated lower victim empathy, a greater level of pro-offending attitudes, an externalized locus of control, more assertiveness, a diminished ability to relate to fictional characters, and greater impulsivity than the internet and mixed offender groups. The mixed offender group demonstrated a higher level of empathic concern than the other two groups. The mixed offender group could also be distinguished from the internet group by increased personal distress and perspective-taking ability. A discriminant function analysis highlighted the key linear factor distinguishing between the groups to be one relating to offense-supportive attitudes and identification with fictional characters. A second factor was related to higher levels of empathic concern and poor self-management. These findings are discussed in the context of the potential pathways between internet and contact sexual offenses.

Keywords

child pornography, internet, sex offenders, cross-over, psychological profiles, etiological pathways

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Introduction

Although they remain a relatively small proportion of all identified sex offenders, there is increasing concern about the behaviors and management of individuals with offenses relating to sexually explicit material involving children (SEM-c) on the internet. Over the past two decades there has been a concerted effort to establish the psychological characteristics of these "internet offenders," understand how their online offenses manifest, and establish whether or not they can be distinguished from those who commit contact offenses against children. By identifying these characteristics and offense processes, we will be better able to develop evidence-based assessment and treatment to those who are detected, create more effective preventative strategies for online offending, and gain a better understanding of the relationship between online and offline sexually offensive behavior.

A number of studies have compared the characteristics of internet offenders (those who access SEM-c online) and contact sex offenders (those who physically commit sexual offenses against child victims). These studies have focused on a number of key variables, such as self-report psychological variables (see Babchishin, Hanson, & Hermann, 2011), assessments of sexual arousal (e.g., penile plethysmograph—PPG; Seto, Cantor, & Blanchard, 2006), and both official and self-reported offense histories (Bourke & Hernandez, 2009; Eke, Seto, & Williams, 2010; Seto, Hanson, & Babchishin, 2011). Overall, Babchishin et al. report in their meta-analysis that internet offenders appear to be distinguishable from contact offenders by a lower level of victim empathy deficits, fewer distorted beliefs and attitudes (cognitive distortions) about the appropriateness of sexual contact between adults and children, and by a greater level of sexual deviance.

Following the growth in criminal justice cases relating to SEM-c, there has been public and professional concern about the level of overlap between the use of SEM-c and the commission of contact child sex offenses. There is considerable debate within the criminal justice field about the size and proportion of offenders in the internet offender populations who may also have contact offenses and vice versa. In the context of online offending, these online/offline offenders are typically referred to as "dual," "cross-over," or "mixed" offenders. Based on the characteristics of those individuals known to the criminal justice system, there are three offending routes by which a sex offender could be categorized as a mixed offender. First, an individual with prior contact offenses may be detected for a subsequent internet offense. Second, an individual with a prior internet offense may be detected for a subsequent contact offense. Finally, an individual may be detected for internet and contact offenses simultaneously, regardless of his or her offending history. However, these criminal justice categorizations are arbitrary in nature, being based only on official outcomes, and may not make a true representation of the behaviors or motivations of the individual.

The link between SEM-c (indeed, any form of pornography) and contact sex offenses remains unclear. It seems that there are a number of sex offenders who express their sexual interest in children exclusively through SEM-c and are unlikely to

commit contact offenses (Seto et al., 2011). For these individuals, a number of potential motivations for SEM-c use have been hypothesized. These include the use of SEM-c as an aid for sexual arousal and masturbation, as a means of escape from reality, for the facilitation of social contacts with like-minded individuals, and even as a self-medication strategy to avoid contact sexual offenses (Taylor & Quayle, 2003; Ward & Hudson, 1998). There are very different motivations and goals involved in each of these, including sexual, emotional, self-regulatory and interpersonal goals. McManus, Long, and Alison (2011) note that there is, on one hand, an argument that SEM-c is implicated in the development of contact offending and that on the other hand there is an argument that SEM-c acts as a diversion from contact offending. They subsequently argue that some offenders escalate from SEM-c to contact offending while other offenders access SEM-c as part of an established history of contact offenses. There is also evidence, both before and after the proliferation of internet access, for the use of SEM-c in the modus operandi of contact offenders—some of whom will be producers of child pornography themselves (Bernard, 1985; Riegel, 2004). Conversely, Taylor and Quayle note that for some individuals, their use of SEM-c may fuel a sexual interest in children and consequently may increase the risk of them seeking to act out offline the activities they see.

