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Recidivism in Pedophiles: An Investigation Using Different Diagnostic Methods

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Abstract

The relationship between pedophilia and recidivism was examined in a sample of 206 extra-familial child molesters assessed at a university teaching hospital between 1982 and 1992. To address definitional issues, pedophilia was defined in one of four ways: (1) a *DSM* diagnosis made by a psychiatrist; (2) a deviant phallometric profile; (3) a combination of *DSM* diagnosis and deviant phallometric results; and, (4) high scores based on the *Screening Scale for Pedophilic Interest* (SSPI; Seto & Lalumière, 2001). Only phallometric assessment was associated with sexual recidivism, but with a small effect size. Overall recidivism rates were 22.8%, 33.9%, and 45.6% for sexual, violent, and any reoffence, respectively. No differences were found between pedophiles and nonpedophiles with respect to recidivism rates, regardless of how pedophilia was defined. Based on these results, the utility of the diagnosis of pedophilia for the purpose of predicting future reoffending is questioned.

KEY WORDS: pedophilia, child molesters, phallometric assessment, diagnoses, recidivism

RECIDIVISM IN PEDOPHILES: AN INVESTIGATION USING DIFFERENT DIAGNOSTIC METHODS

The purpose of diagnoses is to categorize individuals into homogeneous subgroups, which can promote accurate prognosis and effective treatment. Despite this, clinicians and researchers have raised concerns about the validity and thus the application of the diagnosis of pedophilia (Marshall, 1997; 2006; O'Donohue, Regev, & Hagstrom, 2000). In her study, Levenson (2004) examined interdiagnostician reliability of four paraphilias based on individuals referred for sexually violent predator civil commitment consideration. She found concerning results suggesting inconsistent reliability in the diagnosis of these types of disorders using *DSM-IV* criteria. Specifically, she reported the following rates of reliability; pedophilia (kappa = 0.65), sexual sadism (kappa = 0.30), exhibitionism (kappa = 0.47), and paraphilia NOS (kappa = 0.36). Under the guidelines proposed by Cicchetti and Sparrow (1981) this range in scores is considered "poor" to "good." Levenson concludes that the degree of inconsistency in diagnosis has troubling implications in the application to legal processes (e.g. dangerous offender legislation, sexually violent predator statutes).

With respect to pedophilia specifically, O'Donohue et al. (2000) identified problems with the *DSM-IV* diagnostic criteria. For example, they stated that the ambiguous nature of the terms "recurrent" and "intense" within Criterion A forced clinicians to draw inferences as to the nature of the disorder. Given the limitations regarding the accuracy of clinical judgment (Meehl, 1996), these inferences may adversely affect the reliability and validity of this diagnosis. Another

concern with the diagnosis of pedophilia is that child molesters are often reluctant to admit to a clinician that they have deviant sexual fantasies, urges or behaviours, which makes it difficult to gather accurate information (Marshall, 1997; 2006; Ward, Hudson, Johnston, & Marshall, 1997). Lastly, concerns have been raised about Criterion B, which requires that the individual experience distress or impairment as a function of the disordered behaviour, which given the sometimes egosyntonic nature of pedophilia, is simply nonsensical. Fortunately, this issue has been addressed in *DSM*-IV-TR, which states, "because of the egosyntonic nature of Pedophilia…experiencing distress about having fantasies, urges, or behaviors is not necessary for a diagnosis of Pedophilia" (APA, 2000, p. 571).

Due to the apparent difficulties with *DSM* criteria indicated above, it has been suggested that phallometric testing may provide reliable evidence of pedophilia in the absence of an accurate diagnosis (Barbaree & Seto, 1997; Freund & Blanchard, 1989; Freund & Watson, 1991) or, at least, contribute to the diagnostic process (Marshall & Eccles, 1991). Moreover, phallometric testing allows for the assessment of deviant sexual preference while attempting to overcome purposeful impression management. Phallometric assessment has reliably differentiated child molesters from sexual offenders against adults, such that rapists with the greatest number of adult victims are least likely to be diagnosed with pedophilia according to phallometric results (specificity = 96%), and men with the greatest number of child victims are more likely to demonstrate a deviant profile to a child stimulus (sensitivity = 61%; Blanchard, Klassen, Dickey, Kuban, & Blak, 2001; Freund & Watson, 1991).

Although phallometric testing should provide evidence as to the degree of pedophilic interest, there are limitations when relying on this approach. For example, numerous studies have demonstrated that a significant proportion of offenders were able to suppress penile

responses (Howes, 1998; Kalmus & Beech, 2005; Marshall & Fernandez, 2000). Furthermore, the interpretation of arousal is difficult, as some offenders may not be aroused to a certain deviant stimuli, while nonoffenders may be aroused to such deviant stimuli (Bahroo, 2003; Firestone, Bradford, Greenberg & Nunes, 2000). Problems with low responding (O'Donohue & Letourneau, 1992), along with concerns about the reliability (Barbaree, Baxter, & Marshall, 1989) and validity (Hall, Proctor, & Nelson, 1988) of this procedure have led some researchers to question its utility with sexual offenders (Marshall & Fernandez, 2003).

