Child Pornography- Victims, victimizers, and victimization

A Selected Bibliography

2013
Updated August 2014, August 2015, January 2017, July 2018

© 2013, 2014, 2015, 2017, 2018 National Children’s Advocacy Center. All rights reserved.
© 2013, 2014, 2015, 2017, 2018 National Children’s Advocacy Center. All rights reserved.


This project was supported by a grant awarded by the Office of Juvenile Justice and Delinquency Prevention, Office of Justice Programs, U.S. Department of Justice. Points of view or opinions in this document are those of the author and do not necessarily represent the official position or policies of the U.S. Department of Justice.
Scope

This selected bibliography covers literature related to various aspects of child pornography offenders and victims. Included are citations and abstracts for articles, books, book chapters, and reports. All publications are English language. International publications are included. Abstracts are author-produced unless otherwise indicated.

Organization

This bibliography is divided into three sections. Section one covers offenders with emphasis upon pornography as it relates to contact offenses. Section two covers literature about the harm done to the child victims of pornography. Section three covers the possible effects upon adolescents who view pornography. Publications are listed in date descending order within each section. Links to publications are provided when possible.

I. Producers and consumers…………………………………………………………………………………………3
II. Victims……………………………………………………………………………………………………………………33
III. Effects of exposure to pornography upon children and adolescents………………………………43

Disclaimer

This bibliography was prepared by the Digital Information Librarian of the National Children’s Advocacy Center (NCAC) for the purpose of research and education, and for the convenience of our readers. The NCAC is not responsible for the availability or content of cited resources. The NCAC does not endorse, warrant or guarantee the information, products, or services described or offered by the authors or organizations whose publications are cited in this bibliography. The NCAC does not warrant or assume any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed in documents cited here. Points of view presented in cited resources are those of the authors, and do not necessarily coincide with those of the National Children’s Advocacy Center.
Child Pornography- Victims, victimizers, and victimization

A Selected Bibliography

I. Producers and consumers


In the realm of sexual offenses, there has been a decrease in hands-on offenses, but an increase in online offenses against children. The current issue is whether online and offline sexual offenders are alike or differ. This literature review investigates the differences among individuals who have committed child pornography offenses, individuals who have committed contact offenses against children, and individuals who have committed both. This review discusses the various typologies that have been proposed of those who have committed online offenses against children, the diagnostic implications of having committed child pornography offenses, and the current state of treatment and prevention of individuals who have committed online sex offenses against children. The studies examined were found from psychology databases, listserv links, and references of those collected articles. Only articles in English were included in the review. Overall, Internet child pornography offenders (ICPOs) tend to score significantly differently from contact offenders on various psychological measures. These findings may imply that ICPOs have different treatment needs than contact offenders.


This article is the first to integrate the vast research literatures on non-consenting adult and on child pornography (also a form of non-consenting pornography) by using the framework of the Confluence Model of sexual aggression. In contrast to the contradictory conclusions reached by various reviewers and commentators who have typically emphasized a particular methodology or parts of the literature, this review finds a great deal of consistency and convergence among the differing methodologies and literatures that have examined the impact of pornography on
individuals. It is concluded that pornography use may add to the risk of sexual aggression only for those men already predisposed to aggress sexually due to more primary causes than pornography use.


Since the advent of the internet, convictions for the possession, display, trading and distribution of child sexual exploitation material (CSEM) have risen steadily, but little is known about the appropriate assessment and treatment of this offender group, especially in regards to their risk of reoffending. It has been suggested that a conceptual distinction of fantasy- vs. contact-driven CSEM users might be of merit. Sixty-eight offenders recruited from sex offender treatment providers were assessed via an anonymous computer survey including a variety of clinical and risk-related variables; the findings showed differences in the psychological profiles between CSEM users and contact child sex offenders. Numerical and spatial methods were employed to identify subgroups of CSEM users; these confirmed the two-fold distinction of fantasy vs. contact driven offending. The spatial representation of participants identified three dimensions as crucial in the classification of these subgroups: direct sexual contact with a minor, possession of fantasy-generating material, and social contact with other users with a sexual interest in minors, potentially differentiating distinct offender subgroups with different risks and needs. The current study informed the development of an empirical model of CSEM users that could aid in the assessment of risk of reoffending and cross-over to contact sex offending.


Over the past two decades, there has been increased attention on offending behaviors and motivations of child pornography offenders (CPOs). Although existing research has provided a knowledgeable foundation in regard to this offending subpopulation, the literature has been relatively limited on examining changes in offender behaviors and motivations. This study used
interviews with 25 online CPOs in a southern state to identify themes underlying offending behaviors and motives at onset, as well as, continuation of offending over time. We found that offenders reported various circumstances (ranging from intentional to unintentional) and motivations (including thrill-seeking and attraction) at onset; however, CPOs reported thrill-seeking and attraction to be the most common factors driving their continued offending. We applied these themes to the existing literature on child pornography offending and recommended directions for future research. Based on our findings, we offered considerations for the treatment of CPOs.


This article reviews the current literature pertaining to those who engage in child pornography offending. The basic characteristics of online child pornography offenders (CPOs) and related typologies are briefly presented prior to reviewing the comparative literature pertaining to CPOs and child contact sexual offenders. In general, CPOs have been found to be relatively high functioning and generally pro-social individuals with less extensive and diverse offending histories than contact offenders. CPOs also display high levels of sexual pre-occupation, deviant sexual interests, and deficits in interpersonal and affective domains that surpass those of contact offenders. Although further research is required to replicate and clarify preliminary findings, the available evidence indicates that existing sexual offender risk assessment tools and treatment programs are not suitable for use with CPOs, and thus require revision and empirical evaluation prior to widespread use among this population. The article concludes with implications for clinical practice and directions for future research.


Recent research on a risk assessment tool for child pornography offending suggests that admission of sexual interest in children is a risk factor for any sexual recidivism. Admission is easily vulnerable to lying, however, or to refusals to respond when asked about sexual interests. This
may become a particular issue when individuals are concerned about the potential impact of admission of sexual interest on sentencing and other risk-related decisions. In this study, we identified the following behavioral correlates (coded yes/no) of admission of sexual interest in children in the risk tool development sample of 286 men convicted of child pornography offenses: (a) never married (54% of sample), (b) child pornography content included child sexual abuse videos (64%), (c) child pornography content included sex stories involving children (31%), (d) evidence of interest in child pornography spanned 2 or more years (55%), (e) volunteered in a role with high access to children (7%), and (f) engaged in online sexual communication with a minor or officer posing as a minor (10%). When summed, the average score on this Correlates of Admission of Sexual Interest in Children (CASIC) measure was 2.21 (SD _ 1.22, range 0–6) out of a possible 6, and the CASIC score was significantly associated with admission of sexual interest in children, area under the curve (AUC) _ .71, 95% CI [.65, .77]. The CASIC had a stronger relationship with admission in a small cross-validation sample of 60 child pornography offenders, AUC _ .81, 95% CI [.68, .95]. CASIC scores may substitute for admission of sexual interest in risk assessment involving those with child pornography offenses.


The risk for using child abuse images (CAI) is difficult to assess, especially as it mostly remains undetected by legal authorities. The present study investigates the association of aspects of sexual preference and dynamic risk factors with CAI only and mixed offending (CAI and child sexual abuse) over lifetime and within six months prior to assessment. A sample of 190 undetected, self-identified pedo- and/or hebephiles was investigated. Multinomial logistic regression analyses revealed that sexual preoccupation is of great importance, especially for recent CAI only and mixed offending, as well as lifetime mixed offending. Although inconclusive, a sexual preference for early-pubescent children seems to be of interest for recent and lifetime offending. A sexual preference for prepubescent children, additional paraphilias and sexualised coping have shown some, although no statistically meaningful association with lifetime offending. Gender preference, exclusivity of pedohebephilia and offence-supportive attitudes did not show any significant relation with offending behaviour.

Since the advent of the Internet, convictions for the possession, display, trading, and distribution of child sexual exploitation material (CSEM) have risen steadily, but little is known about their appropriate assessment and treatment, especially concerning their risk of reoffending. It has been suggested that a conceptual distinction of fantasy- versus contact-driven CSEM users might be of merit. Sixty-eight offenders recruited from sex offender treatment providers were assessed via an anonymous computer survey including a variety of clinical and risk-related variables; the findings showed differences in the psychological profiles between CSEM users and contact child sex offenders. Numerical and spatial methods of data analysis were used to identify subgroups of CSEM users; these confirmed the twofold distinction of fantasy- versus contact-driven offending. The spatial representation of participants identified three dimensions as crucial in the classification of these subgroups: direct sexual contact with a minor, possession of fantasy-generating material, and social contact with other users with a sexual interest in minors; potentially differentiating distinct offender subgroups with different risks and needs. The current study informed the development of an empirical model of CSEM users that could aid in the assessment of risk of reoffending and cross-over to contact sex offending.


