



Internet child pornography offenders: An examination of attachment and intimacy deficits

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Purpose. This study investigated attachment, intimacy, and anxiety related to interpersonal interactions, in offenders convicted of Internet child pornography (ICP), other sexual offenders, and non-offenders.

Methods. The sample of 162 male participants comprised 32 ICP offenders, 32 matched child sexual offenders, 31 matched adult sexual offenders, 20 offenders convicted of both ICP and an offline sexual offence, and 47 community controls who reported that they had not been convicted of any sexual offences.

Results. The ICP group reported significantly less secure attachment than non-offenders and both the matched child and adult sexual offenders. Both the ICP group and the group convicted of an ICP offence in addition to an offline sexual offence reported a significantly more fearful attachment style and a more negative view of themselves than non-offenders. The ICP group also reported a more negative view of themselves than both of the matched sexual offender groups. Finally, the ICP group reported more social avoidance and distress than non-offenders.

Conclusions. Despite a small sample size these findings provide insights into the cohort of offenders convicted of ICP and their similarities/differences to other sexual offenders.

The introduction of the Internet brought with it many advances including the ability to access information easily, to communicate with others in new ways, and the convenience of being able to undertake tasks such as banking, bill paying and shopping without leaving the home or office. The Internet has also seen the emergence of new opportunities for sexual exploitation when it is used to download, collect, and disseminate child pornography, or to lure potential child victims. Recent estimates suggest that approximately 20,000 indecent images of children are uploaded to the Internet each week (NSPCC Press Release, 2009), while the number of websites containing such images is increasing at a rapid rate (Davidson & Gottschalk, 2011). Given these figures, it is not surprising that the number of arrests and convictions for Internet sexual offences has increased considerably over the past 10 years (Bates & Metcalf, 2007; Motivans & Kyckelhan, 2007; Wolak, Finkelhor, & Mitchell, 2005, 2009). With this increase, comes the imperative to develop an understanding of the factors which contribute to this offending to inform the judicial responses to those who engage in this online offending, and the treatment regimes implemented.

Initial efforts to inform on these issues suggested several typologies of online sexual offenders. For example, Quayle, Vaughan, and Taylor (2006), categorized these offenders

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into (1) those who access child pornography sporadically out of curiosity or impulse, without specific sexual interest in children; (2) those who access child pornography to satisfy sexual fantasies, but do not commit offline sexual offences; (3) those who use the Internet as part of a pattern of, or to facilitate offline sexual offending (this includes individuals who use the Internet to locate and/or groom victims and those who use the Internet to disseminate images they have produced); and lastly, (4) those who access abusive images for seemingly non-sexual reasons (e.g., financial profit).

Despite this, there is some debate as to whether online offenders are a new cohort of sexual offenders or whether they are simply typical sexual offenders who use a new medium. Seto, Hanson, and Babchishin (2011) conducted two meta-analyses, the first of which examined the criminal histories of online offenders. Across studies, 17.3% of offenders were recorded as previously having committed an offline sexual offence (largely against a child). The prevalence was higher when self-report information was used, with approximately half of the online offenders admitting to an offline sexual offence. The second meta-analysis which examined the recidivism rates of online offenders reported that 4.6% of offenders reoffended sexually during the follow-up period (generally <4 years), with 2.0% of the online offenders committing an offline sexual offence and 3.4% committing a further online offence. The authors concluded that their results indicate that online offenders are a distinct cohort of sexual offenders, with relatively low rates of re-offending or offending in a hands-on manner.

The aforementioned research into offenders convicted of online offences could inform risk assessment by the police, courts, correctional systems, and clinicians, and allow them to prioritize and to deliver interventions. In addition, given that many jurisdictions mandate assessment and treatment of sexual offenders, including offenders convicted of online only offences, a greater understanding of offenders convicted of possession of child pornography obtained via the Internet (Internet child pornography [ICP] offenders), is required to facilitate best treatment practice.

In an attempt to assist in this endeavour Briggs, Simon, and Simonsen (2011) examined 51 participants convicted of an Internet-initiated sexual offences in which they attempted to entice an adolescent into a sexual relationship. On the basis of their research, the authors suggested that offenders convicted of Internet-initiated sexual offences are a distinct typology of sexual offenders who are characterized by less severe criminogenic factors than other sexual offenders (rapists, child molesters). They also identified two subgroups within this typology: one group motivated to engage in contact sexual offending offline (*contact driven*) and the other motivated to engage in online cybersex with an adolescent without an expressed intent to meet offline (*fantasy driven*). Offender demographics also distinguished these two groups. When compared to the fantasy driven group, contact offenders were younger, had less formal education, were more likely to be unemployed, reported never having been married more frequently, and engaged in fewer sexual behaviours (with the exception of online grooming). Other studies by researchers such as Webb, Craissati, and Keen (2007) have also reported that online offenders (57%) were more likely than offline offenders (41%) to never have been married.