Despite the concerns about phallometric assessment, relative sexual interest in children remains one of the better predictors of sexual recidivism (Hanson & Bussière, 1998, Hanson & Morton-Bourgon, 2004). However, practical barriers, such as limited access to phallometric laboratories, may preclude the ability to assess offenders phallometrically. For this reason, Seto and Lalumière developed the *Screening Scale for Pedophilic Interests* (*SSPI*; 2001) for the purpose of identifying individuals most likely to be sexually interested in children, and for triage and risk management. Research to date has suggested that *SSPI* scores are significantly related to deviant phallometric responding, and identified pedophilic interest better than chance. The *SSPI* is also related to both sexual and violent recidivism in child molesters (Seto, Harris, Rice, & Barbaree, 2004). In an examination of the predictive utility of the *SSPI*, the authors (Seto, et al., 2004) found that it made a significant contribution to the prediction of sexual offending, beyond that of phallometric testing alone.

To date, many attempts have been made to refine the diagnosis of the paraphilias and pedophilia in particular. Many of those working with sexual offenders recognize the limitations to the diagnosis of pedophilia and have challenged its relevance and utility (Marshall, 1997; 2006; O'Donohue, et al., 2000). One way in which a diagnosis should aid clinicians and

researchers is in the prediction of behaviour. However, little research exists about the nature of recidivism in pedophiles specifically, and in what way they differ from nonpedophiles.

Recidivism in Pedophiles

The meta-analytic work of Hanson and his colleagues (Hanson & Bussière, 1998, Hanson & Morton-Bourgon, 2004) has determined that deviant sexual preference and antisocial orientation are among the best predictors of recidivism in sexual offenders. However, as summarized above, paraphilias are defined in numerous ways and problems exist with the application of such diagnoses. Could the relationship between recidivism and deviant sexual preference be an artifact of operationalization?

Currently, what is known about risk predictors and recidivism rates in pedophiles is extrapolated from studies on intra- and extra-familial child molesters who may or may not have met the diagnostic criteria for pedophilia. In a comparison of recidivism rates in rapists, extrafamilial child molesters, intrafamilial child molesters, and hands-off sexual offenders (e.g. exhibitionists), recidivism rates for the extrafamilial child molesters (the group theoretically most likely to include pedophilic offenders) were 14%, 8 %, and 28 % for sexual, violent, and general recidivism, respectively, after a 5-year follow-up (Bartosh, Garby, Lewis, & Gray, 2003).

Greenberg, Bradford, Firestone, and Curry (1999) found that those child molesters who offended against nonfamily members (biological or legal) reoffended at a higher rate compared to intrafamilial child molesters over a 15-year follow-up period. Specifically, 16.2 % of those who offended against acquaintances committed a new sexual offence, compared to 4.8% of offenders against biological children, or 5.1 % against stepchildren. In another study (Firestone, Bradford, McCoy, Greenberg, Curry, & Larose, 2000) recidivism was examined in extra-familial

child molesters, including pedophiles over a 12-year follow-up. The percentage of men who committed a sexual, violent, or any criminal offense, cumulatively, by the 12th year was 15.1 %, 20.3 %, and 41.6 %, respectively. This study found that the sexual recidivists were more likely to endorse patterns of deviant sexual arousal and substance abuse compared to the nonrecidivists, a finding consistent with previous research with sexual offenders.

Conventionally, recidivism studies include a follow-up period of between 5-10 years, with reported rates of sexual reoffending for extrafamilial child molesters of approximately 12% (Hanson & Bussière, 1998; Hanson & Morton-Bourgon, 2004). However, some research suggests that extrafamilial child molesters may be slower to reoffend, but persist nonetheless over time. Relatively short follow-ups may underestimate the recidivism rates for this group of sexual offenders. Specifically, Hanson (2002) found that extrafamilial child molesters are at a higher risk for recidivism compared to rapists when age is controlled.

Recently, the follow-up period for the study described above (Greenberg, et al., 1999) was extended to 20 years. In a recent investigation, any sexual, violent, or criminal reoffence was examined in a group of extrafamilial child molesters (Wexler, Firestone, Nunes, & Bradford, 2006). A unique aspect of this study was that the recidivists continued to be followed beyond their first reoffence. Therefore, if an offender committed a criminal reoffence first, but then subsequently committed a sexual offence later during his community supervision, this sexual reoffence would be considered in the recidivism analyses. The percentages of any recidivism during the 20-year follow-up were 22.8 %, 35.0 %, and 46.1 % for sexual, violent, and any new offence, respectively. The present data was also drawn from this recently extended dataset (Wexler, et al., 2006). However, in the present investigation we examined those individuals defined as pedophilic specifically.

Based on these findings, it is often suggested that pedophiles are at greater risk for sexual recidivism compared to other sexual offenders (Hanson, Steffy, & Gauthier, 1993), and other categories of child molesters (i.e. incest offenders). However, considerable confusion remains given the variability in the operationalization of pedophilia, such that sometimes it represents all child molesters and other times only those offending against non-familial children, but rarely is pedophilia based on a formal *DSM* (or other) designation. Therefore, based on the definitional and diagnostic issues raised above, the applicability of these findings to pedophiles is questionable.

Unfortunately, the research on pedophiles as a specific group is very limited. In a recent study of recidivism in child molesters, Wilson, Abracen, Picheca, Malcolm, and Prinzo (2003) found that a *DSM-IV* diagnosis of pedophilia was not related to long-term recidivism. Specifically, they examined the diagnosis of pedophilia based on four methods: *Rapid Risk Assessment for Sexual Offender Recidivism* (Hanson, 1997), phallometric assessment, *DSM-IV-TR* criteria, and expert clinical judgment of pedophilic interest. Participants (n = 138) included both intra- and extra-familial child molesters. Results indicated that *DSM* diagnosis of pedophilia and deviant sexual arousal as measured by phallometric assessment were unrelated to sexual recidivism. Only RRASOR scores and clinical judgment were significantly predictive of recidivism in this group.