Only a small number of studies account for these mixed offenders in comparisons between internet and contact offenders. Howitt and Sheldon (2007) compared small groups of internet contact and mixed offenders (based on known offenses) on a measure of offense-supportive cognitions. They developed a self-report measure that applied the implicit theory approach to cognitive distortions in child molesters (Ward & Keenan, 1999) and internet offenders, adapting the items so that they did not assume contact offenses on the part of the respondent. The implicit theory approach proposes five deep cognitive schema held by individuals with a sexual interest in children: (1) that children are sexual objects, (2) that sexual activity is not harmful, (3) that some people are superior to others and deserving of special treatment, (4) that the world is inherently dangerous, and (5) that behavior is uncontrollable and driven by external forces. Howitt and Sheldon found few significant differences between the three groups on any of the scales, suggesting that general sexual offense-supportive cognitions are typically endorsed by all three groups equally. Only two significant differences were noted. First, as compared to the contact group, the internet group appeared to more frequently endorse items relating to the belief that children are sexually sophisticated. However, it has been noted that internet offenders often objectify the children in the images, and hence, if the images are deliberately stylized to make the child look willing and engaging offenders may see the child in the image as sexually sophisticated while at the same time knowing that children in reality are not (Elliott & Beech, 2009). Second, as compared to the mixed group, the contact group appeared to less frequently endorse "dangerous world" items, such as those relating to beliefs that the world is a hostile place and that adults cannot be trusted.

A recent study by Neutze, Seto, Schaefer, Mundt, and Beier (2011) compared a self-referred noncriminal justice sample of 137 contact-only, internet-only, and mixed

offenders on a wider series of self-report measures. Their entire sample had received a specific diagnosis of pedophilic or hebephilic sexual interest, and cases were categorized based on self-reported offences over the offender's lifetime. Principal component analysis was used to identify four superordinate domains that were being assessed by the various scales on the measures: emotional deficits, offense-supportive cognitions, sexual self-regulation problems, and nonconformity. Neutze et al. found no significant differences between the three groups for any scales on the measures. The authors suggest that the lack of differences may be a function of their sample composition, due to their sample being taken from self-referred individuals rather than those who have been convicted. They suggest that those seeking treatment may be more motivated to change than those whose treatment has been prescribed and, therefore, they may be more likely to have challenged and reflected on their own offending.

Seto, Wood, Babchishin, and Flynn (in press) compared contact offenders with two groups of online offenders—those with SEM-c-related offenses and those with online solicitation offenses. Like Neutze et al. (2011), they noted that similarities between the groups were more evident than differences; however, the two online groups demonstrated lower capacity for relationship stability than the contact group. Consistent with the findings of Babchishin et al. (2011), Seto et al. also found that their SEM-c group were rated as having greater deviant sexual arousal on the corresponding Static-2007 dynamic risk item. They note though that this may be due to the SEM-c use in this group being used as evidence for deviant sexual arousal in the Static-2007. Nonetheless, the SEM-c group was more likely to self-report pedophilic sexual interests than the solicitation and contact offender groups and more hebephilic interests than the contact group. In turn, the solicitation group was more likely to admit SEM-c use than the contact group and was more likely to self-report hebephilic sexual interests.

As such, there is growing evidence that individuals with a variety of combinations of contact, internet, and online solicitation offenses may differ on a number of psychological variables. The aim of this investigation is to assess the extent to which a criminal justice–defined mixed offender group shares characteristics with contact and internet offender groups. Given previous comparisons between the two groups on the same battery of self-report measures, it is expected that the internet and contact groups will differ most prominently on variables related to victim empathy and cognitive distortions. What remains to be understood is the extent to which mixed offenders share characteristics with contact offenders (e.g., greater victim empathy distortions, more frequent cognitive distortions) or internet offenders (e.g., greater relatedness to fictional characters) or have a combination of both. Alternatively, they may demonstrate a unique profile unrelated to either contact or internet offenders.

To explore this, three analyses will be conducted. First, the contact, internet, and mixed offender groups will be compared on a measure of socially desirable responding, the results of which will be used to correct the self-report scores for potential response bias. Second, contact, internet, and mixed offenders will be compared on a range of psychological variables, based on clinically observable deficits typically noted in sex offenders (Hanson & Harris, 2000; Thornton, 2002; Ward & Beech, 2006;

Ward & Siegert, 2002). Third, those variables that are found to significantly differ will be used to determine the linear combination that best classifies cases into the three groups.