In this study, we developed a structured risk checklist, the Child Pornography Offender Risk Tool (CPORT), to predict any sexual recidivism among adult male offenders with a conviction for child pornography offenses. We identified predictors of sexual recidivism using a 5-year fixed follow-up analysis from a police case file sample of 266 adult male child pornography offenders in the community after their index offense. In our 5-year follow-up, 29% committed a new offense, and 11% committed a new sexual offense, with 3% committing a new contact sexual offense against a child and 9% committing a new child pornography offense. The CPORT items comprised younger offender age, any prior criminal history, any contact sexual offending, any failure on conditional release, indication of sexual interest in child pornography material or prepubescent or pubescent
children, more boy than girl content in child pornography, and more boy than girl content in other child depictions. The CPORT was significantly associated with any sexual recidivism, with moderate predictive accuracy, and thus has promise in the risk assessment of adult male child pornography offenders with further cross-validation. (PsycINFO Database Record © 2015 APA, All rights reserved)


The current meta-analysis compared the characteristics of online child pornography-only offenders, typical (offline) sex offenders against children, and offenders with both child pornography and contact sex offences against children (mixed). Based on 30 unique samples (comparison ns ranging from 98 to 2,702), the meta-analysis found key differences between groups. Offenders who committed contact sex offences were more likely to have access to children than those with only child pornography offences. In contrast, offenders who used the internet to commit sexual offences had greater access to the internet than those with contact sex offenders. Differences between the groups, however, were not limited to differential opportunities. Sex offenders against children and mixed offenders were found to score higher on indicators of antisociality than online child pornography offenders (CPOs). CPOs were also more likely to have psychological barriers to sexual offending than sex offenders against children and mixed offenders (e.g., greater victim empathy). Mixed offenders were found to be the most pedophilic, even more than CPOs. The findings suggest that offenders who restricted their offending behavior to online child pornography offences were different from mixed offenders and offline sex offenders against children, and that mixed offenders were a particularly high risk group.


Our study is the first to look at mobile device use for child sexual exploitation material (CSEM) consumption, and at the global impact of deterrence efforts by search providers. We used data from Google, Bing, and Yandex to assess how web searches for CSEM are being conducted, both
at present and historically. Our findings show that the blocking efforts by Google and Microsoft have resulted in a 67% drop in the past year in web-based searches for CSEM. Additionally, our findings show that mobile devices are a substantial platform for web-based consumption of CSEM, with tablets and smartphones representing 32% of all queries associated with CSEM conducted on Bing. Further, our findings show that a major search engine not located in the United States, Yandex, did not undertake blocking efforts similar to those implemented by Google and Microsoft and has seen no commensurate drop in CSEM searches and continues to profit from ad revenue on these queries. While the efforts by Google and Microsoft have had a deterrence effect in the United States, searchers from Russia and other locations where child pornography possession is not criminalized have continued to use these services. Additionally, the same lax enforcement environment has allowed searchers from the United States to utilize Yandex with little fear of detection or referral to United States law enforcement from the Russian authorities. © 2015 Elsevier Ltd. All rights reserved.


This study examined the demographic and background characteristic differences between those arrested for child pornography (CP) possession (only), or CP production/distribution, or an attempted or completed sexual exploitation of a minor (SEM) that involved the Internet in some capacity within the context of self-control theory using data from the second wave of the National Juvenile Online Victimization Study (N-JOV2). Results indicate few demographic similarities, which thereby suggest these are largely heterogeneous groupings of individuals. Results also indicate CP producers/distributers engaged in a greater number of behaviors indicative of low self-control compared with CP possessors. Specifically, offenders arrested for CP production/distribution were more likely to have (a) had problems with drugs/alcohol at the time of the crime and (b) been previously violent. In contrast, the only indicator of low self-control that reached statistical significance for CP possessors was the previous use of violence. Moreover, in contrast to CP producers/distributers, full-time employment and marital status may be important
factors to consider in the likelihood of arrest for CP possessors, which is congruent with the tenets of self-control theory.


Considerable debate surrounds the topic of whether possessing or distributing online images of child pornography (CP) represents a new type of crime perpetrated by conventional sex offenders (e.g., child contact [CC] sex offenders), or whether individuals who commit these crimes differ from contact sex offenders in meaningful ways. The current study compares groups of Internet (CP) and CC sexual offenders, with each group’s sexual offending history exclusively confined to its offense category. T tests were used to conduct bivariate comparisons of group demographics and criminal histories. Rates of recidivism were examined using survival curves and Cox proportional hazard regression models. Results showed significant differences on demographic and criminal history variables, with CP offenders demonstrating a lower frequency of prior criminal offending and substance abuse, and higher rates of pre-incarceration employment and level of education. Rates of recidivism were significantly different between the two groups, with CP offenders showing lower rates of re-offense for most measures of recidivism. When controlling for background characteristics and the timing of the event, CC offenders were at much greater risk for having an arrest for a new crime or a non-sexual violent crime than CP offenders. Treatment and policy implications are discussed, along with suggestions for future research.


In this review, concrete directions are provided for individual risk assessment, treatment planning, and future research on child pornography offending. First, based on reviewing offender characteristics, including demographics, socio-affective difficulties, cognitive distortions and psychosexual issues, it is concluded that despite individual differences, many child pornography
offenders have psychological difficulties in multiple areas of functioning. Based on earlier child pornography offender typologies, it is proposed that risk factors of individual offenders can be viewed along the lines of two continua: (1) features related to criminal behavior, and (2) sexual deviance/fantasy. These continua not only give insight into psychological differences between offender types, but also allow for variation in the severity of psychological difficulties within offender types and therefore may enhance individual risk assessment and treatment planning. Moreover, risk factors for cross-over are discussed, including individual characteristics, factors related to engagement with the internet, and the offline environment. Future research should focus on the integration of risk domains within particular offending types. Specifically, research is needed on non-offending pedophiles in order to gain more insight into the relationship between pedophilia and child pornography offending in general.


This study examined the endorsement of cognitive distortions in child pornography offenders (CPOs), using an established assessment tool, the Abel and Becker Cognition Scale. The scale was expanded to include cognitions specific to child pornography offending, extracted from Howitt and Sheldon’s Children and Sexual Activities Inventory (C&SA). Three samples of CPOs, child sex offenders and offenders with both offence types responded to the cognition items. An exploratory Principal Component Analysis suggested six main components of the scale. CPOs were significantly less likely to endorse these statements in general, and this was more pronounced on items that project blame onto the child or other people, describe a need for power and consider children as sexually active. The statements extracted from C&SA did not differentiate between the groups. These findings are discussed under consideration of the relationship between cognitive distortions and contact sex offending, and in reference to the general criticism concerning the definition and appropriate measurement of cognitive distortions.

The growing number of notifications for child pornography (CP) possession constitutes a capacity problem for police forces entrusted with the investigation of these offenses. Notifications of CP offenses in which the investigation reveals concurrent direct victimization, in the form of contact offenses, grooming, online offending, or the production of CP material, form a potential target group for prioritization. The first of the twofold aims of this study was to validate the occurring distinction between mixed suspects (i.e., CP possession suspects who were also ever associated with direct victimization) and CP-only suspects (i.e., CP possession suspects who were never associated with direct victimization) to predict an outcome of the investigation including direct victimization. The second aim was to explore variables related to direct victimization among CP-only suspects. A total of 150 files of police investigations into notifications for CP offenses were studied. Findings confirmed significantly greater prevalence of direct victimization as an outcome of the investigation among mixed suspects than CP-only suspects (90% vs. 10%). Among CP-only suspects, direct victimization was predicted by (a) prior police contacts, charges, or convictions concerning noncontact sexual offending, (b) the confiscation of more than two computers during the house search, and (c) a more serious nature of the CP material that formed the basis for the notification in terms of younger victims and more extreme content. These variables may point to a small subgroup of heavily invested CP offenders who are at a higher risk to cross the line to direct victimization. Cross-validation of these preliminary findings is indicated.


We used data gathered via investigative “RoundUp” software to measure a year of online child pornography (CP) trafficking activity by U.S. computers on the Gnutella peer-to-peer network. The data include millions of observations of Internet Protocol addresses sharing known CP files, identified as such in previous law enforcement investigations. We found that 244,920 U.S. computers shared 120,418 unique known CP files on Gnutella during the study year. More than 80% of these computers shared fewer than 10 such files during the study year or shared files for
fewer than 10 days. However, less than 1% of computers (n = 915) made high annual contributions to the number of known CP files available on the network (100 or more files). If law enforcement arrested the operators of these high-contribution computers and took their files offline, the number of distinct known CP files available in the P2P network could be reduced by as much as 30%. Our findings indicate widespread low level CP trafficking by U.S. computers in one peer-to-peer network, while a small percentage of computers made high contributions to the problem. However, our measures were not comprehensive and should be considered lower bounds estimates. Nonetheless, our findings show that data can be systematically gathered and analyzed to develop an empirical grasp of the scope and characteristics of CP trafficking on peer-to-peer networks. Such measurements can be used to combat the problem. Further, investigative software tools can be used strategically to help law enforcement prioritize investigations.