In a similar study, demographic, psychological (e.g. *Psychopathy Checklist-Revised, Michigan Alcoholism Screening Test*), and offence history variables were compared between pedophilic and nonpedophilic men across four diagnostic methods (*DSM* diagnosis, deviant phallometric responding, *DSM* diagnosis and deviant phallometric responding, and *SSPI*; Kingston, Firestone, Moulden, & Bradford, in press). The authors found that no variables

reliably and consistently differentiated pedophiles from nonpedophiles regardless of the classification system used. Although a few variables predicted pedophilic designation, odds ratios revealed that the value added was quite limited and not clinically meaningful. Additionally, results indicated that the procedures used to define pedophilia (i.e. *DSM*, phallometrics, and *SSPI*) were not significantly related to one another. This is troublesome given that if a true construct exists one would expect some consistency across diagnostic methods. On the contrary, men defined as pedophilic using one method, were not the same individuals diagnosed using another. These results prompted us to embark on the present investigation.

The purpose of the present study was to further explore the role of pedophilia in the prediction of recidivism. In a previous investigation, Kingston et al. (In press) failed to identify differences between pedophiles and nonpedophiles across diagnostic categories, suggesting that pedophilic and nonpedophilic men, irrespective of diagnostic method, differed little from one another. However, two specific questions remained: (1) what relationship exists, if any, between the different diagnostic methods and recidivism, and (2) what differences exist between recidivism rates for pedophiles and nonpedophiles. Consistent with this previous research, we studied pedophilia using multiple definitions (i.e. *DSM*, phallometrics, and *SSPI*) and diagnostic methods in order to address the operationalization issues described above. Given the previous research suggesting that pedophiles represent a more sexually deviant group than nonpedophiles, and therefore more likely to reoffend (Hanson & Bussière, 1998; Hanson & Morton-Bourgon, 2004; Seto, 2004) we hypothesized the pedophiles would demonstrate greater recidivism rates than nonpedophiles.

METHODS

Participants

All participants (N = 206) were adult males, and had been convicted of a hands-on sexual offence against an unrelated male or female child who was under the age of 16 at the time of the offence. Demographic information for the participants is summarized by diagnostic group in Table 1. The participants were assessed at a university teaching hospital in a large Canadian city, between 1982 and 1992. If the police records indicated that the participants had ever offended against an adult or against a family member, they were excluded from the analysis. All participants signed a consent form at the time of assessment permitting use of their data for research, which was conducted in compliance with the internal review board of the hospital. This sample has been previously examined in a number of other studies (e.g. Firestone, Bradford, Greenberg, & Serran, 2000; Firestone, et al., 2000; Kingston, et al., 2006; Wexler, et al., 2006).

Insert Table 1 about here

Procedures

The standard procedure in the hospital-based clinic was that each patient was first interviewed by a psychiatrist who then provided a *DSM* diagnosis (if appropriate). Patients were also required to complete forms gathering various demographic information and psychological questionnaires. The psychiatrist would have access to previous medical charts and police reports, which included diagnostic history, previous psychological assessments, and psychosocial and criminal history. These diagnoses were made by experienced psychiatrists whose major

clinical work was with sexual offenders. Participants were then assessed in the phallometric lab. Only a portion of the data collected in these assessments is examined here.

For the survival analyses the sample was divided into four categories based on different methods of defining pedophilia. Each pedophilic group was compared to a group of men determined to be nonpedophilic based on the same method of classification. The first comparison included men who had been diagnosed with pedophilia based on *DSM* criteria (*DSM*, $n = 85$). This group was compared to those individuals not diagnosed with pedophilia based on *DSM* criteria ($n = 79$). The second comparison studied men defined as pedophilic based on a deviant phallometric index score (i.e., ≥ 1) on either the Pedophile Index and/or the Pedophile Assault Index (PD, $n = 110$) and compared them to men determined to be nonpedophilic based on a phallometric score of < 1 ($n = 45$). The third comparison distinguished between those offenders classified as pedophiles when they received a *DSM* diagnosis of pedophilia in addition to receiving a deviant phallometric score (i.e. ≥ 1) on either of the indices mentioned above (*DSM*+PD, $n = 59$). Again this group was compared to those offenders who were not given a diagnosis of pedophilia and received a phallometric score < 1 (i.e., non-deviant, $n = 43$). The last comparison included men described as pedophilic based on the *SSPI* (Seto & Lalumière, 2001). Those men with a score of three or above were defined as pedophilic (*SSPI*, $n = 103$). Those with scores below three were considered nonpedophilic ($n = 103$). *SSPI* scores were calculated by the authors based on recoding existing information in the dataset. Each participant was not necessarily assessed with both methods (*DSM* and PD) for determining pedophilia, and thus, participant numbers in each group will not sum to 206. The reasons for missing data may have included a lack of information (file or self-report) to make a diagnosis, an inability to

adequately assess deviant arousal because of technological problems or refusal to participate in some aspects of the assessment.