Method

Sample

A sample consisting of 526 contact offenders, 459 internet offenders, and 143 mixed offenders was examined. The contact offender group consisted of individuals with an index contact offense against a child (e.g., rape, indecent assault, and/or gross indecency perpetrated against a person under the age of 16) and no known index or prior convictions for internet offenses. Of these offenders, where the information was available ($n = 520$), 124 (23.8%) had previous known convictions for sexual offenses. The internet offender group consisted of individuals with an index internet-related sexual offense (e.g., the possession, distribution, and/or making[1] of indecent images of a person under the age of 18) and no known index or prior convictions for contact offenses. The mixed offender group consisted of 97 offenders who had a combination of contact and internet index offenses and 46 offenders who had only an index internet offense but also had known previous convictions for contact offenses against children. Our inclusion criteria for this group also included individuals with an index contact offense and previous internet offenses, though no such offenders existed in the data set. Offenders with index offenses related to online "grooming" or the procurement of children online were also excluded from the sample. It was decided that these offenders could not be included in the internet group as their behavior represents direct victimization of a child, nor could they be included in the contact group as the offense is based on the act of arranging to meet a child after online grooming and there was no evidence available to confirm whether or not they had committed a contact sexual offense. It is noted that these groups are based on broad legal definitions, and it should be stressed that there is likely to be a degree of heterogeneity within the groups in regard to the extent of their offending behaviors.

Demographic information was obtained from each offender's presentence report. Demographic details were not available for all offenders in the sample due to missing data in some files, and therefore, the total numbers in Table 1 correspond to those offenders for whom the data were recorded. A univariate GLM (general linear model) revealed a significant effect of age, $F = 4.03$, $df = 1097$, $p = .18$. However, the magnitude of this difference was small[2] ($r = .06$). Post hoc analysis showed that the contact offender group was significantly older than the internet offender group ($p < .05$). There was a significant difference in relationship status between the groups, $\chi^2(4) = 34.08$, $p < .001$, which was a reflection of the higher proportion of internet offenders who were recorded as "single" and the lower proportion who were divorced, separated, or widowed. There was a significant difference in parenthood, $\chi^2(4) = 37.63$, $p < .001$, with an increase in the relative proportions of fathers from the internet (lowest),

Table 1. Sociodemographic and Offense-Related Characteristics of Contact, Mixed, and Internet Offenders

	Contact	Mixed	Internet
Age	(*n* = 518) 42.2 (14.3)	(*n* = 139) 42.0 (11.9)	(*n* = 444) 39.9 (11.3)*
Relationship status (%)	(*n* = 526)	(*n* = 140)	(*n* = 443)
Single	45.6	48.6	58.1
Married/cohabiting	20.4	18.6	24.0
Separated/divorced/ widowed	34.1	32.9	17.9**
Parent (%)	(*n* = 522)	(*n* = 131)	(*n* = 438)
Yes	60.7	51.1	40.9
No	39.3	48.9	59.1**
Victim gender	(*n* = 524)	(*n* = 125)	(*n* = 374)
Male	17.6	20.0	9.1
Female	79.6	60.8	53.7
Combination	2.9	19.2	37.2**

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

through the mixed, to the contact group (highest). There was also a significant difference in victim gender, $\chi^2(4) = 183.61$, $p < .001$, which was a reflection of the higher proportion of internet offenders with a combination of male and female victims. This is potentially a result of the often indiscriminate nature of downloading (e.g., through peer-to-peer software) and the vast quantities of images that some internet offenders collect, rather than a systematic difference in sexual preference.

Measures

The U.K. Probation Service determines suitability for a sex offender treatment program using Beech's (1998) deviancy algorithm, a pretreatment screening system that uses a battery of psychological self-report measures. Data for this study represented archival raw scores from these pretreatment assessments. The measures assess three[3] of the four sets of clinical phenomena often displayed by sex offenders (Hanson & Harris, 2000; Thornton, 2002; Ward & Beech, 2006; Ward & Siegert, 2002): offense-supportive beliefs, interpersonal deficits, and emotional dysregulation. This study utilized these pretreatment scores to compare self-report characteristics between the three groups.