In their meta-analysis, Babchishin, Hanson, and Hermann (2011) identified other differences between online and offline sexual offenders. They found that online sexual offenders had greater victim empathy, greater sexual deviancy, and lower impression management than offline sexual offenders. In addition, offline sexual offenders were reported to be older than online sexual offenders, to have a greater emotional identification with children, and to have more cognitive distortions. Babchishin *et al.* suggested that these differences may be due to ICP offenders having greater self-control,

and more psychological barriers to acting on their deviant interests than offline offenders. It is important to highlight, however, that this meta-analysis had one major limitation: approximately half of the studies reviewed included child luring offenders (contact driven) in the same sample as online (fantasy driven) offenders. As discussed above, the former appears to be more closely aligned to offline offenders than to online offenders.

On the basis of their findings, Briggs *et al.* (2011) hypothesized that online offenders avoid relationships and spend a significant amount of time in online chat rooms as a primary social and sexual outlet. Indeed, there is evidence that some people use the Internet to deal with negative emotions such as boredom, anxiety, and depression (Quayle *et al.*, 2006), and it has been suggested that the Internet provides them with a safe, non-threatening way to establish social contacts when their real world socialization is dysfunctional. Aligned to these observations, it has been suggested that people who present with problematic Internet use have difficulties in the areas of anxiety, depression, and social isolation, as well as loneliness and intimacy deficits (Burgess, Mahoney, Visk, & Morgenbesser, 2008; Morahan-Martin & Schumacher, 2000; Weiss, 2004). In relation to online sexual offending, Briggs *et al.* (2011) suggested that an avoidance of emotional closeness in sexual relationships is potentially responsible for the low rates of contact sexual offending by online offenders despite their high levels of sexual deviancy. Research which reports that online offenders also spend a significant amount of time on the Internet for non-offending purposes (Davidson, 2008) and have frequent conflicts in their adult relationships (Young, 2008) supports this contention.

Middleton, Elliott, Mandeville-Norden, and Beech (2006) conducted one of the most comprehensive studies of the aetiology of ICP offending using the Pathways Model proposed by Ward and Siegert (2002). In brief, this model purports that there are multiple pathways to offending, which are influenced by the complex interaction of emotional, biological, physiological, cultural, and environmental variables. The model proposes four core mechanisms: (1) intimacy and social skill deficits; (2) distorted sexual scripts; (3) emotional dysregulation; and (4) anti-social cognitions, each of which constitutes a single pathway and distinct aetiology of sexual offending.

Middleton *et al.* (2006) found that 35% of their sample of ICP offenders fitted the intimacy deficits pathway, and they suggested that the primary mechanism underlying this pathway is an insecure attachment style, which in turn leads to low levels of social skills and self-esteem. According to Ward and Siegert (2002), sexual offenders in this pathway engage in a sexual behaviour (both abusive and non-abusive) to alleviate loneliness and to compensate for a lack of intimacy.

Supporting a link between Internet sexual offending and this pathway, Bates and Metcalf (2007) found that Internet offenders scored higher than other sexual offenders on measures of emotional loneliness. In addition, social anxiety and related features such as overly self-conscious feelings, social passivity, a lack of assertiveness, and excessive interpersonal sensitivity, have all been found to be higher in online offenders than other sexual offenders (Bates & Metcalf, 2007; Laulik, Allam, & Sheridan, 2007; Middleton *et al.*, 2006). Marshall, O'Brien, Marshall, Booth, and Davis (2012) proposed that the lack of these observations in offline offenders indicates that social anxiety may be a unique feature of online offending. Their study tested the hypothesis that ICP offenders differ from offline offenders on three facets: obsessive-compulsive disorder, loneliness, and social phobia. Preliminary results (from an ongoing study) indicate support for obsessive-compulsive disorder and loneliness as differentiators. Although the results did not indicate that social phobia differentiates these two groups, it is important to note that the group of offenders convicted of ICP did score in the range that meets the diagnostic criteria for this.

In an attempt to delineate the intimacy deficits of sexual offenders, Ward, Hudson, Marshall, and Siegert (1995) developed a comprehensive model based on attachment theory, as shown in Figure 1. This model utilizes Bartholomew's three forms of insecure attachment (preoccupied, dismissing, and fearful), each of which is proposed to lead to a failure to achieve intimacy within adult relationships (Bartholomew & Horowitz, 1991; Horowitz, Rosenberg, & Bartholomew, 1993). As can be seen in the model, the intimacy problems faced by individuals of each insecure attachment style are very different, and each form of insecure attachment is associated with particular patterns of offending. The implication of this is that effective treatment of sexual offenders relies on the identification of the offender's attachment style and subsequent intimacy problems. In addition, different therapeutic interventions can be modified to align with offenders' interpersonal styles to further increase their responsiveness to treatment.