Measures

Diagnostic and Statistical Manual of Mental Disorders

Two versions of the *DSM* were used during the initial assessment of participants in this study (*DSM*-III, APA, 1980; *DSM*-III-R, APA, 1987). The participants for whom *DSM* diagnoses were available were assessed with *DSM-III* (n = 56) and *DSM-III-R* (n = 108). The diagnostic criteria for both versions are included in the Appendix. The specific version of the *DSM* used in the determination of the diagnosis varied depending on the year of assessment. The progression of the *DSM* resulted in more specific and comprehensive criteria with respect to greater behavioural emphasis, and age specifications. Specifically, *DSM-III* and *DSM-III-R* did not include acting on fantasies and urges as one of the criteria, which resulted in the potential exclusion of individuals who molested a child, yet denied sexual fantasy and attraction. This change would have likely resulted in fewer men being diagnosed as pedophilic using the *DSM-III-R*. However, as Marshall (1997) notes, many diagnosticians ignored this statement in order to justify treating individuals who were clearly engaging in deviant sexual behavior, regardless of their own admission. Participants were defined as either pedophilic or not by the psychiatrists. The *DSM* did not include any information on validity or reliability for either version. Subsequently, the *DSM-IV* added a behavioural component to the criteria, but the requirement for the patient to feel distress remained. Note that this latter element was changed in the most recent edition of the *DSM-IV-TR* , which was not used in the present study.

Screening Scale for Pedophilic Interests

The *SSPI* (Seto & Lalumière, 2001) is a brief screening instrument based on historical/static offence variables. The scale includes four items including presence of a male victim, more than one victim, victim is 11-years-old or younger, and unrelated victim. The *SSPI* has been shown to be highly correlated with measures of pedophilic interest based on phallometric assessment (pedophilic index), and to identify pedophilic interest in child molesters significantly better than chance (Seto & Lalumière, 2001). Two scoring methods were considered for the *SSPI*, including the original continuous score, and a dichotomized score. Although this measure was not designed with a cutoff score, we chose to dichotomize our participant group based on high versus low scores. This was done for the purpose of comparing this measure to the more traditional, and categorical methods of determining pedophilic interest.

Measurement of Sexual Arousal

Changes in penile circumference in response to audio stimuli were measured by means of an Indium-Gallium strain gauge and processed on an IBM compatible computer for storage and printout.

Stimuli Presentation. The order of the stimuli presentation, held constant for all participants, was computer-controlled. Participants were presented with one or more of three series of audiotapes. The audiotape battery consisted of vignettes (Abel, Blanchard, & Barlow, 1981) of approximately two-minute duration describing sexual activity between two people varying with respect to age, sex, and degree of consent, coercion, and violence portrayed. Each participant was presented with a full set containing one vignette from each category following instructions to allow normal arousal to occur. The female child series consisted of descriptions of sexual activity with a female partner/victim for eight categories. The male child series

consisted of eight corresponding vignettes involving a male partner/victim but also included one scenario involving an adult female partner. For each of the female and male child series, two equivalent scenarios for each category were included. Categories were as follows: (a) child initiates, (b) child mutual, (c) non-physical coercion of child, (d) physical coercion of child, (e) violent sex with child, (f) nonsexual assault of child, (g) consenting sex with female adult, and (h) sex with female child relative (incest).

Scoring. The Pedophile Index (PI) was calculated by dividing the participant's highest response to a child initiates or child mutual stimulus by the highest response to an adult-consenting stimulus. The Pedophile Assault Index (PAI) was calculated by dividing the highest response to an assault stimulus involving a child victim (non-physical coercion of child, physical coercion of child, sadistic sex with child, or nonsexual assault of child) by the highest response to a child-nonviolent stimulus. In addition to the index scores, a dichotomized variable was also created reflecting deviant (>1) and non-deviant (<1) scores. This was done for the purpose of comparing this measure to the more traditional, and categorical methods of determining pedophilic interest. Participants were defined as pedophilic if their score on either the PI or PAI was deviant (PD).

Recidivism Analyses

A definition of sexual recidivism was any charge or conviction for a sexual offence after the index offence. Violent recidivism was any charge or conviction for a violent and/or sexual offence and finally, criminal recidivism was any charge or conviction noted in the Canadian Police Information Center's (CPIC) report. Recidivism analyses were based on the time to any sexual, violent, or criminal offence, and the length of follow-up in this particular study was 20 years. It should be stressed that recidivists were those individuals that have been charged or

convicted of reoffending. It is evident that this is an under representation of all reoffending. This cumulative hierarchy in which each additional category includes the previous category is employed to account for plea-bargaining, a common practice, and to allow comparison with prior recidivism studies.

In the present study the time to first reoffence was entered into the survival analysis. In some cases this may have underestimated the time to sexual or violent recidivism, in the event that a first reoffence was considered criminal, and yet the same individual later committed a sexual offence. Although the participant would be categorized as a sexual recidivist, his time to sexually reoffend would be shorter than it appears on the survival curve. More than half of sexual offenders are released to the community on conditional release (Motiuk & Belcourt, 1996). In order to calculate time at risk to reoffend during the 20-year follow-up period, information detailing the exact amount of time served for each sentence and amount of time living in the community was needed. This information was beyond the scope of the present investigation.

Statistical Treatment of the Data

Prior to performing statistical tests, the data were screened to ensure that assumptions underlying the tests were not violated. Outlying cases were detected using a criterion of plus or minus three standard deviations from the mean or by visual inspection of normal probability plots. Values of outlying cases were adjusted upward or downward according to the direction of the problem.