The following scales were used in the analysis. Scales 1 to 3 measure offense-related beliefs and attitudes, Scales 4 to 10 measure social adequacy and interpersonal functioning, Scales 11 to 15 measure ability to effectively manage emotions and behaviors, and Scale 16 was used to correct for socially desirable responding:

(1) Victim Empathy Distortion Scale (Beckett & Fisher, 1994), (2 & 3) Children and Sex Cognitions Questionnaire (Beckett, 1987), (4) Short Self-Esteem Scale (Thornton, unpublished; Webster, Mann, Thornton, & Wakeling, 2006), (5) University of California Los Angeles (UCLA) Loneliness Scale (Russell, Peplau, & Cutrona, 1980), (6 & 7) Kingston Sexual Behavior Clinic: Social Response Inventory (Keltner, Marshall, & Marshall, 1981), (8, 9, 10, & 11) Interpersonal Reactivity Index (IRI; Davis, 1980), (12) Nowicki-Strickland Locus of Control Scale (Nowicki & Duke, 1974), (13, 14, & 15) Barratt Impulsivity Scale—11 (BIS-11; Barratt, 1994), and (16) Paulhus Deception Scales (PDS; Paulhus, 1998). Full descriptions of these measures, including statistics related to internal reliability and test–retest reliability, can be found in Elliott, Beech, Mandeville-Norden, and Hayes (2009).

Results

Three analyses were carried out. First, an analysis of socially desirable responding was conducted to assess its impact on these self-report measures. A mathematical correction was then applied to the raw scores to correct for socially desirable responding. Subsequently, two main analyses were carried out: (1) a multivariate GLM with post hoc comparisons to ascertain significant group differences, and (2) a discriminant function analysis (DFA) to understand how the measures related to each other in order to determine group membership. These are described in turn below.

Socially Desirable Responding

A multivariate GLM[4] analysis revealed a significant multivariate difference between the groups on the PDS measure of socially desirable responding, $F = 18.60$, $df = 1125$, $p < .001$. As seen in Table 2, main effects were also found for each of the PDS subscales: Image Management (IM) ($r = .06$, $p = .01$) and Self-Deceptive Enhancement Scale (SDE; $r = .18$, $p < .001$). Post hoc comparisons indicated a significant difference between the contact and internet groups on the PDS Impression Management scale ($p = .006$). Significant differences were also found on the Self-Deceptive Enhancement Scale between the contact group and both the mixed group ($p < .001$) and the internet group ($p < .001$). Although this suggests that contact offenders are somewhat more likely than mixed and internet offenders to show an unconscious bias toward favorable self-description, it is important to note that the multivariate effect size (.18) is small.

To correct for socially desirable response bias, the self-report scores were adjusted using a statistical technique devised by Saunders (1991). The regression coefficient for predicting the unadjusted score for each measure from the offender's score on the response validity measure is derived for each comparison group using the regression formula: Y = (a) (x) + b, where Y is the unadjusted score, (a) is the regression coefficient, and (x) is the score on the accountability measure. This regression coefficient provide a coefficient by which scores on a measure increase or decrease, within each

Table 2. Multivariate General Linear Model Analysis Between the Contact, Mixed, and Internet Groups on a Range of Psychometric Measures After Adjustment for Socially Desirable Responding