Most child pornography is distributed online. It is estimated that 3% to 15% of child pornography consumers are juveniles. The present study analyzed a consecutive sample of 54 male juveniles convicted of the possession of child pornography. Demographic characteristics, criminal history, and subsequent offending were assessed from criminal files and official reports. Juvenile possessors of child pornography were compared to three different groups of juveniles: Juvenile possessors of other illegal pornography (n = 42), juveniles who committed a sexual contact offense against a child (n = 64), and juveniles who committed a sexual contact offense against a peer or adult (n = 104). Juvenile possessors of child pornography were found to have downloaded the illegal material more frequently and over a longer time period than juvenile possessors of other illegal pornography. Furthermore, juvenile possessors of child pornography differed from juveniles who had committed a sexual contact offense in terms of demographics and showed fewer previous and subsequent offending than juveniles who sexually offended against a peer or adult. We conclude that juvenile possessors of child pornography need a specific target intervention focusing on dysfunctional Internet use and sexually deviant arousal.
Peer-to-peer networks are the most popular mechanism for the criminal acquisition and distribution of child pornography (CP). In this paper, we examine observations of peers sharing known CP on the eMule and Gnutella networks, which were collected by law enforcement using forensic tools that we developed. We characterize a year’s worth of network activity and evaluate different strategies for prioritizing investigators’ limited resources. The highest impact research in criminal forensics works within, and is evaluated under, the constraints and goals of investigations. We follow that principle, rather than presenting a set of isolated, exploratory characterizations of users. First, we focus on strategies for reducing the number of CP files available on the network by removing a minimal number of peers. We present a metric for peer removal that is more effective than simply selecting peers with the largest libraries or the most days online. Second, we characterize six aggressive peer subgroups, including: peers using Tor, peers that bridge multiple p2p networks, and the top 10% of peers contributing to file availability. We find that these subgroups are more active in their trafficking, having more known CP and more uptime, than the average peer. Finally, while in theory Tor presents a challenge to investigators, we observe that in practice offenders use Tor inconsistently. Over 90% of regular Tor users send traffic from a non-Tor IP at least once after first using Tor.


This study examined a sample of 120 adult males convicted of offences involving indecent images of children (IIOC); 60 had a previous contact child sexual offence (dual offenders) and 60 had no evidence of an offence against a child. Analyses explored socio-demographic characteristics, previous convictions, and access to children. Of the 120 offenders, a subsample of 60 offenders (30 dual offenders and 30 non-contact) were further examined in terms of the quantity of IIOC, types of IIOC, and offending behavior. The study found the two offender groups could be discriminated by previous convictions, access to children, the number, proportion, and type of
IIOC viewed. The IIOC preferences displayed within their possession differentiated dual offenders from non-contact IIOC offenders. Within group comparisons of the dual offenders differentiated sadistic rapists from sexual penetrative and sexual touching offenders. The paper suggests there may be a homology between IIOC possession, victim selection, and offending behavior. Implications for law enforcement are discussed in terms of likelihood of contact offending and assisting in investigative prioritization.


Cyberspace has added a new dimension to the ecology of children made the subjects of sexual abuse images distributed online. These images cannot be permanently removed and can continue to circulate in cyberspace forever. A review of the current literature suggests that helping professionals are not consistently aware of or do not probe possibilities of online sexual victimization in the investigation, assessment, and treatment of child sexual abuse. Nor is this issue adequately addressed in their education and training. There are gaps in the literature regarding how to identify and provide treatment for these children. New assessment and treatment targets are needed to enhance existing practice approaches. A contemporary ecological model that incorporates an explicit consideration of the cybersystem is provided as a starting point for practitioners to be aware of the possibility that images of child sexual abuse were recorded and distributed online.


The internet has opened up opportunities for non-contact sex offending, such as the viewing of child pornography. This paper proposes a model for the classification of child pornography offenders as an aid for their assessment and treatment, deducted from empirical studies and existing typologies for child pornography offenders. Different subgroups of child pornography offenders may be described according to three dimensions: (1) type of offending, (2) the motivation behind child pornography offending and (3) the situational and social engagement in the offending behaviour. Distinct pathways of child pornography offending can be identified,
related to differing criminogenic needs, severity of offending, and appropriate assessment and treatment strategies for the offenders.


The recent Supreme Court ruling in *U.S. v. Comstock* (2010) upheld the constitutionality of The Adam Walsh Act, which provides for civil commitment of child pornography (CP) offenders certified as sexually dangerous, thereby approving litigation of all such prisoners in the federal system. The two studies reported here sought to address the question: What is the likelihood that an individual convicted of child pornography offenses has a prior history of a hands-on sexual offense involving a child or has a high probability of committing such an offense? Our sample consisted of 349 participants: 113 who committed an Internet sexual offense only and no other known or self-reported hands-on sexual offense, 176 child molesters who reported no Internet sexual offense, and 60 child molesters that reported committing an Internet sexual offense. Study 1 yielded two scales, one reflecting Antisocial Behavior (AB) and one reflecting Internet Preoccupation (IP). Those two scales predicted membership in the combined sample of child molesters with a high degree of accuracy (c ~ 0.75). Study two revealed that all three groups were discrete with respect to AB and IP. By increasing the IP scale by 1 point, the odds of being an IO rather than a CM increased by 86%. The plotted conditional probabilities increased linearly as values on the AB scale increase, from 0.27 when AB _ 0 to 0.84 when AB _ 13. Our results are discussed in terms of risk discrimination among possessors of child pornography, relevance of risk to the statutory third prong element of serious difficulty, and the policy implications of the findings reported here.

Current knowledge about risk factors for child sexual abuse and child pornography offenses is based on samples of convicted offenders, i.e., detected offenders. Only few studies focus on offenders not detected by the criminal justice system. In this study, a sample of 345 self-referred pedophiles and hebephiles was recruited from the community. All participants met DSM-IV-TR criteria for pedophilia or hebephilia (paraphilia not otherwise specified), were assured of confidentiality, and self-reported lifetime sexual offending against prepubescent and/or pubescent children. Two sets of group comparisons were conducted on self-report data of risk factors for sexual reoffending. Measures of risk factors address the following dimensions identified in samples of convicted offenders: sexual preferences (i.e. co-occurring paraphilias), sexual self-regulation problems, offense-supportive cognitions, diverse socio-affective deficits, and indicators of social functioning (e.g., education, employment). Men who admitted current or previous investigation or conviction by legal authorities (detected offenders) were compared with those who denied any detection for their sexual offenses against children (undetected offenders). Group comparisons (detected vs. undetected) were further conducted for each offense type separately (child pornography only offenders, child sexual abuse only offenders, mixed offenders). Although there were more similarities between undetected and detected offenders, selected measures of sexual-self regulation problems, socio-affective deficits, and social functioning data demonstrated group differences.


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.


Little is known about factors that distinguish men who act upon their self-identified sexual interest in prepubescent or pubescent children from those who do not. Even less is known about pedophiles or hebephiles who are not involved with the criminal justice system. In this study, a sample of 155 self-referred pedophiles and hebephiles was recruited from the community. All participants met DSM-IV-TR criteria for pedophilia (or paraphilia not otherwise specified for those who were sexually attracted to pubescent children). Two sets of group comparisons were conducted on sociodemographic variables and measures of dynamic risk factors. The first set was based on recent activity and compared men who had committed child pornography only or child sexual abuse offenses in the past six months with men who remained offense-free during the same period. The second set was based on lifetime offense history (excluding the most recent six months) and compared child pornography offenders with child sexual abuse offenders and men who had committed both kinds of offenses. Overall, there were more similarities than differences between groups.


Availability of child pornography on the Internet has created new opportunities for offending. It has been noted that many people charged with offences relating to this had not previously been
identified as sexual offenders against children. Our aim was to compare the characteristics of people charged with child pornography offences as a result of police monitoring of the Internet with those detected by other means. We hypothesised that those apprehended via the Internet would be more likely to be older and less likely to have severe psychiatric disorder or to have been previously charged with a sexual offence involving contact with a child than those identified by other means. Data were extracted from the findings of clinical examinations by the authors either in the course of preparing reports for court, or in the course of providing treatment. There were 52 men detected by police Internet surveillance and 53 men detected by other means, the latter including 16 men who had not been charged with an offence at the time of referral. Those detected via the Internet were more likely to be in possession of very large quantities of child pornography. Those detected by other means were more likely to have major psychiatric and substance abuse disorders and to report childhood sexual abuse. A subgroup analysis of the 89 people who were facing charges at the time of the assessment found that the only significant differences were in the amount of material and the history of sexual abuse. The men recruited to this study, conducted over a period of nearly 10 years, reflect the changing nature of the technology used to commit this type of offence in that time. The characteristics of the subjects did not confirm the stereotype of an Internet child pornography offender who was high functioning and otherwise well-adjusted and carried a low risk of other types of offences.


There is much concern about the likelihood that online sexual offenders (particularly online child pornography offenders) have either committed or will commit offline sexual offenses involving contact with a victim. This study addresses this question in two meta-analyses: the first examined the contact sexual offense histories of online offenders, whereas the second examined the recidivism rates from follow-up studies of online offenders. The first meta-analysis found that approximately 1 in 8 online offenders (12%) have an officially known contact sexual offense history at the time of their index offense \((k = 21, N = 4,464)\). Approximately one in two (55%) online offenders admitted to a contact sexual offense in the six studies that had self-report data \((N = 523)\). The second meta-analysis revealed that 4.6% of online offenders committed a new
sexual offense of some kind during a 1.5- to 6-year follow-up \((k = 9, N = 2,630)\); 2.0% committed a contact sexual offense and 3.4% committed a new child pornography offense. The results of these two quantitative reviews suggest that there may be a distinct subgroup of online-only offenders who pose relatively low risk of committing contact sexual offenses in the future.


This review aims to focus on men who access, download, and circulate child abuse images across the internet as the most frequently occurring type of internet sex offender.

**Design/methodology/approach** - Some of the misconceptions associated with this behaviour are outlined and the extent to which internet offenders display some of the criminogenic factors thought to be associated with the multi-factorial theories of sexual offending are reviewed.