RESULTS

Descriptive characteristics of the pedophilic offenders for each diagnostic category are summarized in Table 1. The overall proportion of men recidivating was 22.8% (47/206) for sexual recidivism, 33.9% (70/206) for violent recidivism (including sexual), and 45.6% (94/206) for general recidivism. The proportions of recidivists based on first reoffence was 17.4% (36/206) for sexual recidivism, 28.6% (59/206) for violent recidivism (including sexual), and 45.1% (93/206) for general recidivism. The overall average time at risk to first reoffence was 10.56 years (*SD* = 4.5) for sexual recidivists, 9.80 years (*SD* = 4.95) for violent (and sexual) recidivists, and 8.14 years (*SD* = 5.30) for criminal recidivists. One-way ANOVAs were used to compare time at risk to violently (including sexual) recidivate. Pedophiles had statistically shorter times at risk than nonpedophiles for each classification procedure, with the exception of the phallometrically defined group. The times at risk for the pedophiles and nonpedophiles respectively were as follows: (1) *DSM* (9.41 versus 11.74, $p < .01$); (2) PD (9.95 versus 11.03, $p = ns$); (3) DSM+PD (11.79 versus 14.52, $p < .001$) and (4) *SSPI* (8.55 versus 10.98, $p < .001$).

Association Between Pedophilia and Recidivism

Correlations were calculated to determine the relationships between the three diagnostic methods and the three types of recidivism. For phallometric and *SSPI* variables, both continuous and dichotomous scores were included to explore if different methods of scoring offered improvements in determining a relationship between pedophilia and recidivism. As shown in Table 2, only the Pedophile Assault Index (continuous; PAI-C) was significantly associated with sexual recidivism in pedophiles (r^2 .04). Table 2 also shows how the relationships between diagnostic methods were mixed. The pedophile index was associated with both the *DSM* and

SSPI. However, these relationships varied with the scoring method used (i.e. continuous or dichotomous).

Insert Table 2 about here

Survival Analysis: Comparing Pedophiles and Nonpedophiles

A life-tables survival analysis was used to compare recidivism rates for pedophiles and nonpedophiles within each diagnostic group. This method provided the opportunity to assess the probability of each offender recidivating for each year up to 20-years follow-up. This type of analysis takes into account all subjects included in the study, the length of time each offender was followed, and whether or not he committed a new offence (Prentky, Lee, Knight, & Cerce, 1997). These analyses computed recidivism based on the time to the first offence, and produced the survival rates over a 20-year period. Figure 1 illustrates the survival rates for pedophiles and nonpedophiles across the four diagnostic categories for violent recidivism (including sexual). Pedophiles and nonpedophiles in the *DSM* group were not significantly different for sexual recidivism, Survival $\chi^2 = .002$ (1), $p = .97$, violent recidivism, Survival $\chi^2 = .002$ (1), $p = .97$, or criminal recidivism, Survival $\chi^2 = .091$ (1), $p = .76$. The survival rates of pedophilic and nonpedophilic sexual offenders in the Phallometric group were not significantly different for sexual recidivism, Survival $\chi^2 = 3.33$ (1), $p = .07$, violent recidivism, Survival $\chi^2 = 2.27$ (1), $p = .13$, or criminal recidivism, Survival $\chi^2 = 3.57$ (1), $p = .06$. In comparing the survival rates for those diagnosed based on the *DSM*+Phallometric criteria, no significant differences were found for sexual recidivism, Survival $\chi^2 = .488$ (1), $p = .49$, violent recidivism, Survival $\chi^2 = .337$ (1), $p = .56$, or criminal recidivism, Survival $\chi^2 = .388$ (1), $p = .53$. Finally, pedophiles and

nonpedophiles in the *SSPI* group were not significantly different for sexual recidivism, Survival $\chi^2 = .418$ (1), $p = .52$, violent recidivism, Survival $\chi^2 = .071$ (1), $p = .79$, or criminal recidivism, Survival $\chi^2 = .033$ (1), $p = .96$. Survival graphs for only violent recidivism were chosen to reduce space and redundancy given nonsignificant results.

Insert Figure 1 about here

DISCUSSION

The purpose of the present study was to examine recidivism in men variously defined as pedophilic. Furthermore, the different methods of operationalizing pedophilia were considered to address questions of definition. This research contributes to the literature by addressing specific questions about what differences exist between pedophiles and nonpedophiles with respect to recidivism.

The overall proportion of men recidivating was 22.8% (47/206) for sexual recidivism, 33.9% (70/206) for violent recidivism (including sexual), and 45.6% (94/206) for general recidivism. No differences existed between pedophiles and nonpedophiles with respect to recidivism rates. However, in most groups the pedophiles had significantly shorter times at risk compared to the nonpedophiles. This difference is likely attributable to the lengthier sentences awarded to pedophilic offenders, resulting in longer prison terms and shorter periods of conditional release and thus opportunity to reoffend. Despite shorter times at risk, they were no more likely to recidivate compared to nonpedophiles.

The correlational results suggested that only phallometric assessment, when considered continuously (PAI-C), was associated with sexual and general recidivism in this group of

pedophiles. However, it should be noted that this effect was quite small. No other method of defining pedophilic interest was related to any form of recidivism. The relationship between the PAI and sexual recidivism may suggest that the inclusion of violence in this index represents a more sensitive albeit weak indicator of risk. Similarly, in a study of extrafamilial child molesters using the same database, recidivists were differentiated from nonrecidivists by their preference for child assault stimuli and use of violence during the offence, and not their sexual preference for children alone (Wexler, et al., 2006). Therefore, perhaps it is violence and not purely the attraction to underage persons that is indicative of risk to reoffend.