	Contact (n = 526)	Mixed (n = 142)	Internet (n = 459)	F	Correlational effect size (r)	Post hoc findings
Impression management	8.7 (4.0)	8.2 (4.1)	7.9 (3.6)	4.621*	.06	C > I**
Self-deceptive enhancement	4.2 (3.5)	3.0 (2.9)	2.5 (2.5)	37.833**	.18	C > M***, C > I***
Victim empathy distortions	36.0 (25.9)	29.1 (20.2)	21.5 (18.8)	50.12**	.21	C > M**, C > I***, M > I***
Children and sex: Cognitive distortion	15.6 (10.1)	12.4 (10.3)	11.0 (7.9)	31.01**	.16	C > M**, C > I***
Children and sex: Emotional Congruence	14.6 (10.3)	13.6 (9.5)	12.4 (8.6)	6.55*	.08	C > I***
Thornton Self-esteem	3.2 (2.3)	3.3. (2.5)	3.2 (2.3)	.17	.01	—
Emotional loneliness	47.1 (10.6)	46.9 (10.5)	46.5 (11.1)	.37	.02	—
Underassertiveness	11.5 (6.6)	11.7 (7.0)	12.4 (6.0)	2.05	.04	—
Overassertiveness	1.8 (2.6)	0.8 (1.9)	1.3 (1.6)	14.30**	.11	C > M***, C > I***, I > M*
IRI Perspective taking	15.2 (5.1)	16.1 (4.6)	15.0 (4.5)	2.69	.05	M > I*
IRI Empathic Concern	19.0 (4.3)	20.8 (4.0)	18.5 (4.4)	14.39**	.11	M > C***, M > I***
IRI Fantasy	12.6 (4.8)	15.0 (5.2)	14.5 (4.8)	24.53**	.15	C < M***, C < I***
IRI Personal distress	12.6 (5.4)	13.8 (5.5)	12.2 (4.9)	4.56*	.06	M > I*
Locus of control	15.0 (5.5)	12.2 (5.8)	13.4 (5.0)	20.38**	.13	C > M***, C > I***
Barratt Impulsivity Scale-11: Motor	21.8 (4.3)	21.5 (3.7)	22.2 (4.0)	2.40	.05	—
Barratt Impulsivity Scale-11: Cognitive	25.7 (3.8)	24.6 (3.5)	24.5 (3.5)	13.21**	.11	C > M**,C > I***
Barratt Impulsivity Scale-11: Nonplanning	26.6 (4.9)	26.8 (4.3)	25.9 (4.3)	3.28	.05	—

Note: IRI = Interpersonal Reactivity Index.
*p < .05. **p < .01. ***p < .001.

group, for every 1 unit increase in PDS total score (i.e., the effect of increasing levels of socially desirable responding on a group's scores on a particular measure). The adjusted score (Y^1) is calculated by multiplying the accountability score by the regression coefficient and subtracting this from the unadjusted score: $Y^1 = Y - (a)(x)$.

Comparisons of Samples

A multivariate GLM analysis[5] revealed a significant multivariate difference between the groups on a range of psychological measures ($F = 10.69$, $df = 1124$, $p < .001$; Wilks' Lambda = .764). Univariate F tests indicated that there were significant differences between the groups on 9 out of the 15 measures. These can be seen in Table 2, along with means, standard deviations, and Pearson's r correlational effect size. The values for the scales below the first two rows (the PDS scales) have been adjusted using the Saunders correction for socially desirable responding.

Post hoc analyses[6] were carried out to assess differences between the three groups. Six of the 15 measures appeared to significantly distinguish the contact group from both the mixed and internet groups: a greater frequency of victim empathy distortions, a greater frequency of cognitive distortions, lower fantasy scores, a more external locus of control, overassertiveness, and higher levels of cognitive impulsivity. On these six measures, mixed offenders could also be distinguished from internet offenders as having a greater frequency of victim empathy distortions and lower scores for overassertiveness. On three measures, the mixed offenders could be significantly distinguished from the other two groups. The mixed group demonstrated significantly higher levels of empathic concern than the contact and internet groups and significantly higher levels of personal distress and increased perspective taking than the internet group. Finally, the contact group could be distinguished from the internet group on one measure, demonstrating significantly higher levels of emotional congruence with children.

Discriminant Function Analysis

A DFA was conducted to determine the linear combination of measures that best classifies cases into the three groups. The seven measures on which the groups significantly differed (and where $r > .10$) in the multivariate GLM were included in a stepwise DFA analysis: victim empathy, cognitive distortion, overassertiveness, empathic concern, fantasy, locus of control, and cognitive impulsivity. Two significant functions were derived from the DFA. The eigenvalues, relative variance, canonical correlations, and statistical significance for each function are shown in Table 3.

Function 1 was related to offense-supportive attitudes and fantasy (cognitive distortion, victim empathy, and fantasy) and discriminated contact offenders from internet offenders and mixed offenders and, to a lesser extent, mixed offenders from internet offenders. Function 1 contributes the most to discriminatory power, representing

Table 3. Statistical Significance for the Derived Discriminant Functions

Function	Eigenvalue	% variance	Canonical correlations	Wilks Lambda	χ^2	*df*	Sig.
1	.173	80.9	.384	.819	224.27	12	<.001
2	.041	19.1	.198	.961	44.90	5	<.001

Table 4. DFA Group Classification

		Predicted group membership			
		Contact	Internet	Mixed	Total
Original group membership (*n*)	Contact	346	179	1	526
	Internet	157	302	0	459
	Mixed	64	78	1	143
Original group membership (%)	Contact	65.8	34.0	0.2	
	Internet	34.2	65.8	0.0	
	Mixed	44.8	54.4	0.7	

Note: DFA = discriminant function analysis; 57% of original grouped cases correctly classified. Percentages are calculated across rows.