**Findings** - One conclusion from this is paper is the general impression that internet offenders show many of the characteristics of paedophiles. Their theoretical importance is that they appear to be "desisters" from acting out their sexual interest in children by hands-on offending.

**Originality/value** - It is argued that there is a need for more research to stimulate our understanding of this type of offender. Furthermore, what of those who both download material and offend directly against children? They present a dilemma for the literature as some research would suggest that they are not entirely like the internet or the contact sexual offenders in their psychological make-up; they are the group most in need of reappraisal.


This article describes trends in child pornography (CP) possession cases that ended in arrest in 2000 and in 2006, using data from the National Juvenile Online Victimization Study, a two-wave longitudinal survey of a national sample of more than 2,500 U.S. law enforcement agencies. In 2006, there were an estimated 3,672 arrests for CP possession, compared with 1,713 arrests in 2000. Many characteristics of the offenders and the offense remained stable. In both 2006 and
2000, most offenders were White, non-Hispanic males and socioeconomically diverse. Few were known to have committed previous sex crimes. Most had CP that depicted preteen children and serious sexual abuse. In 2006, however, a higher proportion of offenders were aged 18 to 25 years, used peer-to-peer (p2p) networks, had images of children younger than 3 years, and had CP videos. P2p users had more extreme images (e.g., younger victims, sexual violence) and larger numbers of images than those who did not use p2p networks. Findings reflect heightened efforts in the criminal justice system to combat CP crimes. More cases originated with investigations of CP possession and involved proactive investigations aimed at detecting CP. The great majority of cases were successfully prosecuted, with more offenders sentenced to incarceration and serving longer sentences than in 2000. As in 2000, one in six cases that began with investigations of CP possession detected offenders who had molested children.


Recent years have seen a significant increase in the criminal penalties associated with possession of child pornography. The new severity appears to be premised on arguments that blur the distinction between those who possess images of child pornography and those who sexually abuse children. In particular, sentences have been increased based on arguments that possession of pornography is equivalent to or worse than child sex abuse, arguments that viewing child pornography increases the risk that an individual will sexually abuse a child, and arguments that those who possess child pornography are abusing children undetected. This Article identifies instances where possession of child pornography and child sex abuse have been conflated, critically evaluates the arguments that promote such conflation, and identifies independent concerns with conflation. Specifically, it argues that blurring the distinction between the two crimes allows us to continue to misperceive child sex abuse as a stranger-danger issue and that when law enforcement statistics aggregate possession and child sex abuse, the public may be misled into believing that law enforcement is successfully battling child sex abuse. The Article concludes that the modern trend of increasing sentences for possession of child pornography ought to be reviewed, and it suggests several possible areas of reform.

By exploring the internet sexual activity of two groups of adult male child pornography offenders (n_110), this study sought to identify potential risk factors associated with those offenders who also sexually abused minors. In this endeavour, six areas of internet sexual activity were explored: (1) the level of involvement with child pornography; (2) the level of involvement with nonpornographic material depicting minors; (3) the online seduction of minors; (4) the level of communication with individuals who also have a sexual interest in minors; (5) the level of involvement with adult pornography; and (6) the level of involvement in internet chatrooms related to adults. Results indicated that child pornography offenders are a heterogeneous group. Additionally, dispositional factors related to substance abuse, antisocial orientation and deviant sexual interest and situational factors related to internet sexual activity discriminated child pornography offenders who sexually abused minors from those who did not.


The DSM-V Paraphilias subworkgroup has proposed a number of changes to the diagnostic criteria for pedophilia (Blanchard, 2009a). In this commentary, I briefly discuss some of these changes in light of recent research on internet facilitated sexual offenders and focus on the relevance of child pornography and internet solicitation when considering the diagnosis of pedophilia.


This study aimed to explore qualitatively the lived experiences of four males convicted of manufacturing indecent images of children to determine whether there were similarities or differences in their experiences, perspectives and behaviours which might lead to a better
understanding of this offence type. Interpretative phenomenological analysis (IPA) is used to examine the participants' responses to a semi-structured interview. The results identify links between formative life experiences and subsequent offending, and indicate that the majority of the producers had an awareness of their sexual interest in children prior to engagement with the internet. All participants possessed a collection of images covering the full spectrum of seriousness. The analysis identified differences between the experiences, perceptions and behaviours of “sharing producers” and “non-sharing producers”. Sharing producers had greater levels of access to their victims and the nature of their abuse was more serious, while their manipulation focused on persuading victims to collaborate with the abuse. The findings of the study suggest that producers of indecent images of children may not be a homogeneous group, and that some are meeting quite different needs than others by engaging in the behaviour.


There is an ongoing public debate about internet sex offenders: do they progress to contact offences, or are their deviant interests sufficiently satisfied through downloading indecent images of children? Also, do such individuals accept that they create victims in the absence of direct physical contact with children? This paper presents an analysis of the accounts offered by individuals convicted of internet-based sexual offences involving the downloading and viewing of images of children (n = 7). The data were collected through semi-structured interviews, and analysed using interpretative phenomenological analysis (IPA); a number of themes were generated from the rich data set produced. Here we focus upon the dominant theme of “self-distancing” wherein interviewees variously and often creatively rejected the view that they were creating child victims, actively dis-identified from the sex offender label and generally downplayed their accountability relating to their offending activities. Findings are discussed in relation to policy implications and treatment.

This study compared two groups of child pornography offenders participating in a voluntary treatment program: men whose known sexual offense history at the time of judicial sentencing involved the possession, receipt, or distribution of child abuse images, but did not include any “hands-on” sexual abuse; and men convicted of similar offenses who had documented histories of hands-on sexual offending against at least one child victim. The goal was to determine whether the former group of offenders were “merely” collectors of child pornography at little risk for engaging in hands-on sexual offenses, or if they were contact sex offenders whose criminal sexual behavior involving children, with the exception of Internet crimes, went undetected. Our findings show that the Internet offenders in our sample were significantly more likely than not to have sexually abused a child via a hands-on act. They also indicate that the offenders who abused children were likely to have offended against multiple victims, and that the incidence of “crossover” by gender and age is high.


This review outlines the links between contemporary etiological and offense-process theories of child sexual abuse and our current knowledge of individuals who commit offenses related to online child pornography. First, we integrate previous behavioral typologies into a four-category internet offender typology. Second, we summarize development of etiological theory and evaluate the strengths and weaknesses of these theories in explaining the child pornography offender. Third, we outline the potential situational and ecological factors relating to the online environment that may also be a cause for the development and maintenance of prurient online behavior. Fourth, we review theories of the offense process and apply these to research into the modus operandi of child pornography offenders. Finally, we examine the usefulness of this approach in the assessment of risk and the treatment of online offenders.

There is an ongoing debate on whether consumers of child pornography pose a risk for hands-on sex offenses. Up until now, there have been very few studies which have analyzed the association between the consumption of child pornography and the subsequent perpetration of hands-on sex offenses. The aim of this study was to examine the recidivism rates for hands-on and hands-off sex offenses in a sample of child pornography users using a 6 year follow-up design. The current study population consisted of 231 men, who were subsequently charged with consumption of illegal pornographic material after being detected by a special operation against Internet child pornography, conducted by the Swiss police in 2002. Criminal history, as well as recidivism, was assessed using the criminal records from 2008. 4.8% (n = 11) of the study sample had a prior conviction for a sexual and/or violent offense, 1% (n = 2) for a hands-on sex offense, involving child sexual abuse, 3.3% (n = 8) for a hands-off sex offense and one for a nonsexual violent offense. When applying a broad definition of recidivism, which included ongoing investigations, charges and convictions, 3% (n = 7) of the study sample recidivated with a violent and/or sex offense, 3.9% (n = 9) with a hands-off sex offense and 0.8% (n = 2) with a hands-on sex offense. Consuming child pornography alone is not a risk factor for committing hands-on sex offenses – at least not for those subjects who had never committed a hands-on sex offense. The majority of the investigated consumers had no previous convictions for hands-on sex offenses. For those offenders, the prognosis for hands-on sex offenses, as well as for recidivism with child pornography, is favorable.


This paper outlines the current literature on what is known about the processes by which individuals utilize the Internet for child sexual abuse. First, three ways in which the Internet is utilized are outlined: (1) by dissemination of sexually abusive images of children for personal and/or commercial reasons; (2) by communication with other individuals with a sexual interest in children: and (3) by maintaining and developing online pedophilic networks. Second, content and availability of abusive images are described, and the difficulties faced by criminal justice agencies
in both the definition of abusive images and their prohibition is discussed. Third, the potential for offenders to ‘cross-over’ from online offenses to contact sexual victimization of children is examined and placed within a context of various Internet offender typologies that have been developed. Finally, implications of this body of research for law and public policy are considered.