Given recent meta-analytic findings suggesting a relationship between deviant sexual arousal and recidivism, these results are somewhat surprising (Hanson & Bussière, 1998, Hanson & Morton-Bourgon, 2004). However, previous research reported by Rice, Quinsey, and Harris (1991) found a similarly weak relationship between phallometric assessment of deviant sexual preference and recidivism, such that deviant indices accounted for less than three per cent of the variance in the prediction of outcome. Marshall (2006) has argued that phallometry is a weak predictor of recidivism, likely due to the issues surrounding reliability and validity described above. Specific differences in procedures and populations may also contribute to disparate findings. The participants in the current study were assessed in a hospital setting often prior to adjudication. Many of these men received short or community-based sentences. Therefore, this sample likely represents a broader sample of offenders, which may differ from incarcerated sexual abusers. Procedurally, the hospital protocol for phallometry included no method to detect and track faking. A portion of the "true" pedophilic sample may have inhibited deviant sexual responses and thus been misdiagnosed as non-pedophilic. Clearly, a number of issues exist with the use of phallometric assessment, and we submit that some of these problems may explain the

lack of findings between groups. Standardization of phallometric stimuli and procedures will improve consistency in research, and thus greater clarity regarding what does and does not predict recidivism with respect to deviant sexual preference. In the meantime we recognize the present findings as anomalous, and hope other researchers will continue to examine and attempt to replicate these findings.

With respect to associations between diagnostic methods, we found some small correlations between phallometrically assessed deviant sexual arousal and the *DSM* and *SSPI*. However, as mentioned above, this depended on the scoring method used. This may reflect the loss of power associated with dichotomized variables. This is important when considering the debate about defining sexual deviance as a categorical concept rather than dimensionally (Marshall, 2006). Further evidence for this argument is that the *DSM* was associated with phallometric results only when they were considered continuously. The findings suggest that the *DSM* and categorical definitions in general may not be a viable tool in assessments for the purpose of predicting reoffence and risk management. Given that such diagnoses are the typical means of conveying pathology in such assessments, these results have important implications for questions relevant to civil commitment and dangerous offender proceedings. Although additional correlations existed between *DSM*+PD and various measures of phallometric assessment and the *DSM*, the reader is reminded that these relationships are by design.

In previous research no relationships were found between the same diagnostic methods examined presently (Kingston et al., 2006). The current statistically significant results likely reflect the use of continuous scoring, but the effect sizes remain small, diminishing the importance of the findings.

The final hypothesis was not supported. That is, no differences were observed between pedophiles and nonpedophiles with respect to time to first sexual, violent, and any criminal reoffence regardless of how pedophilia was defined. These results suggest that meaningful differences may not exist between pedophilic and nonpedophilic offenders in terms of their risk to reoffend, and actual reoffence rates. This finding has implications for practice, given that pedophiles are often considered to be at greater risk for sexual recidivism compared to nonpedophilic offenders. This finding also extends our previous research where we determined that pedophiles and nonpedophiles did not differ on a number of important psychological and offence related characteristics, such as criminal history, psychopathy, substance use, hostility, and sexual functioning (Kingston et al. 2006).

These results suggest poor predictive validity of pedophilia as a *DSM* diagnostic category or otherwise defined as in the present investigation. Diagnoses, *DSM* or otherwise, are employed because of their putative value for therapeutic guidance and predictive utility (e.g. recidivism). However, in this investigation, regardless of how it was defined, pedophiles and nonpedophiles could not be reliably discriminated with respect to recidivism.

Limitations

Although we have attempted to provide a simple and yet broad examination of pedophilia and recidivism, we acknowledge that certain limitations warrant that the results be interpreted with caution. Concerns with the reliability of self-report data, particularly in forensic settings, have routinely been cited and may have influenced the results of the present study (Nugent & Kroner, 1996; see also Mills, Loza, & Kroner, 2003). Given that two of the methods used for defining pedophiles in this study are likely influenced by the respondents desire to present himself in a socially desirable manner (interviews for *DSM* diagnosis, and phallometric

assessment), it may be that certain pedophilic individuals were not detected and therefore were classified as non-pedophiles.

Another issue to acknowledge is that the psychiatrists making the diagnoses in this investigation were not aware that the validity of their diagnoses was going to be studied. We feel that the results presented may, as such, be seen as even more ecologically valid because they reflect how the diagnosis is routinely used. One might argue that because the criteria are so flawed, diagnosticians are forced to modify or infer data for the purpose of making a diagnosis, and it is likely that these issues (i.e. diagnostic criteria, inference) compromise the utility of the diagnosis.

As mentioned above, the participants in the study were assessed over a 10 year period, during which time, *DSM* criteria for pedophilia changed. Changes in the criteria over the span of the study may have challenged the reliability of diagnosis, resulting in some contamination between the groups. As described above, previous versions of the *DSM* have been criticized due to the requirement that an individual be distressed about their fantasies, urges, and/or behaviours in order to warrant a diagnosis. In the *DSM-IV-TR* this specification has been removed, acknowledging that some individuals are not distressed by their pedophilic interest/behaviour. Therefore, we may observe different results based on the current application of the *DSM* criteria.