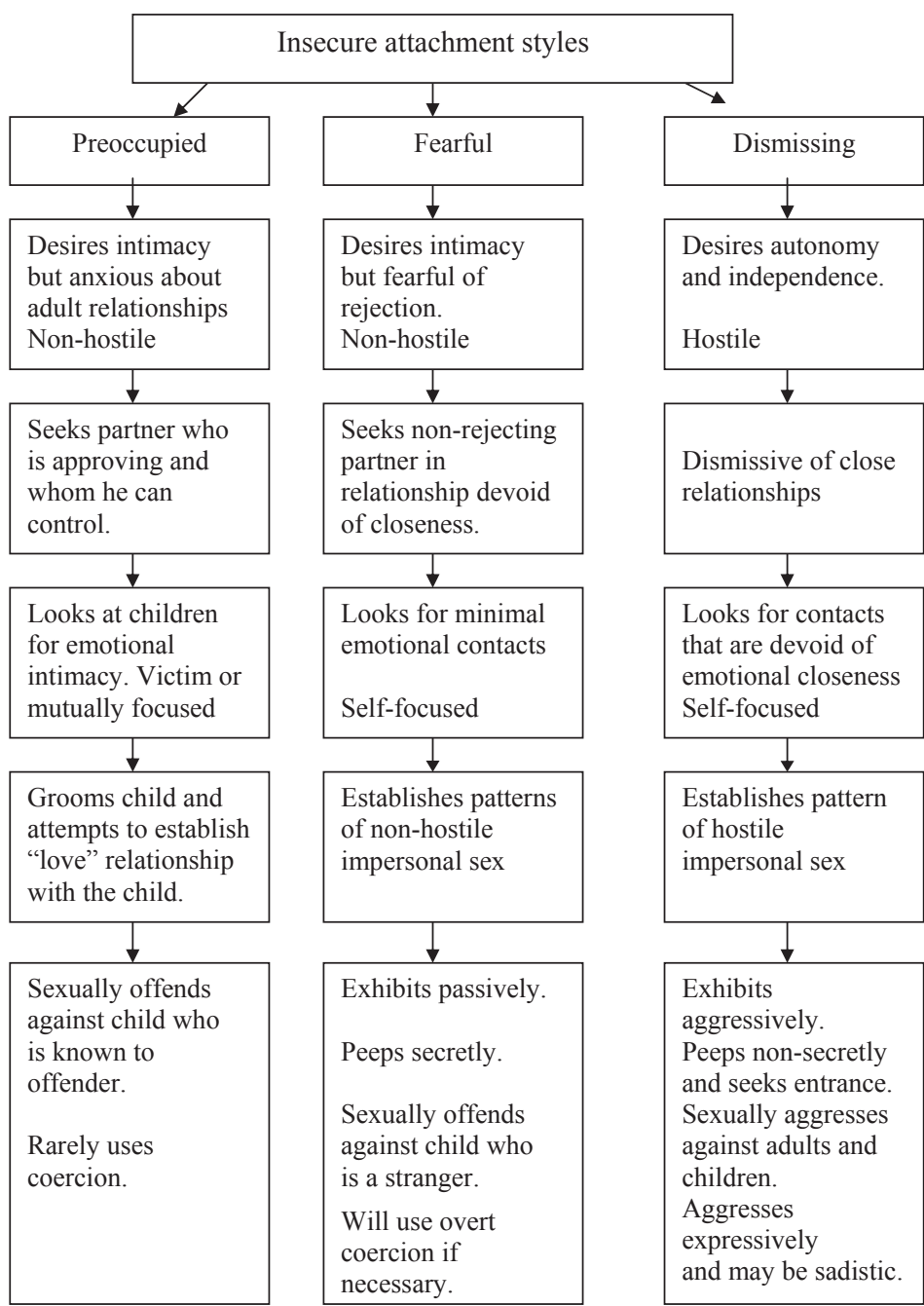


Figure 1. Attachment styles and sexual offending pathways (adapted from Ward et al., 1995).

Critics of this model highlight that some sexual offenders do display insecure attachments in adulthood (McCormack, Hudson, & Ward, 2002; Ward, Hudson, & Marshall, 1996; Ward, McCormack, & Hudson, 1997), however, some see themselves as securely attached (Marshall & Marshall, 2010). Although attachment difficulties may not be sufficient to identify sexual offenders, based on the aforementioned research it is possible that Internet offenders may indeed be distinguishable from other sexual offenders on the basis of their attachment style and/or this may differentiate between offenders likely to progress to contact offending and those unlikely to do so.