There is widespread acceptance that sexual fantasy plays a role in sexual offences but little clarity as the nature of this relationship. This paper seeks to understand better the role of fantasy in offending behaviour through the study of sexual fantasy in Internet child pornography offenders when compared with contact offenders. Differences in the patterns of sexual fantasy associated with the different offender types are explored in order to understand how fantasy content is associated with contact offences with children and desisting from such direct acting out. Participants were all convicted of child sexual offences and recruited with the help of the probation and prison services. Out of these, 16 were Internet-only offenders, 25 were contact offenders with no history of Internet offending and 10 were offenders with a mixed contact and Internet offending history. A variety of self-completion questionnaires including fantasy were completed on an individual basis together with a detailed interview. The most common sexual fantasies were typical adult-male heterosexual fantasies though a variety of child-oriented and other fantasies were also common. Contact offenders reported fewer girl-oriented sexual fantasies although the groups did not differ in terms of terms of boy-oriented fantasies. There was evidence that confrontational fantasies were commoner among contact offenders than Internet offenders. There are relationships between early sexual experiences and fantasy but peer sexual contacts seemed to be important rather than sexual abuse. Generally, the contact offenders seem to have less sexual fantasy pertinent to their offending than did Internet offenders. Fantasy deficit may be involved in contact offending against children.

The aim of this exploratory study was to compare internet sex offenders with a matched group of child molesters in the Greater London Area. Over an 8-month period 210 subjects were assessed, of whom 90 were internet sex offenders and 120 were child molesters. A wide range of background data was collected, including a number of psychometric measures to determine risk and personality traits. The research identified a number of similarities between internet sex offenders and child molesters on background variables. Specifically, in comparison to the child molesters, the internet offenders reported more psychological difficulties in adulthood and fewer prior sexual convictions. The socio-affective characteristics of internet offenders and child molesters look similar, but the antisocial variables, such as, ‘acting out’ and breaking social rules underlines their difference. The follow up research was carried out after a short period of time at risk—averaging 18 months—but suggested that internet sex offenders were significantly less likely to fail in the community than child molesters in terms of all types of recidivism.


Since the advent of the Internet, the sex industry has profited from an unprecedented proximity to the home environment. Consequently, couples, families, and individuals of all ages are being impacted by pornography in new ways. Examining the systemic impact of Internet pornography, however, is relatively uncharted territory and the body of systemically-focused research is limited. A review of the research that does exist was undertaken and many negative trends were revealed. While much remains unknown about the impact of Internet pornography on marriages and families, the available data provide an informed starting point for policy makers, educators, clinicians, and researchers.

This study investigated whether being charged with a child pornography offense is a valid diagnostic indicator of pedophilia, as represented by an index of phallometrically assessed sexual arousal to children. The sample of 685 male patients was referred between 1995 and 2004 for a sexological assessment of their sexual interests and behavior. As a group, child pornography offenders showed greater sexual arousal to children than to adults and differed from groups of sex offenders against children, sex offenders against adults, and general sexology patients. The results suggest child pornography offending is a stronger diagnostic indicator of pedophilia than is sexually offending against child victims. Theoretical and clinical implications are discussed.


The likelihood that child pornography offenders will later commit a contact sexual offense is unknown. In the present study, we identified a sample of 201 adult male child pornography offenders using police databases and examined their charges or convictions after the index child pornography offense(s). We also examined their criminal records to identify potential predictors of later offenses: 56% of the sample had a prior criminal record, 24% had prior contact sexual offenses, and 15% had prior child pornography offenses. One-third were concurrently charged with other crimes at the time they were charged for child pornography offenses. The average time at risk was 2.5 years; 17% of the sample offended again in some way during this time, and 4% committed a new contact sexual offense. Child pornography offenders with prior criminal records were significantly more likely to offend again in any way during the follow-up period. Child pornography offenders who had committed a prior or concurrent contact sexual offense were the most likely to offend again, either generally or sexually.

This essay comprises testimony to the Congressional Committee on Government Reform. The Committee’s concern was the possibility of exposure to pornography when children and teens participate in peer-to-peer file-sharing networks, which are extremely popular in these age groups. A review of the relevant literature led to three major conclusions: (1) Pornography and related sexual media can influence sexual violence, sexual attitudes, moral values, and sexual activity of children and youth. (2) Peer-to-peer file-sharing networks are part of an all-pervasive sexualized media environment. This total environment, including file-sharing networks, leads to a tremendous amount of inadvertent and unintentional exposure of children and young people to pornography and other adult sexual media. Peer-to-peer networks and the Internet differ from other sexualized media in that young people construct important components of this sexualized environment themselves. (3) A warm and communicative parent–child relationship is the most important nontechnical means that parents can use to deal with the challenges of the sexualized media environment, including peer-to-peer file-sharing networks. In addition, open parent–child channels for communicating about sexual and media experiences, sex education at home or school, and parental participation with children on the Internet are constructive influences. For boys already at risk for antisocial behavior, parents should carefully monitor and severely limit access to pornography on file-sharing networks and elsewhere.


The Internet has increased the range, volume and accessibility of sexually abusive imagery, including child pornography. Child pornography depicts the sexual or sexualised physical abuse of children under 16 years of age. Australia has joined many other nations in an international effort to combat this multi-faceted global menace that combines both heavily networked and highly individualised criminal behaviour. This paper examines the typology of online child pornography offending, as well as law enforcement responses to the problem. This work is a result of a collaborative program between the Australian Institute of Criminology and the Australian High Tech Crime Centre.

This article reviews the definition and assessment of pedophilia, describes the relationship between pedophilia and sexual offenses against children, and provides an overview of our current theoretical understanding of the etiology of pedophilia. A great deal is known about the assessment of pedophilia—attributable to public and professional concerns regarding the empirical association between pedophilia and sexual offenses against children—but much remains to be learned about pedophilia, including its prevalence in the general population, cross-cultural manifestations, developmental trajectories, and causes. Recent research suggests that neurodevelopmental problems and childhood sexual abuse play a role in the etiology of pedophilia, but the mechanisms that are involved are unknown. Future directions for research on assessment methods and etiology are highlighted.


A recent increase in the number of referrals for individuals who have accessed child pornography over the Internet has led to a need for clinicians to familiarise themselves with the language and concepts associated with this type of sexual offence. A brief review of the area highlights the legal dilemmas posed by the nature of the Internet. While definitional issues are a primary focus in legal processes, a demonstrated sexual arousal to children is more relevant in therapy. Modifications of traditional treatment approaches are suggested to facilitate therapeutic progress for this population. Discussion focuses on the early motivation for treatment, cognitive distortions, victim impact and cycles of offending behaviour. This work is offered as an early intervention to prevent potential future progression to hands-on sexual offending against children.

The United States Supreme Court has recently ruled that virtual child pornography is protected free speech, partly on the grounds that virtual pornography does not harm actual children. I review the evidence for the contention that virtual pornography might harm children, and find that it is, at best, inconclusive. Saying that virtual child pornography does not harm actual children is not to say that it is completely harmless, however. Child pornography, actual or virtual, necessarily eroticizes inequality; in a sexist society it therefore contributes to the subordination of women.


Thirteen men convicted of downloading child pornography were interviewed with a view to understanding how these men talked about the photographs and the function such talk played in their accounts. The interviews were informed by earlier work with defended subjects and were analyzed within a discursive framework. Quotations are used from the interviews to illustrate the analysis. Six principal discourses emerged within these accounts in relation to child pornography: sexual arousal; as collectibles; facilitating social relationships; as a way of avoiding real life; as therapy; and in relation to the Internet. These are discussed in the context of previous research. The analysis illustrates the important role that the Internet plays in increasing sexual arousal to child pornography and highlights individual differences in whether this serves as a substitute or as a blueprint for contact offenses. It also draws our attention to the important role that community plays in the Internet and how collecting facilitates the objectification of children and increases the likelihood that in the quest for new images children continue to be sexually abused. Discourses focusing on both therapy and addiction serve to distance the respondent from personal agency and allow for continued engagement with child pornography.

This paper uses a case study (the experience of having been sexually abused as a child) and a review of the relevant literature as the basis for developing a conceptual model of the relationship between intra-familial and extra-familial child sexual abuse and child sexual exploitation, and the role of adult and child pornography in it. The paper illustrates some of the characteristics and effects of pornography and child sexual abuse including: gender; intra- and intergenerational patterns of victimization; coercion and compliance; the sexualization of the child; pornography and prostitution; and the function of incest as a form of pimping for the perpetrator and as grooming for extra-familial abuse. It also illustrates the way in which pornography is a part of all forms of intra-familial and extra-familial abuse and is itself a form of organized abuse. © 1997 John Wiley & Sons, Ltd.


There are few case-study-based reports of the role of pornography in the lives of sex offenders in contrast with numerous studies of a survey and statistical nature. Very little is known about the ways in which offenders process pornographic and other erotic materials as part of their offending patterns. The research reported in this study was based on case studies of fixated paedophiles in a private clinic for sex offenders. The men were interviewed about a range of matters including their offending, their psychosexual histories, pornography, fantasy, and sexual abuse in childhood. Commercial pornography was rarely a significant aspect of their use of erotica although some experience of such materials was typical of the men. Most common was ‘soft-core’ heterosexually oriented pornography. Explicit child pornography was uncommon. However, offenders also generated their own ‘erotic’ materials from relatively innocuous sources such as television advertisements, clothing catalogues featuring children modelling underwear, and similar sources. In no case did exposure to pornography precede offending-related behaviour in childhood. All of the offenders had experienced childhood sexual abuse by adults or older peers. The relationship of these findings to previous research and implications for legislation are noted.

Sexual abuse is now a major form of child maltreatment; however, the causes of such exploitation are obscure. A review of official reports and other research indicate that the circumstances surrounding sexual abuse are inadequately specified to allow specific causal interpretations. The role of pornography in contributing to such abuse is explored by reviewing laboratory studies and the circumstances of child sexual abuse. An assessment of the research literature suggests that pornography is a minor and indirect influence on child sexual maltreatment.