Psychometrically, much controversy surrounds the reliability and validity of both the diagnosis of pedophilia (O'Donohue et al., 2000) and phallometrics (Marshall, & Fernandez, 2003). This is problematic given that both were used to define pedophilic groups. The decision to define pedophilia using these methods was based on the fact that these are the two most commonly used ways to make such a categorization in the field. Clearly, these methodological issues will impact on the integrity of these results. However, given that *DSM* and phallometric

assessment remain the standard of practice, the practicality and generalizability of these results warranted the use of these tools.

The current use of the *SSPI* may represent another limitation to the present study. The authors recognize that this instrument was not designed to be a diagnostic tool, but we chose to incorporate it as another method of defining pedophilia because of its promise as a non-intrusive, actuarial method of identifying men with pedophilic interests. The use of high scores (3-5) was selected by the authors as a way of differentiating those men with more, or more strongly weighted, features associated with pedophilic designation. The authors recognize that the determination of high scores is arbitrary and does not represent the suggested use of the *SSPI*. However, such a dichotomous categorization, in addition to the prescribed continuous scoring method, was selected for the purpose of consistency between grouping methods.

Lastly, an underlying limitation to forensic work is the difficulty establishing base rates and accurate reporting of offences and reoffences. Therefore, this research summarizes results for those recidivists who had been detected within the follow-up period, and therefore represents an underestimate of recidivism in pedophiles.

Conclusions

This study suggests that the current use of the diagnosis of pedophilia may not provide clinicians and researchers with additional or relevant information to effectively, and reliably predict recidivism for extrafamilial child molesters. The results suggest that those individuals diagnosed as pedophiles do not recidivate more often or more quickly than nonpedophiles. Given that the present findings, along with those of a related study (Kingston, et al., 2006) contradict the implication that pedophiles are more deviant and likely to reoffend, it seems prudent to

reevaluate the current definition and diagnostic practices related to pedophilic interest. Consistent with the suggestions of others (Marshall, 1997; 2005; 2006; O'Donohue, et al., 2000) it is the authors' belief that future descriptions of the dangerousness of extra-familial child molesters focus more on behavioural criteria. Information gleaned from actuarial assessments, concerning the type of sexual offence and the number of victims may be more useful than a formal diagnosis. The present investigation suggests such diagnoses offer little useful information regarding legal adjudication, at least in terms of the probability of reoffending,

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Appendix

Diagnostic and Statistical Manual of Mental Disorders: Criteria for Pedophilia

DSM-III	*DSM-III-R*
A. The act or fantasy of engaging in sexual activity with prepubertal children is a repeatedly preferred or exclusive method of achieving sexual excitement	A. Over a period of at least sex months, recurrent intense sexual urges and sexually arousing fantasies involving sexual activity with a prepubescent child or children (generally age 13 or younger).
B. If the individual is an adult, the prepubertal children are at least ten years younger than the individual. If the individual is a late adolescent, no precise age difference is required, and clinical judgment must take into account the age difference as well as the sexual maturity of the child.	B. The person has acted on these urges, or is markedly distressed by them.
	C. The person is at least 16-years-old and at least 5 years older than the child or children in A.

Note: From *DSM-II*I (APA, 1980) and *DSM-III-R* (APA, 1987).

Table 1.

Demographic Information for Pedophilic Sexual Offenders based on Various Definitional/Diagnostic Categories

Variable	DSM	Phallometric	DSM + Phallometric	SSPI
Age (In Years)	37.4±12.48 (85)	37.19±12.85 (110)	35.81±13.02 (59)	37.23±12.66 (103)
Education (In Years)	11.08±4.44 (84)	10.61±4 (103)	10.47±4.30 (59)	10.63±3.75 (101)
Ever Married	28.6 (84)	33.3 (108)	22.0 (59)	40 (100)
Pedophile Index	1.68±1.64 (82)	1.90±1.57 (110)	2.23±1.62 (59)	1.68±1.53 (61)
Pedophile Assault Index	.83±.65 (81)	1.11±.61 (110)	1.03±.60 (58)	.80±.65 (61)
Prior Charges/Convictions				
Sexual	.98±3.19 (85)	1.43±4.69 (110)	.80±1.85 (59)	1.96±4.98 (103)
Violent	1.29±3.35 (85)	1.85±4.78 (110)	1.17±2.09 (59)	2.21±5.03 (103)
Criminal	3.77±8.42 (85)	4.36±8.81 (110)	3.88±6.78 (59)	4.14±7.20 (103)
Recidivism				
Sexual	24.7 (85)	30.9 (110)	30.5 (59)	23.3 (103)
Violent	34.1 (85)	41.8 (110)	42.4 (59)	32 (103)
Criminal	45.8 (85)	54.5 (110)	55.9 (59)	44.6 (103)

Note: Means or percentages are reported. Percentages represent the proportion who had been married and who had recidivated. Sample size in parentheses.

Table 2.