Using this model, the most relevant style of attachment for online offenders is fearful attachment. Fearfully attached individuals desire intimacy but are afraid of rejection. They tend to avoid close relationships and engage in impersonal sex with others in an attempt to satisfy intimacy needs (Hazan & Shaver, 1988). According to Bartholomew (1990), fearful attachment is characterized by a negative model of the self and a negative model of others. Theoretically this means that fearfully attached individuals do not have a fundamental sense of worthiness or an expectation that other people are generally warm and accepting. Ward *et al.* (1995) proposed that when such individuals sexually offend they are likely to engage in passive exhibitionism, voyeurism, and child molestation, offences that are 'devoid of personal contact or at least involve minimal personal contact' (p. 328). Likewise, the anonymity provided by the Internet appears to be a perfect vehicle for those who have a fearful attachment style to avoid social interactions and associated distress. Indeed, similarities can be seen between the offence processes of Internet offenders, voyeurs, and exhibitionists, in that each of them does not directly approach their victims for contact (Quayle & Taylor, 2003).

Based on the above, a pathway to ICP offending can be proposed: childhood attachment difficulties lead to an adult attachment style characterized by fearful attachment, predominantly consisting of a negative view of the self and difficulties related to autonomy. This style and its features in turn create anxieties around interpersonal interactions, evidenced particularly by social avoidance and distress. In conjunction with a number of other factors, the anonymity provided by the Internet reduces interpersonal anxieties and facilitates the use of child pornography as an indirect means of making contact (in an attempt to achieve intimacy) with others.

This study aimed to investigate whether attachment, intimacy, and anxieties related to interpersonal interactions are possible distinguishing factors between those who are convicted of ICP offending and those who are convicted of offline sexual offences. It was hypothesized that when compared to offline sexual offenders, offenders convicted of ICP offending would display higher levels of the following:

1. insecure attachment styles (specifically more fearful attachment);
2. negative internal working models of themselves;
3. negative internal working models of others;
4. fear of intimacy;
5. fear of negative evaluation; and
6. social avoidance and distress.

Method

Participants

The sample was recruited in the state of Victoria, Australia, and comprised of 162 male participants divided across five groups. The first group was made up of offenders ($N = 32$)

who had been convicted of one or more charges of possession of child pornography that was obtained via the Internet, but had never been convicted of an offline sexual offence in the state (ICP offenders). The second group consisted of child sexual offenders ($N = 32$) convicted of one or more sexual offences¹ perpetrated against a person under 16 years of age. The third group was made up of offenders ($N = 31$) convicted of one or more sexual offences perpetrated against a person over 16 years of age. Participants in the child and adult offender groups were drawn from the Department of Justice sexual offender database, were matched by month and year of birth with the ICP group, and had never been convicted of an ICP offence in the state of Victoria. It is important to note that offenders in the matched child sexual offenders group were not currently convicted of any sexual offences against an adult and offenders in the matched adult sexual offender group were not currently convicted of any sexual offences against a child. The fourth group consisted of offenders ($N = 20$) convicted of one or more ICP offences in conjunction with one or more child and/or adult sexual offences. Finally, a community comparison group ($N = 47$) was made up of non-offenders randomly selected from the state electoral roll. These participants reported that they had never been convicted of any offences of ICP.

Participants' ages ranged from 20 to 81 years, with a mean age of 45 years. The majority of participants were either single (40.6%) or married (33.1%), were of Anglo-Australian ethnicity (85.5%), and had attempted high school (44.7%) or completed a university/tertiary degree (20.5%). Participants' demographics are detailed in Table 1 for each of the five groups.

Measures

The measures used in this study were specifically selected to assess the target variables purported to underlie the ICP offences as discussed above.

The Relationship Styles Questionnaire (RSQ; Griffin & Bartholomew, 1994) was used to assess how well the four categorical types of attachment (secure, fearful, dismissing, and preoccupied) describe the respondent. Participants were asked to rate the extent to which they believe each of 30 short statements described their feelings about close relationships using a 5-point Likert scale (1 [*not at all like me*] through to 5 [*very much like me*]). Four items contribute to the score for each of the preoccupied and fearful patterns, whereas five items contribute to the score for each of the secure and dismissing patterns of attachment. It is important to note that the highest of the four attachment rating can also be used to classify subjects into an attachment category. The resulting group membership will, however, only indicate the best fitting attachment pattern. Referral to each of the four scores to indicate how well each of the categories of attachment (secure, fearful, dismissing, and preoccupied) describes the individual is therefore a more accurate and holistic representation of the individual and is the method used in this study. The RSQ shows high internal reliability of .83 (Griffin & Bartholomew, 1994).