80.9% of the variance in the data. Function 2 was related to empathic concern and self-management (empathic concern, locus of control, overassertiveness, cognitive impulsivity) and discriminated mixed offenders from contact and internet offenders.

As shown in Table 4, the correct classification of cases into contact, internet, and mixed groups on the basis of these discriminant functions is substantially better than chance (39.9%)[7], with 57% of the observed cases being correctly classified (i.e., their predicted group classification, based on their scores on those variables that generated the two functions, matched their actual group membership). Of the contact offenders, 346 (65.8%) were correctly classified, but the vast majority of the remainder were misclassified as internet offenders (34%). Of the internet offenders, 302 (65.8%) were correctly classified, and all of those remaining were misclassified as contact offenders (34.2%). However, in the mixed group only one case (0.7%) was correctly classified. Consequently, the overall accuracy of classification was likely to be have been reduced by the incorrect classification of the mixed offender group as either internet or contact offenders. Based on their scores on those variables that generated the two discriminant functions, 44.8% of the mixed offenders were classified as contact offenders and 54.5% were classified as internet offenders.

As we created our mixed offender group from two sources (those with mixed index offenses and those with historical contact offenses) it was important to rule this out as a potential cause of misclassification for mixed offenders, for example, to ensure that all those misclassified as internet offenders are not disproportionately from one source

or the other. Using the casewise statistics it was found that of those individuals with both index contact and internet offenses, 54 were classified as internet offenders and 43 were classified as contact offenders. Of those individuals with index internet offenses and historical contact offenses, 24 were classified as internet offenders and 21 were classified as contact offenders. This demonstrates there was a relatively even proportion of offenders from each source that were misclassified and, hence, sampling source does not appear to account for the misclassification of mixed offenders.

Discussion

This study found that mixed offenders present a self-reported psychological profile wherein they have more in common with internet offenders than with contact offenders on some variables, while occupying an approximately median position between contact and internet offenders on others. Overall, the findings appear to suggest that mixed offenders present with clinical symptoms more similar to internet offenders rather than to contact offenders. In turn, however, mixed offenders present with more self-management deficits than internet offenders. A DFA demonstrated that the key linear difference, based on the significant variables from the GLM, was a function relating to the frequency of offense-supportive attitudes and identification with fictional characters. Contact offenders demonstrated a greater frequency of cognitive distortions and victim empathy distortions, whereas internet and mixed offenders had a greater ability to relate to fictional characters.

Mixed Offenders and Offense-Supportive Beliefs

The findings suggest that offenders with index offenses relating to SEM-c, regardless of previous contact offenses, are less likely than those with contact-only offenses to endorse beliefs such as “the victim enjoyed what happened” or “the victim was not harmed by what happened.” There is an extensive literature on pro-offending attitudes held by child molesters and how they relate to offense-related behavior (e.g., Abel, Becker, & Cunningham-Rathner, 1984; Maruna & Mann, 2006; Marziano, Ward, Beech, & Pattison, 2006; Ward & Keenan, 1999). However, it has been noted that internet offenders do appear to be aware of the harm caused by sexual contact between children and adults, but may cognitively distance themselves from the abusive nature of the images to justify their use of images, through a belief that they are not responsible for any harm caused by the activities depicted (Howitt & Sheldon, 2007; Quayle & Taylor, 2002). They also appear to view other sex offenders (child molesters and rapists) as more dangerous, harmful, and deviant than themselves (Malesky & Ennis, 2004; Winder & Gough, 2010).

It appears contradictory to find that mixed offenders do not hold offense-supportive beliefs about sexual activity between adults and children, given that they have current or historical contact sex offenses against children. This raises the question as to how mixed offenders, who have presumably been exposed to the harmful realities of the

sexual offense process, appear to have greater victim empathy and less cognitive distortions than contact-only offenders. This appears to be counterintuitive to the "escalation hypothesis" proposed by Taylor and Quayle (2003). This hypothesis suggests that ongoing exposure to SEM-c creates maladaptive schema about the appropriateness of child sex relations that increase the appeal of contact offending as an acceptable response to negative emotions or life stressors. It might have been expected that the mixed group would demonstrate these cognitive distortions to justify their contact offending.