II. Victims of child pornography


This research explores the complex experiences of survivors of child pornography production. The study was conducted among a convenience sample of child pornography adult survivors (*N*=133), using an online survey which included a series of open-ended questions. Nearly half of respondents reported that they felt the production of sexual images caused specific problems that were different from the problems caused by other aspects of the abuse. Nearly half of the sample worried all the time that people would think they were willing participants or that people would recognize them, one-third refused to talk about the images and 22% denied there were images. The qualitative analysis identified three major themes which emerged from the survivor's perspective as adults: Guilt and shame, their ongoing vulnerability and an empowerment dimension the images sometimes brought. Recommendations for further research and additional implications are discussed.

This paper sets out the distinctive harm caused and wrong done to child pornography victims. It presents a paradigm of reparation within a restorative justice framework that explains the significance of material reparation for these victims. The paper demonstrates that because of the particular nature of child pornography offences and the harms and wrongs occasioned, existing avenues for legal redress in England and Wales and the USA are generally inadequate and ill-fitting, and that a new mechanism for effecting suitable reparation is required. It concludes by sketching a new mode of restorative justice for victims of child pornography, emphasising significant matters that must be addressed alongside financial redress in order to facilitate victims’ restoration.


Victims portrayed in sexual abuse images may be resistant to participate in research because of embarrassment or shame due to the sensitive nature and potential permanency of images. No studies we are aware of explore reactions to participating in research after this type of crime. Telephone interviews were conducted with convenience samples of parents (*n* = 46) and adolescents who were victims of child sexual abuse (*n* = 11; some of whom were portrayed in sexual abuse images), and online surveys were completed by adult survivors depicted in abuse images (*N* = 133). The first lesson was that few agencies tracked this type of crime. This lack of tracking raises the question as to what types of data should be collected and tracked as part of an investigation. The second lesson was that few victims at the two participating agencies had been portrayed in sexual abuse images (4%-5%). The third lesson was that once possible cases were identified, we found relatively high percentages of consent to contact and interview completions. This implies that researchers and service providers should not be hesitant about conducting research after an investigation of child sexual abuse. The fourth lesson was that the vast majority of participants reported not being upset by the questions. We hope that the data presented here will encourage agencies to reconsider the types of data being tracked and will encourage researchers
to conduct in-depth research with populations that are often difficult to reach to continue improving the professional response to child victimization.


The innovation of the Internet and the proliferation of new digital technologies in everyday life have unfortunately created more opportunities for the sexual abuse of children and especially the global distribution of child sexual abuse images online (CSAIO). Most of the current therapeutic interventions being used were designed to treat ‘conventional’ sexual abuse trauma. Victims of CSAIO may experience ongoing trauma because the recordings of their abuse have the potential to be endlessly viewed and shared by those with a sexual interest in children some of whom may be known to them. However, little is known about the potential psychological harm to victims, the extent to which existing trauma treatment modalities are applicable to them, or what modifications of these treatments may be required for effective treatment. This paper explores current ways of understanding the harms done to the victims of CSAIO and presents cautions and recommendations for moving forward.


This article examines the history of legal discussion of the harms of child pornography possession and viewing in the United States and Canada, with special attention to the evolving conception of direct harms to children and youth pictured in these images. The article further addresses ongoing uncertainty about harms associated with images that do not record an instance of sexual abuse, but where the harm arises solely from non-consensual distribution of nude and/or sexual images. Achieving greater understanding and recognition of both the similarities and differences between the harms that arise from the “permanent record of abuse” and from ongoing circulation and use of images beyond the subject’s control are necessary in order to equip both clinical and legal practitioners with the knowledge they need in order to provide appropriate support for victims of the varied forms of sexual abuse related to sexual image online.

Child sexual abuse images online (CSAIO) present new and daunting challenges for practitioners working in the field of child sexual abuse (CSA). Current understanding of the phenomenon is severely limited due to a lack of theoretical and empirical research in the area. This article reports findings from a study that examined practitioners’ experiences with, and views of, CSAIO. Participants differed in how they conceptualized what constituted online CSA images and held varying degrees of concern regarding the potential effects of CSAIO on the child. Some practitioners were uncertain about whether child victims of CSAIO experience particular effects different from or over and above those caused by conventional (non-Internet related) CSA. A key finding was that most practitioners did not have a clear understanding of CSAIO. This article includes recommendations for future research regarding the implications of technology in the field of CSA.


This Article explores the issues of restitution to the victims of child pornography and other federal sex offenses in depth and contends that Congress meant what it said in Section 2259 — specifically that child pornography victims must receive an award for the “full amount” of their losses from any defendant convicted of harming them. This approach is consistent not only with the plain language of the statute but the well-established tort principle that any intentional wrongdoer is jointly and severally liable with other wrongdoers for an innocent victim’s losses. Requiring defendants to pay for the full amount of the losses that they have caused will address the significant financial losses suffered by child pornography victims.


Results from the National Juvenile Online Victimization (N-JOV) Prosecutor Study indicate that prosecutors use a mix of strategies to handle defendants who possess large amounts of child pornography (CP). Prosecutors reported difficulties with computer forensics and the police investigation, but not so much with defense strategies. One-quarter of prosecutors who dealt with CP cases had one that went in front of a jury in the past 2 years. Nearly half of prosecutors would like clearer guidelines about the types of CP cases accepted for federal prosecution.


The article focuses on the presumed damages theory in child pornography restitution cases. Topics include the proximate cause requirement for restitution, the denial of recovery for child pornography victims, and the doctrine of presumed damages. Information is provided on victim relief for privacy and defamation torts.


Despite an increase in research on child abuse images and sex offender risk, we still lack specific data about the characteristics of the children found within these images. Such data would assist us with understanding the exploitation of children through abusive images and the choice of images by offenders. We accessed sexualized child images submitted to the Child Exploitation and Online Protection Centre (CEOP) in the United Kingdom. In 1998, CEOP developed a database (ChildBase) of child abuse images gathered from police seizures across the United Kingdom. This
database is continually updated and is operationally used to identify victims. We randomly selected 10% of the 247,950 images, submitted during 2005-2009, and sorted them into the following categories: gender, age, and ethnic group (White, Asian, Black, and Hispanic/Latino). Codes (n = 24,550) were analyzed using frequencies and cross tabulations in relation to gender, age, and racial group. The odds of the abuse images being female versus male were about 4 to 1, and the odds of the images being of White children versus non-White children were about 10 to 1 (9.805). There was a significant gender difference in age distribution of all the children within the images. The limitations of this study are also discussed along with possible implications and recommendations for future research.


The trauma of being a victim of sexual abuse is very difficult to live with, but for victims of internet offending there are added complexities for him/her in trying to make sense of what has happened. They are often “directed” by the offender to perform sexual acts on themselves and/or others, which creates huge confusion for the victim in terms of even using the common language of perpetrator/offender because of the victim needing to make sense of the fact that they touched themselves and/or others in many incidents and, for them, does this make them the perpetrator? The perpetrator role of being the “director” needs to be explored with the victim in the very layers of what this means as opposed to the perpetrator doing the touching, but also needs to be considered in treatment programmes when often internet offenders debate the “I didn't touch her/him”. This paper will explore the complexities as a therapist working with victims of internet abuse as well as the impact of this on assessment and treatment of internet offenders.


The online distribution of abusive images has risen dramatically over recent years and this raises many questions concerning the children within the images, particularly in relation to identification and provision of services. From October 2004 until September 2007, Innocence in Danger e.V. conducted an empirical study concerning the care and treatment
of victims of child pornographic exploitation (CPE) in Germany by contacting all specialized institutions nationwide dealing with sexually abused children. This was achieved through questionnaires and interviews. A total of 245 cases of child pornographic exploitation (197 girls, 48 boys) and 280 suspected cases of child pornographic exploitation were identified. It was reported that cases of CPE were of a higher complexity than offline abuse, more demanding for professionals and raised many questions about professional involvement. Identified challenges included the issue of permanence once abusive images have been distributed online, and the coping strategies of children which might foster resilience. The study concludes that even though child pornographic exploitation is much talked about, there is still a lack of knowledge in how to identify, approach and help such children.


The article discusses the study which examines the sexual victimization of children through the Internet. It refers to the findings from the National Online Victimization Study which monitors sex crimes on nationally representative sample of youth and children. It looks into the types of sex crimes such as attempted and completed sexual assault, child pornography, and transmitting of illegal sexual materials. The authors describe the types of victimization that occur in the Internet and the children who are most vulnerable. They also suggest the area where law enforcement needs to direct its resources in order to effectively address this problem.


The goal of this paper is to demonstrate that possession of child pornography is not a victimless crime. It will illustrate the problem and explain the harm suffered by its victims. It will then trace factors that may have contributed to the perception that possession of child pornography is a victimless offense. The first factor is the dual nature of the child pornography laws that addresses both actual and future harm. When this duality is applied to possessors, their link to actual harm appears attenuated because the possessor is not involved in the acts of sexual abuse inherent in producing the images. The second factor is that a number of scholars have criticized generally
possession offenses as a tool for preemptive prosecutions, but they have not exempted child pornography from their condemnation. Finally, technology itself is a cause. The growth of the Internet and the ability to find images from the comfort of one's home further weakens the connection between the victim and the viewer; this distance is exacerbated by a general sense that nothing is real in cyberspace.