Based on procedures suggested by Bartholomew (Bartholomew & Horowitz, 1991; Griffin & Bartholomew, 1994) the four attachment styles were used to form two additional orthogonal indices of attachment that are thought to be the underlying theoretical dimensions of the four attachment styles: 'model of self' and 'model of others.' The 'model of self' index was computed as follows: ('secure' + 'dismissing') – ('fearful'

¹ Sexual offences include indecent assault; rape; attempted rape; sexual harassment; incest; stalking; and indecent exposure.

Table 1. Demographic statistics of participants

	Overall sample (N = 170)	Non-offenders (N = 52)	Internet child pornographers (N = 33)	Matched child sexual offenders (N = 33)	Matched adult sexual offenders (N = 33)	Internet and interpersonal sexual offenders (N = 20)
Relationship status (%)						
Single	40.6	15.4	66.7	48.5	48.1	44.4
Steady partner	3.8	11.5	0	0	0	0
De facto relationship	6.9	5.8	3.3	0	11.1	5.6
Married	33.1	63.5	0	24.2	14.8	11.1
Widower	1.9	1.9	0	6.1	0	11.1
Separated	5.0	1.9	0	0	14.8	5.6
Divorced	8.8	0	10	12.1	11.1	22.2
Employment (%)						
Yes	49.4	69.2	66.7	36.4	31.3	20
No	50.6	30.8	33.3	63.6	68.8	80
Ethnicity (%)						
Anglo-Australian	85.5	84.6	91.7	73.7	85.7	100
Other	14.5	15.4	8.3	26.3	14.3	0
Education (%)						
Completed primary school	3.8	5.8	7.1	3	0	0
Attempted high school	44.7	19.2	46.4	75.8	61.5	70.6
Completed high school	14.7	13.5	21.4	12.1	15.4	11.8
TAFE/Trade qualification	12.2	26.9	3.6	6.1	3.8	5.9
University/Tertiary	20.5	34.6	21.4	3.0	19.2	11.8
Age (%)						
18–24 years	7.7	11.5	9.4	9.1	3.1	0
25–35 years	20.8	9.6	25	24.2	31.3	21.1
35–45 years	20.2	21.2	21.9	21.2	18.8	15.8
45–55 years	26.2	21.2	25	24.2	28.1	42.1
55–65 years	14.9	15.4	12.5	12.1	18.8	15.8
65+ years	10.1	21.2	6.3	9.1	0	5.3

TAFE, Technical and further education.

+ ‘preoccupied). The ‘model of other’ index was computed as follows: (‘secure’ + ‘pre-occupied) – (‘dismissing’ + ‘fearful’). The correlation between the two indices (.28) was expected to be low.

The Fear of Intimacy Scale (FIS; Descutner & Thelen, 1991) was used to measure participants’ fear of intimacy. In this questionnaire participants were asked to imagine that they were in a close, dating relationship, and once again, rate how characteristic the 35 statements would be of them on a 5-point Likert scale ranging from 1 ‘not at all characteristic of me’ to 5 ‘extremely characteristic of me’. This scale has excellent internal consistency, with an alpha of .93 and stability with a 1-month test–retest correlation of .89 (Descutner & Thelen, 1991). The FIS also has good construct validity. Descutner and

Thelen reported positive correlations with the UCLA Loneliness Scale and negatively correlated with the Jourard Self-Disclosure Questionnaire, Miller Social Intimacy Scale and Need for Recognition Scale. They also reported a significant correlation with social desirability.

The Fear of Negative Evaluation Scale (FNE; Watson & Friend, 1969) was used to measure one aspect of social anxiety, the fear of receiving negative evaluation from others. Participants were asked to indicate whether 30 statements about their concern of others' views and opinions of them were true or false for them. Internal consistency of this scale is good with the average item correlating .72 to the total score. Scores on the FNE correlate with measures of social approval, locus of control, desirability, autonomy, dependence, dominance, abasement, exhibitionism, and other measures of anxiety (Watson & Friend, 1969).

The Social Avoidance and Distress Scale (Watson & Friend, 1969) is a 28-item measure of two aspects of social anxiety, one's experience of distress, discomfort, fear and anxiety, and the deliberate avoidance of social situations. Social avoidance is measured in terms of avoiding being with, talking to, or escaping from others for any reason. Both actual avoidance and the desire to avoid are measured in this scale. Social distress is measured by the reported experience of a negative emotion, such as being upset, distressed, tense, or anxious in social interactions, or the reported lack of negative emotion, such as being relaxed, calm, at ease, or comfortable. The measure does not contain subscales but is instead a unidimensional measure with items phrased to reflect anxiety and non-anxiety symptoms to control for response bias. Participants were asked to indicate whether statements that relate to feelings and behaviours in social situations were true or false for them. This scale has sound psychometric properties with an internal reliability of .77 (Watson & Friend, 1969).