Evidence for the effect of pornography on attitudes appears to be conflicting and inconsistent. Paul and Linz (2008), for example, found that although there is evidence that viewing so-called "barely legal" material (where the performer is 18 or older, but appears younger) may create cognitive associations between youth and sexuality, there was no evidence that this led to attitudes and beliefs that child sex imagery is socially acceptable. Conversely, a meta-analysis by Hald, Malamuth, and Yuen (2009) found that attitudes supporting violence toward women were significantly correlated with the use of pornography, especially violent pornography. A number of studies have noted, however, the role of pornography on violent and sexually abusive outcomes appears to be principally related to men who demonstrate a prior proclivity for sexual aggression and use pornography frequently (e.g., Kingston, Malamuth, Fedoroff, & Marshall, 2009; Langevin & Curnoe, 2004; Seto, Maric, & Barbaree, 2001).

Mixed Offenders and Fantasy

The finding that the mixed group shares with the internet group a greater ability to relate to fictional characters is perhaps not surprising, given the use of SEM-c in both groups. A previous study using these measures with groups of child-related sex offenders (Elliott et al., 2009) noted that users of SEM-c were more likely to endorse items associated with deep emotional engagement in fictional narrative and empathizing with characters within those narratives. These elevated scores for fantasy demonstrated by internet and mixed offenders also appear consistent with the nature of SEM-c itself. To the user, the children depicted in SEM-c material may represent characters performing a role for an audience. SEM-c is often deliberately stylized to meet audience demands for smiling children, in order for that audience to be able to engage in fantasies of compliant, willing children (Taylor & Quayle, 2003). This connection between fantasy and SEM-c may also be linked to the evidence that SEM-c offenders have higher levels of sexual deviance and preoccupation than contact and solicitation (i.e., online grooming) offenders (e.g., Babchishin et al., 2011; Seto et al., in press).

Although neither deviant sexual interest nor sexual preoccupations were directly assessed by the scales in this study, this ability to engage with fictional material could be a function of sexual preoccupation and deviant interest for SEM-c users. Further research is required to investigate whether heightened levels of fantasy predict the use of pornography. In particular, there is a need to examine whether individuals who feel

they relate to fictional characters are potentially drawn to material depicting sexual activity as a sexual outlet or whether the stylization of pornographic imagery creates a sense of engagement with fictional characters and scenarios.

Mixed Offenders and Self-Management

One possible explanation for the contact offending by a population of mixed offenders who may not share the cognitive distortions of contact-only offenders is their self-management skills. The second, less influential factor in the DFA was the higher levels of empathic concern and poor self-management that distinguished the mixed offenders from the internet offenders. Sex offenders have been noted to use sex as a coping strategy to deal with difficult and stressful situations (Cortoni & Marshall, 2001; Stinson, Becker, & Sales, 2008). This lack of self-management may explain how a group of individuals who do not appear to have such deficits in victim empathy or hold pro-offending attitudes supporting adult–child sexual relationships commit contact offenses. Babchishin et al. (2011) suggest that it may be plausible that those internet offenders who demonstrate higher levels of sexual deviance, but do not commit contact offenses, might have greater self-control. Hence, those who do commit contact offenses may do so due to a lack of self-management skills. Ward and Hudson (1998) suggested that the use of SEM-c by individuals with a sexual interest in children actually represents a maladaptive strategy to avoid contact offending. These maladaptive self-management strategies may actually have the opposite effect and increase the risk of contact offending.

Limitations

It is important to note that the effect sizes for all of these differences were small in magnitude, with only the difference in victim empathy being considered a medium-sized effect. Similarly, the DFA findings should be treated with some caution as the self-management factor accounts for only a small amount of the variance and about one third of the sample were miscategorized by the two factors. Hence, these factors represent only subtle rather than extreme differences between the groups.

A potential methodological limitation is the self-report approach to assessment. The scores presented here are pretreatment scores obtained after arrest and during the early stages of probation supervision as a sex offender. Therefore, it could be argued that the participants may not be responding in the same way under supervision that they might have responded during the period in which they were offending.