The N-JOV Study collected information from a national sample of law enforcement agencies about the characteristics of Internet sex crimes against minors and the number of arrests for these crimes during a 1-year period. The goals of the study were to estimate a baseline number of arrests during a 1-year period, so that the increase in the number of these cases can be measured in the future; to develop a statistical portrait of the characteristics of Internet sex crimes against minors and how such cases are handled by the criminal justice system; and to organize the cases into a typology useful for tracking and analysis. The study found that law enforcement agencies at all levels made an estimated 2,577 arrests for Internet sex crimes against minors during the 12 months that began on July 1, 2000. The types of crimes for which arrests occurred were as follows: Internet-related contacts between offenders and victims that resulted in sexual assaults and the use of the victims in the production of child pornography (39 percent of arrests); Internet solicitations for sexual contact made to undercover law enforcement officers posing as minors (25 percent of arrests); and the possession, distribution, or trading of Internet child pornography by offenders who did not use the Internet to sexually exploit identified victims or solicit undercover investigators (36 percent of arrests). Two-thirds (67 percent) of offenders who committed any of the types of Internet sex
crimes against minors possessed child pornography. The vast majority of offenders were non-Hispanic White males older than 25 who were acting alone. Most investigations (79 percent) involved more than one law enforcement agency. State, county, and local agencies were involved in 85 percent of all cases; Federal agencies were involved in 46 percent of the cases. Apparently there were fewer dismissals and acquittals in cases that involved Internet-related sex crimes against minors than for conventional prosecutions of child sexual abuse.


The Office of Juvenile Justice and Delinquency Prevention (OJJDP) is committed to improving the justice system’s response to crimes against children. OJJDP recognizes that children are at increased risk for crime victimization. Not only are children the victims of many of the same crimes that victimize adults, they are subject to other crimes, like child abuse and neglect, that are specific to childhood. The impact of these crimes on young victims can be devastating, and the violent or sexual victimization of children can often lead to an intergenerational cycle of violence and abuse. The purpose of OJJDP’s Crimes Against Children Series is to improve and expand the nation’s efforts to better serve child victims by presenting the latest information about child victimization, including analyses of crime victimization statistics, studies of child victims and their special needs, and descriptions of programs and approaches that address these needs.


Two complementary perspectives on child pornography—legal and psychological—are presented and an emergent typology for understanding the nature of such pictures on the Internet is outlined. Data from the Combating Paedophile Information Networks in Europe (COPINE) project is used to illustrate the nature of the material available to people with a sexual interest in children, where it can be found and how offenders use and are changed by the Internet. It concludes with a consideration of issues that are of concern in relation to child pornography, the Internet and offending behaviour.


Reports on the child sexual abuse (CSA) aspects of child pornography from the viewpoint of the negative impact on the cognitive, psychological, and social development of the child victim. Elements of CSA, sex ring dynamics, acute symptoms, and adaptive behavioral responses of victims and perpetrators are discussed. Treatment issues include the careful evaluation of unresolved childhood sexual abuse and the disclosure aspects of abuse, which confronts males with gender identity problems related to bi- or homosexuality. It is argued that the CSA victim's symptoms may best be understood under the diagnosis of chronic or delayed posttraumatic stress. (PsycINFO Database Record ©2012 APA, All rights reserved)


Children have been sexually exploited throughout recorded history. The invention of the camera and subsequent related technological advances (slides, movies, instant picture cameras and videotape) have provided new avenues for the exploitation of children by facilitating the distribution of pictorial representations of these children on a world-wide basis. A major use of commercial child pornography is to convince a potential child victim that the sexual acts desired by the adult offender are fun, exciting, can satisfy the child's curiosity and are a societally acceptable means of expressing affection. Commercial child pornography publications contain numerous pictures of children viewing child pornography, in some cases replicating the pose(s) depicted in the viewed material. Although many jurisdictions have now prohibited child
pornography, the need for a world-wide ban continues, as the remaining producers distribute their material throughout the world.


In the decade of the 70s, much was learned about abused and neglected children and their families, Public outcry demanded action at the state, regional and national level hoping that the effort would generate more effective methods of identification, intervention and treatment. Consequently, researchers and theoreticians initiated efforts that were aimed at providing a better understanding of why some parents abuse or neglect their children while others do not. In spite of all the energy and time, one form of child abuse continues to flourish relatively unnoticed—child pornography, or as it is more commonly known in the trade, “kiddie” or “chicken” porn. Because of the dearth of information about the subject, this paper addresses five key issues: (1) Who are the children who become the young stars of pornographic films? (2) How many children are estimated to be involved in this activity? (3) What are the presumed effects of such involvement on children? (4) Legal issues related to the control of the pornographic industry; and (5) What is the challenge to social work and other helping professionals?

III. Effects of exposure to pornography upon children and adolescents


Research has demonstrated that adolescents regularly use Internet pornography. This (14.10; \( N = 325 \)) that (a) explains their exposure to Internet pornography by looking at relationships with pubertal timing and sensation seeking, and (b) explores the potential consequence of their exposure to Internet pornography for their academic performance. An integrative path model indicated that pubertal timing and sensation seeking predicted the use of Internet pornography. Boys with an advanced pubertal stage and boys high in sensation seeking more frequently used Internet pornography. Moreover, an increased use of Internet pornography decreased boys’ academic performance six months later. The discussion focuses on the consequences of this integrative model for future research on Internet pornography.


Most research on child pornography use has been based on selected clinical or criminal justice samples; risk factors for child pornography use in the general population remain largely unexplored. In this study, we examined prevalence, risk factors, and correlates of viewing depictions of adult–child sex in a population-representative sample of 1,978 young Swedish men (17–20 years, Mdn = 18 years, overall response rate, 77 %). In an anonymous, school-based survey, participants self-reported sexual coercion experiences, attitudes and beliefs about sex, perceived peer attitudes, and sexual interests and behaviors; including pornography use, sexual interest in children, and sexually coercive behavior. A total of 84 (4.2 %) young men reported they had ever viewed child pornography. Most theory-based variables were moderately and significantly associated with child pornography viewing and were consistent with models of sexual offending implicating both antisociality and sexual deviance. In multivariate logistic regression analysis, 7 of 15 tested factors independently predicted child pornography viewing and explained 42 % of the variance: ever had sex with a male, likely to have sex with a child aged 12–14, likely to have sex with a child 12 or less, perception of children as seductive, having friends who have watched child pornography, frequent pornography use, and ever viewed violent pornography. From these, a 6-item Child Pornography Correlates Scale was constructed and then cross-validated in a similar but independent Norwegian sample.

Although blocking and filtering software can prevent access, unwanted and intentional exposure is always possible. In 2005, a study of youth aged 10-17 found 42% reported wanted and unwanted exposure to online pornography in the past year. Continued exposure to pornography can have negative effects on children and youth. Lawyers who represent children and youth should be aware of the possibility of such exposure and prepared to advocate for them.


The Office of the Children's Commissioner for England is calling for urgent action to develop children's resilience to pornography following a research report it commissioned which found that: a significant number of children access pornography; it influences their attitudes towards relationships and sex; it is linked to risky behavior such as having sex at a younger age; and there is a correlation between holding violent attitudes and accessing more violent media. Children and young people's exposure and access to pornography occurs both on and offline but in recent years the most common method of access is via Internet enabled technology: Exposure and access to pornography increases with age; Accidental exposure to pornography is more prevalent than deliberate access; There are gender differences in exposure and access to pornography with boys more likely to be exposed to and deliberately access, seek or use pornography than girls. It concludes that there are still many unanswered questions about the affect exposure to pornography has on children: a situation the Office of the Children's Commissioner considers requires urgent action in an age where extreme violent and sadistic imagery is two clicks away. The researchers identified 41,000 items of academic literature about pornography undertaking an in-depth analysis of 276 to draw its conclusions.

Among the suggested problems and harms associated with widespread pornography use among young people, risky sexual behaviors have been frequently mentioned. To further explore this public health concern, this article analyzed sexual sensation seeking (SSS) as a potential confounder of the association between pornography use and sexual risks using data collected in 2010 from a population-based sample of young Croatian adults aged 18 to 25 (n=41,005). Significant, but small, correlations were found between the indicators of pornography use (age at first exposure, frequency of use in the past 12 months, and personal importance of pornography) and sexual risk taking. However, in a multivariate analysis, only age at first exposure to pornography remained a significant, albeit weak, predictor of sexual risk taking among both women and men. SSS, defined as the dispositional tendency toward the impulsive pursuit of sexual arousal and stimulation, neither confounded nor moderated this association. Overall, the findings do not support the notion that pornography use is substantially associated with sexual risk taking among young adults, but suggest that early exposure to sexually explicit material and high SSS are additive risk factors for sexual risk taking.