Procedure

Approval to conduct the study was obtained from the University Research Ethics Committee and the Department of Justice Research Committee. All offenders convicted of ICP offences in the state at the time of the study were included. After separating those who had also committed offline sexual offences, the remaining ICP were matched via date of birth with an offender who had committed an offline sexual offence against a child and an offender who had committed an offline sexual offence against an adult. Upon referral to Sex Offender Program (SOP) all offenders complete a battery of psychometric tests, including the materials used in this study. De-identified data for participants in the four offender groups were then obtained from the SOP. Potential participants for the community control group were randomly selected from the state electoral role and sent an invitation to participate in the study and a questionnaire pack by post. A section of the anonymous questionnaire requested demographic information, including age, highest level of education, ethnicity, employment status, and relationship status. Participants were also asked if they had ever been convicted of, or engaged in viewing ICP. Completed questionnaires were returned by reply-paid mail. The low response rate of approximately 9% may have been due to the sensitive nature of the questions asked.

Results

Data for each group on each measure are summarized in Table 2. Prior to analyses, the Statistical Package for the Social Sciences was used to assess the accuracy of data entry,

Table 2. Means and standard deviations of participants identification with attachment styles, models of self and other, and intimacy scales

	Control (<i>n</i> = 47)	ICP (<i>n</i> = 32)	Matched child offender (<i>n</i> = 32)	Matched adult offender (<i>n</i> = 31)	ICP + offline sexual offence (<i>n</i> = 20)
Secure attachment	3.28 (0.63)	2.36 (1.19)	2.99 (0.85)	3.02 (0.84)	2.88 (1.01)
Fearful attachment	2.21 (0.79)	2.95 (0.79)	2.69 (0.91)	2.50 (0.93)	2.95 (0.54)
Dismissive attachment	2.86 (0.72)	2.71 (0.59)	3.15 (0.92)	3.05 (0.81)	2.74 (0.76)
Preoccupied attachment	2.5 (0.85)	2.88 (0.81)	2.53 (0.90)	2.65 (0.77)	3.09 (0.80)
Model of self	1.44 (1.78)	−.77 (2.01)	.91 (2.02)	.91 (2.29)	−.43 (1.73)
Model of others	.71 (1.53)	−.42 (1.99)	−.31 (2.26)	.12 (1.62)	.28 (1.64)
Fear of intimacy	72.30 (22.87)	81.10 (21.80)	80.19 (23.32)	72.10 (23.83)	76.05 (24.71)
Fear of negative Evaluation	11.33 (4.27)	15.07 (9.92)	11.55 (9.35)	10.86 (7.02)	16.55 (8.79)
Social avoidance/ distress	6.5 (5.83)	14.3 (9.34)	10.11 (8.32)	7.96 (7.14)	10.31 (7.08)

Note. ICP = Internet child pornography.

missing values, the distribution of variables, and the assumptions of multivariate analysis of variance (MANOVA). Data screening was conducted separately for each group. No violations of skewness or kurtosis were detected for any of the dependent variables, attachment styles (secure, fearful, preoccupied, and dismissing), models of self and others, fear of intimacy, fear of negative evaluation or social avoidance, and distress. Following assessment of normality, the data were screened for both univariate and multivariate outliers. No univariate outliers were detected. The assumption of multivariate normality was assessed through the use of Mahalanobis distances. One multivariate outlier was detected but this outlier was not removed from the sample or rescaled because it was considered representative of the sample (Tabachnick & Fidell, 2001).

Attachment styles

A one-way MANOVA indicated that a significant multivariate effect existed for the categorical attachment styles (secure, preoccupied, dismissing, and fearful), $F(16, 628) = 2.62, p = .001, \eta^2 = .63$ (see Table 2). After conducting Bonferroni’s adjustment, using an alpha level of .017, univariate tests revealed that this effect was significant for the secure, $F(4, 157) = 5.25, p = .001, \eta^2 = .12$ and fearful, $F(4, 157) = 5.31, p < .001, \eta^2 = .12$ attachment styles. Further investigation using Tukey’s *post-hoc* tests, revealed that the ICP offenders differed significantly in secure attachment style from non-offenders ($p < .001$), matched child sexual offenders ($p < .03$), and matched adult sexual offenders ($p < .04$). Each of these groups scored higher than ICP offenders on the secure attachment scale. The ICP offenders also scored significantly higher on the fearful attachment scale than non-offenders ($p < .001$), as did ICP + offline sexual offenders ($p = .008$).