In addition, these psychological measures were chosen to assess treatment need and effectiveness in contact sexual offenders, before the emergence of the internet sexual offenses. Howitt and Sheldon (2007) noted that the disparity between clinical and self-report measure approaches to eliciting and measuring cognitive distortions in internet offenders somewhat undermines the self-report approach for that population. Hence, the scales used here may be measuring constructs that are perhaps unrelated to internet

offenders. There was also no measure of socioeconomic status, and we were unable to test any assumptions that access to computer technology could be a systematic variable in an analysis of this type. The self-report measures used in this analysis also do not assess sexual interest. As such there was no opportunity to explore the extent to which our mixed offender sample integrates into the findings of Babchishin et al. (2011), that deviant sexual interest is a key difference between online and offline offenders.

Although the present sample was, in criminal justice terms, reasonably large, the sample participants are taken from a community-based population and, therefore, may not represent their respective populations as a whole, as there is no comparison to either incarcerated or noncriminal justice offenders. It can be assumed that offenders who have been sentenced to a community sentence will have committed offenses that were not considered serious enough, or did not have a long enough criminal history, to warrant incarceration. Internet offenses are often very difficult to detect, and hence, there may be subsets of online offenders who we do not see or have access to (Neutze et al., 2010; Ray, Kimonis, & Donoghue, 2010). Similarly, it is not known whether or not individuals in both our internet and contact samples have undetected offenses of the other type. This may be particularly important in light of evidence that internet offenders have been found to self-report further contact offenses or risky sexual behavior during treatment (Bourke & Hernandez, 2009) and during polygraph examination (Buschman et al., 2010). The lack of self-reported data for previous contact and internet offenses may have led to some offenders being incorrectly labeled from the outset, as some of the single-offense groups may have been more appropriately placed in the mixed group had these data been available.

Data were also not available regarding the ages of the victims and as such we may be making comparisons between very different groups. Hypothetically, for example, if a large number of the internet group were accessing images of victims aged 16 to 18 this may not be comparable with the contact group as the contact group would not contain individuals with victims in this age group as the U.K. age of consent for sexual activity is 16 years.

Conclusions

This investigation has uncovered some potential leads in our understanding of those offenders who have a combination of both contact and internet sex offenses. They appear to present a more similar profile on self-report psychometrics to internet offenders rather than contact offenders but appear to have somewhat inferior emotional self-management to the other two groups. These findings may generate more questions than they provide answers, and we would strongly encourage further research into the internet offense process in terms of how individuals on the three mixed offense pathways differ in terms of how their cognitive processes are affected by the immediate effects of internet use and how this might affect self-control and subsequently potentially harmful online behaviors.

In terms of clinical practice with mixed offenders, this suggests that clinicians that encounter mixed offenders may need to first assess what *type* of mixed offender they are presented with and understand that even though a mixed offender has committed a contact offense their treatment needs may look somewhat different from those who commit contact offenses alone. Indeed, if more thorough policing techniques mean that mixed offenders become more prevalent, assessment and treatment for all contact offenders may need to incorporate some internet-specific elements to account for this potentially underrepresented population.

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Notes

1. This should be distinguished from the "taking" of an image (which could be considered a form of contact offending) and refers to the deliberate creation of an electronic copy of an indecent image of a child (see Gillespie, 2005).
2. Cohen (1988) defined the threshold of a small effect size as $d = .20$ ($r = .10$), a medium effect size as $d = .50$ ($r = .24$), and a large effect size as $d = .80$ ($r = .37$).
3. Deviant sexual arousal is difficult to assess using self-report measures and is more typically measured using clinical assessment, the penile plethysmograph (PPG), or polygraph testing (Beech, Fisher, & Thornton, 2003).
4. As we use this acronym from this point, it is worth noting that it should not be confused with the Good Lives Model approach to sex offender treatment.
5. An initial GLM accounting for the significant differences in age, parenthood, and victim gender resulted in group differences for all variables being highly (and improbably) significant. Given the small effect sizes for these differences and the issues relating to sampling (especially in victim gender) the GLM presented here does not include these demographic factors as covariates.
6. Games-Howell tests were used, as this test takes into account samples of unequal sizes and does not require population variances to be equivalent (Field, 2009).
7. Calculated by dividing the sum of the weighted probabilities of correct classification for each group by the total N (Tabachnick & Fidell, 2007): ((526*.47) + (459*.41) + (143*.13)) / 1128 = 450.2 (39.9%) cases correctly classified by chance alone.

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