Longitudinal linkages between intentional exposure to x-rated material and sexually aggressive behavior were examined among youth 10–15 year olds surveyed nationally in the United States. At Wave 1 in 2006, participants (n=51,588) were queried about these exposures and outcomes in the preceding 12 months. Wave 2 data (n=51,206) were collected approximately 12 months after Wave 1 and Wave 3 data (n=51,159) were collected approximately 24 months after Wave 1. Thus, data for this project represent a 36-month time frame. A marginal model with generalized estimating equations was used to represent the population-average odds of sexually aggressive behavior over the 36 months as a function of exposure to x-rated material over the same time and to account for clustering in the data within person over time. An average of 5% of youth reported perpetrating sexually aggressive behavior and 23% of youth reported intentional exposure to x-
rated material. After adjusting for other potentially influential proximal (i.e., sexual aggression victimization) and distal characteristics (e.g., substance use), we found that intentional exposure to violent x-rated material over time predicted an almost 6-fold increase in the odds of self-reported sexually aggressive behavior (aOR: 5.8, 95% CI: 3.2, 10.5), whereas exposure to nonviolent x-rated material was not statistically significantly related (aOR: 1.7, 95% CI: 0.94, 2.9). Associations were similar for boys and girls (boys nonviolent x-rated material aOR52.0, 95% CI: 0.8, 4.7; violent x-rated material aOR56.5, 95% CI: 2.7, 15.3; girls nonviolent x-rated material aOR51.2, 95% CI: 0.5, 3.2; violet x-rated material aOR56.1, 95% CI: 2.5, 14.8).


Sexually reactive children and adolescents (SRCAs), sometimes referred to as juvenile sexual offenders, may be more vulnerable and likely to experience damaging effects from pornography use because they are a high-risk group for a variety of aggressive behaviors. The purpose of this study is to describe the characteristics of those who use pornography and those who do not and to examine the associations between pornography use and aggressive behaviors among SRCAs. This secondary analysis used a descriptive, exploratory design to study 160 SRCAs. Chi-square and individual odds ratio analyses were employed to examine the associations between use of pornography and aggressive behaviors. SRCAs who used pornography were more likely to display aggressive behaviors than their non-using cohort. Recommendations for nurses and mental health professionals encountering these children and adolescents are offered.


Exposure to pornography is routine among children and young people, with a range of notable and often troubling effects. Particularly among younger children, exposure to pornography may be
disturbing or upsetting. Exposure to pornography helps to sustain young people’s adherence to sexist and unhealthy notions of sex and relationships. And, especially among boys and young men who are frequent consumers of pornography, including of more violent materials, consumption intensifies attitudes supportive of sexual coercion and increases their likelihood of perpetrating assault. While children and young people are sexual beings and deserve age-appropriate materials on sex and sexuality, pornography is a poor, and indeed dangerous, sex educator. Copyright © 2009 John Wiley & Sons, Ltd.


We examined exposure to Internet pornography before the age of 18, as reported by college students (n 563), via an online survey. Ninety-three percent of boys and 62% of girls were exposed to online pornography during adolescence. Exposure prior to age 13 was relatively uncommon. Boys were more likely to be exposed at an earlier age, to see more images, to see more extreme images (e.g., rape, child pornography), and to view pornography more often, while girls reported more involuntary exposure. If participants in this study are typical of young people, exposure to pornography on the Internet can be described as a normative experience, and more study of its impact is clearly warranted.


Youth in Australia are routinely exposed to sexually explicit images. Among 16- and 17-year-olds, three-quarters of boys and one-tenth of girls have ever watched an X-rated movie. Three-quarters of 16- and 17-year-olds have been exposed accidentally to pornographic websites, while 38 percent of boys and 2 percent of girls have deliberately accessed them. Internet pornography is a particularly pervasive source of minors’ exposure to pornography, both accidental and deliberate. Two features of children’s exposure to pornography mirror those among adults. First, males are more likely to seek out, and are more frequent consumers of, both X-rated movies and pornographic websites. Second, Internet users of any age find it difficult to avoid unwanted encounters with sexually explicit materials.

The goal was to assess the extent of unwanted and wanted exposure to online pornography among youth Internet users and associated risk factors. A telephone survey of a nationally representative sample of 1500 youth Internet users aged 10 to 17 years was conducted between March and June 2005. Forty-two percent of youth Internet users had been exposed to online pornography in the past year. Of those, 66% reported only unwanted exposure. Multinomial logistic regression analysis was used to compare youth with unwanted exposure only or any wanted exposure with those with no exposure. Unwanted exposure was related to only 1 Internet activity, namely, using file-sharing programs to download images. Filtering and blocking software reduced the risk of unwanted exposure, as did attending an Internet safety presentation by law enforcement personnel. Unwanted exposure rates were higher for teens, youth who reported being harassed or sexually solicited online or interpersonally victimized offline, and youth who scored in the borderline or clinically significant range on the Child Behavior Checklist subscale for depression. Wanted exposure rates were higher for teens, boys, and youth who used file-sharing programs to download images, talked online to unknown persons about sex, used the Internet at friends’ homes, or scored in the borderline or clinically significant range on the Child Behavior Checklist subscale for rule-breaking. Depression also could be a risk factor for some youth. Youth who used filtering and blocking software had lower odds of wanted exposure. More research concerning the potential impact of Internet pornography on youth is warranted, given the high rate of exposure, the fact that much exposure is unwanted, and the fact that youth with certain vulnerabilities, such as depression, interpersonal victimization, and delinquent tendencies, have more exposure.


This cross-sectional study examined 804 adolescents, boys and girls, aged from 14 to 19 years, attending different types of high schools in the northwest of Italy; the questionnaire “Me and My Health” (Bonino, 1996) was used to collect data. The main goals were: (i) to investigate the relationship between active and passive forms of sexual harassment and violence and the
relationship between pornography (reading magazines and viewing films or videos) and unwanted sex among adolescents; (ii) to explore the differences in these relationships with respect to gender and age; and (iii) to investigate the factors (pornography, gender and age) that are most likely to promote unwanted sex. The findings showed that active and passive sexual violence and unwanted sex and pornography were correlated. However, reading pornographic material was more strongly linked to active sexual violence, while being a boy was found to be protective against passive sexual violence. Nevertheless, some effects of viewing pornographic films on passive unwanted sex were also found, especially among girls.


Drawing on a survey of 745 Dutch adolescents ages 13 to 18, the authors investigated (a) the occurrence and frequency of adolescents’ exposure to sexually explicit material on the Internet and (b) the correlates of this exposure. Seventy-one percent of the male adolescents and 40% of the female adolescents had been exposed to some kind of online sexually explicit material in the 6 months prior to the interview. Adolescents were more likely to be exposed to sexually explicit material online if they were male, were high sensation seekers, were less satisfied with their lives, were more sexually interested, used sexual content in other media more often, had a fast Internet connection, and had friends that were predominantly younger. Among male adolescents, a more advanced pubertal status was also associated with more frequent exposure to online sexually explicit material. Among female adolescents, greater sexual experience decreased exposure to online sexually explicit material.


This study examines use of Internet pornography by adolescents in Taiwan and the relationships between exposure to Internet pornography and the sexual attitudes and behavior of surveyed teens. Results show that about 38% of the sample had some exposure to Internet pornography. Further, this exposure was associated with greater acceptance of sexual permissiveness and the greater
likelihood of engaging in sexually permissive behavior. Most important, this exposure showed sustained relationships with sexually permissive attitudes and behavior when it was examined simultaneously with exposure to traditional pornography, general media use, and demographics.


Estimates suggest that up to 90% or more youth between 12 and 18 years have access to the Internet. Concern has been raised that this increased accessibility may lead to a rise in pornography seeking among children and adolescents, with potentially serious ramifications for child and adolescent sexual development. Using data from the Youth Internet Safety Survey, a nationally representative, cross-sectional telephone survey of 1501 children and adolescents (ages 10–17 years), characteristics associated with self-reported pornography seeking behavior, both on the Internet and using traditional methods (e.g., magazines), are identified. Seekers of pornography, both online and offline, are significantly more likely to be male, with only 5% of self-identified seekers being female. The vast majority (87%) of youth who report looking for sexual images online are 14 years of age or older, when it is developmentally appropriate to be sexually curious. Children under the age of 14 who have intentionally looked at pornography are more likely to report traditional exposures, such as magazines or movies. Concerns about a large group of young children exposing themselves to pornography on the Internet may be overstated. Those who report intentional exposure to pornography, irrespective of source, are significantly more likely to cross-sectionally report delinquent behavior and substance use in the previous year. Further, online seekers versus offline seekers are more likely to report clinical features associated with depression and lower levels of emotional bonding with their caregiver. Results of the current investigation raise important questions for further inquiry. Findings from these cross-sectional data provide justification for longitudinal studies aimed at parsing out temporal sequencing of psychosocial experiences.


Within the last few years, there has been a tremendous increase in the availability of highly sexually explicit material, specifically with the introduction of adult videos. Many people feel that such easy access to sexually explicit material will mean an increase in sexually related crime, and a more cavalier attitude towards sex in general (Attorney General’s Commission on Pornography, 1986). In addition, the AIDS epidemic has created an atmosphere in which anything suspected of promoting sexual promiscuity is frowned upon. As pointed out by other authors in this issue, there are many problems associated with conducting research on the effects of pornography and its relationship to sex crimes. First, sex crimes can never be observed in a laboratory. One must rely on police statistics and retrospective reporting, both of which raise methodological issues. Second, it cannot be demonstrated experimentally that pornography causes sexual deviance unless a previously non-deviant subject is exposed to pornography under controlled conditions and then commits sexual crimes. Ethically this cannot be permitted. Third, the media tends to sensationalize sex crime cases, particularly when large amounts of pornography are found in possession of the offender. This creates a climate in which researchers may expect to find links between pornography and sexual violence which may in turn color the interpretation of research findings.