Model of self and others

A one-way MANOVA was conducted to examine whether significant differences existed between the five groups on the two orthogonal attachment styles (model of self and model

Table 3. Summary of statistical effects

Variable	Significant differences	<i>p</i>
Secure attachment	ICP < non-offenders	<.001
	ICP < matched child sexual offenders	<.05
	ICP < matched adult sexual offenders	<.05
Fearful attachment	ICP > non-offenders	<.001
	Combination offenders (ICP + offline) > non-offenders	<.01
Preoccupied	No significant differences found	
Dismissing	No significant differences found	
Model of self	ICP < non-offenders	<.001
	ICP < matched child sexual offenders	<.01
	ICP < matched adult sexual offenders	<.01
	Combination offenders (ICP + offline) < non-offenders	<.01
Model of others	No significant differences found	
Fear of intimacy	No significant differences found	
Fear of negative evaluation	No significant differences found	
Social avoidance and distress	ICP > non-offenders	<.01

Note. ICP = Internet child pornography.

of others). Using Wilks' lambda, a multivariate effect existed, $F(8, 312) = 4.52, p < .001, \eta^2 = .10$. After conducting Bonferroni's adjustment, using an alpha level of .025, univariate tests revealed that this interaction was only significant for model of self, $F(4, 157) = 7.68, p < .001, \eta^2 = .16$. *Post-hoc* tests revealed that ICP offenders differed significantly from non-offenders ($p < .001$), matched child offenders ($p < .01$), and matched adult offenders ($p = .01$). The ICP + offline offenders also differed significantly from non-offenders ($p < .01$; see Table 2). In each case, those with a conviction for ICP offences reported a more negative view of themselves.

Fear of intimacy, fear of negative evaluation, and social avoidance and distress

A one-way MANOVA revealed a significant multivariate effect for the five groups on the variables fear of intimacy, fear of negative evaluation, and social avoidance and distress, $F(12, 345) = 1.79, p < .048, \eta^2 = .59$. Univariate tests revealed this effect was significant for social avoidance and distress, $F(4, 115) = 3.23, p = .015, \eta^2 = .51$ (see Table 2). Further investigations using Tukey's *post-hoc* tests revealed that only non-offenders and ICP had significantly different mean scores ($p < .01$) with ICP scoring higher than non-offenders. Table 3 shows a summary of the statistical effects.

Discussion

The aim of this study was to establish whether and how those convicted of ICP offences differ from offline sexual offenders. It was hypothesized that compared with those who committed offline sexual offences, ICP offenders would display a more fearful attachment style, more negative internal working models of themselves and others, a greater fear of intimacy and negative evaluation, and more social avoidance and distress.

The first hypothesis was not supported. Although the ICP offenders reported being most closely approximated by a fearful attachment style, they did not differ from any of the comparison offender groups on the measure of fearful attachment. More specifically, they

did not differ from adult sexual offenders, child sexual offenders or the combination group (of ICP + offline sexual offending) in their feelings about close relationships. This suggests that they do not tend to avoid close relationships more than the other offender groups.

The hypothesis that ICP offenders would view themselves and others more negatively than would other sexual offenders was partly supported. Online offenders did report a more negative view of themselves than both offline adult and child sexual offenders, but they did not report a more negative view of others. By viewing themselves more negatively and as less worthy of love, ICP offenders are likely to find it more difficult to get close to others and to be more uncomfortable depending on and having others depend on them. They are more dependent on others' for acceptance and affirmation, which makes them susceptible to loneliness and depression stemming from a lack of interpersonal resources, fear of rejection, and low self-confidence. This finding may explain the previous findings that online offenders are less likely to have been married (Briggs *et al.*, 2011; Webb *et al.*, 2007).

The ICP offender sample did not differ significantly from any of the comparison offender groups on fear of intimacy, fear of negative evaluation or the measure of social avoidance and distress. Hence, they did not differ from these groups in their capacity to exchange important thoughts/feelings with a person they value or in their apprehension of others' evaluation of them. Given that the online offenders reported being most closely approximated by a fearful attachment style, it is not surprising that they do not fear intimacy, as this is a measure of connectedness. It is, however, unexpected that they did not report a greater fear of rejection. It is possible that the measure of fear of rejection was inappropriate, that fear of rejection is not how their negative model of self manifests, or that using the Internet reduces their fear of rejection by allowing autonomy.

The lack of support for the hypothesis that offenders convicted of ICP offences would display more social avoidance and distress than offline sexual offenders suggests that online offenders do not either actively (or want to) avoid being with or talking to others, nor do they want to escape such situations any more than other sexual offenders. This result appears to be in conflict with proposed typologies (Briggs *et al.*, 2011; Krone, 2004; Lanning, 2001; Quayle *et al.*, 2006), and is surprising, given that research has found that offenders convicted of ICP offences scored in the diagnostic range for social phobia (Marshall *et al.*, 2012). That said, preliminary results (from that same ongoing study) did not indicate social phobia differentiates between online and offline offenders but did indicate that obsessive-compulsive disorder and loneliness do. A larger sample size may have differentiated between online and offline offenders. Alternatively, the measure used may not have been appropriate to identify social avoidance and distress or the sample may have been confounded by including offenders from the contact driven subgroup of the typology as identified by Briggs *et al.* (2011). This could have occurred if offenders had committed such offences but had not been convicted of such.

It is important to note that those who were convicted of online offences only were unable to be distinguished from those who offended both via the Internet and offline on any of the variables hypothesized to differentiate between online and offline offenders. This suggests that the group of offenders who use both the Internet and offend offline are psychologically similar to those who offend online only. This is not surprising, given that both groups engage in online offending.

However, although not hypothesized, ICP-only offenders reported significantly less secure attachment than matched child and matched adult sexual offenders while

offenders who were convicted of offending both online and offline did not. This suggests that offenders convicted of only ICP may experience relatively more problems than offline offenders in forming fulfilling adult relationships, whether these are close friendships, romantic relationships or close relationships with family members. The combination group aligns more closely with the adult and child offline sexual offenders than the ICP group on this variable which suggests that ICP offenders who also engage in offline offending may be a specific subgroup of online offenders, sharing characteristics with both ICP offenders and offline offenders. Again this should not be unexpected because they engage in both types of offending.

Internet child pornography offenders were also differentiated from non-offenders on a number of variables: secure attachment style, fearful attachment style, negative model of self, and social avoidance and distress. This was also true for offenders convicted of both ICP offences and offline sexual offences for fearful attachment style and negative model of self. In contrast, the offline sexual offenders did not differ from community controls on any variable. This again suggests that online offenders can be differentiated from offline offenders by some psychological characteristics.

Overall, these findings are consistent with the proposition that the Internet is an attractive medium to some sexual offenders because it lessens the distress/anxiety generally experienced in interpersonal interactions. Further support can be found in Quayle and Taylor's (2003) study. They reported that distal cognitive distortions were sometimes used to justify offending on the basis that the Internet provided a way to explore sexuality for those who have difficulty with interpersonal interactions. In their study one participant stated '... I wouldn't talk to them ... unless they spoke to me I always acted nervous around them ... and I think it was because of that ... that it was more easier ... it was easily accessible on the Internet ... just to erm ... just to look at the images there' (Quayle & Taylor, 2003, p. 96). This statement appears to indicate that this offender felt such significant distress in interpersonal interactions that the only offending medium he could use was the Internet. This point warrants further investigation as it is possible that social avoidance and distress are factors that protect those who are offending online from progressing to contact offending. The extension of this argument is that a risk factor for Internet offenders to cross over into hands on offending is improvement in this area (i.e., less social avoidance and distress). This point is particularly pertinent as if this is the case and treatment of Internet offenders addresses this without consideration of other factors, the risk that ICP offenders will transition to offline offences may increase. This proposition is worthy of further study.

The findings of this study have a number of other possible implications for the psychological treatment of ICP offenders should this be considered appropriate or required by mandate. As can be seen in Ward *et al.*'s model (Figure 1), the intimacy problems faced by individuals of each insecure attachment style are very different. The implication of this is that the treatment needs of an offender whose offence is characterized by fears of rejection and is an attempt to develop a 'safe' relationship are very different from those of an offender who is dismissive of emotional intimacy and offends opportunistically. However, in the absence of a clear understanding of the aetiology of ICP, online offenders have been placed in the same treatment programmes as other sexual offenders (Delmonico & Griffin, 2008; Elliott & Beech, 2009). Our results suggest that if online offenders are to be treated, they may require specifically designed treatment programmes to address factors such as loneliness, social skills, and low self-esteem. Other researchers have also made this suggestion (Graf, Weisert, &

Dittman, 2006; Hayes, Archer, & Middleton, 2006). Similarly Marshall *et al.* (2012) reported clinical observations which align with this recommendation.

Despite this, the study has several limitations. Although significant results were found, a much larger sample size would have revealed differences in smaller effect sizes. The small sample size was primarily due to the low numbers of offenders convicted of ICP offences in the state of Victoria. As conviction rates and custodial sentences rise, larger samples may become more accessible. A second limitation of this study was that non-offender participants self-reported their non-engagement in any kind of sex offending, and it is not known if those in each of the sexual offender groups had perpetrated any other types of offences for which no convictions had been recorded. Also in relation to the sample, it is possible that the control group was biased. Given that the response rate was only 9%, the representativeness of this sample is questionable. Finally, one other limitation is the potential retrospectivity bias. The variables assessed may have changed since the offence was committed, yet the study assumed that the variables measured some many months after the offence were stable.

Conclusion

This study has shown that ICP offenders have some psychological characteristics which distinguish them from other sexual offenders, as well as from non-offenders. They have a more negative view of themselves and less secure attachment than other sexual offenders which suggests that they may require specifically designed treatment programs to address factors such as loneliness, social skills and low self-esteem. Further investigation into whether such offenders are able to be distinguished from other sexual offenders is warranted to inform the prevention of, and response to, ICP offenders.

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