Correlation Matrix for Diagnostic Method and Type of Recidivism

	SSPI-T	SSPI-C	PI-C	PI-D	PAI-C	PAI-D	DSM+PD	Sexual	Violent	Any
DSM	-.01	-.00	.18*	.12	-.00	.00	1.00	-.03	-.09	-.06
	(164)	(164)	(157)	(157)	(155)	(155)	(102)	(164)	(164)	(164)
SSPI-T	-	.70**	.15	.17*	-.06	-.05	.01	-.05	-.11	-.04
		(206)	(157)	(157)	(155)	(155)	(102)	(206)	(206)	(206)
SSPI-C		-	-.03	.00	.08	.01	.05	-.10	-.09	.02
			(157)	(157)	(155)	(155)	(102)	(206)	(206)	(206)
PI-C			-	.75**	.03	-.08	.61**	.01	.05	.06
				157	(155)	(155)	(102)	(157)	(157)	(157)
PI-D				-	.09	-.01	.74**	.08	.06	.07
					(155)	(155)	(102)	(157)	(157)	(157)
PAI-C					-	.81**	.23*	.20**	.15	.21**
						(155)	(101)	(155)	(155)	(155)
PAI-D						-	.12	.12	.03	.13
							(101)	(155)	(155)	(155)
DSM+PD							-	.05	-.01	.04
								(102)	(102)	(102)
Sexual								-	.75**	.59**
									(206)	(206)
Violent									-	.78**
										(206)

Note: DSM = Diagnostic and Statistical Manual for Mental Disorders (*DSM* III/*DSM*-III-R); *SSPI*-T = Screening Scale for Pedophilic Interests – Total score; *SSPI*-C = Screening Scale for Pedophilic Interests-Cutoff scores; PI-C = Pedophile Index – Continuous scores; PI-D = Pedophile Index – Dichotomous scores; PAI-C = Pedophile Assault Index – Continuous scores; PAI-D = Pedophile Assault Index – Dichotomous scores, DSM+PD = diagnosis based on Diagnostic and Statistical Manual for Mental Disorders (*DSM* III/*DSM*-III-R) and deviant score on either PAI-D or PI-D; Sexual = sexual recidivism; Violent = violent recidivism; Criminal = criminal recidivism.

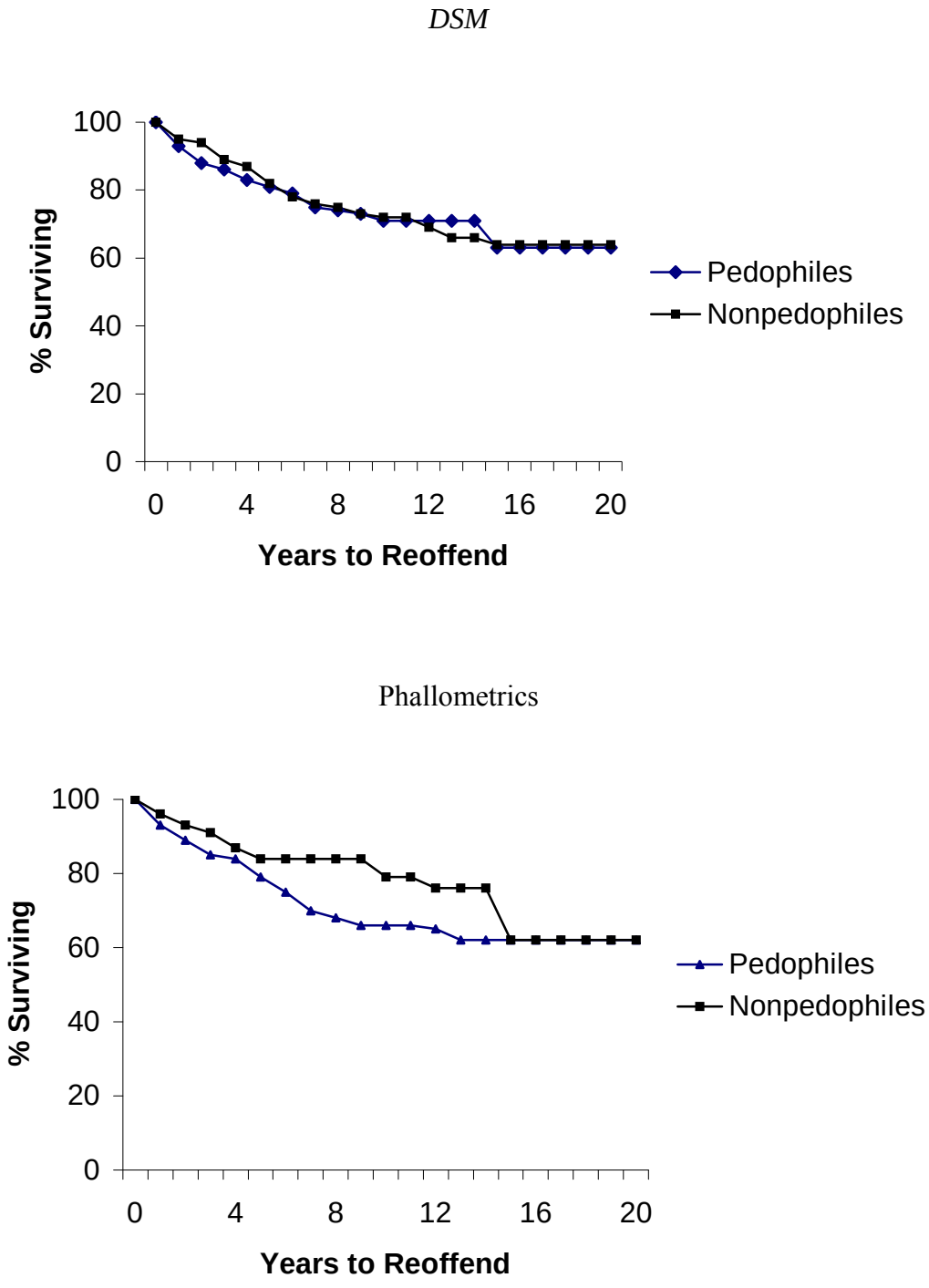
* = $p < .05$; ** = $p < .001$.

Figure Captions

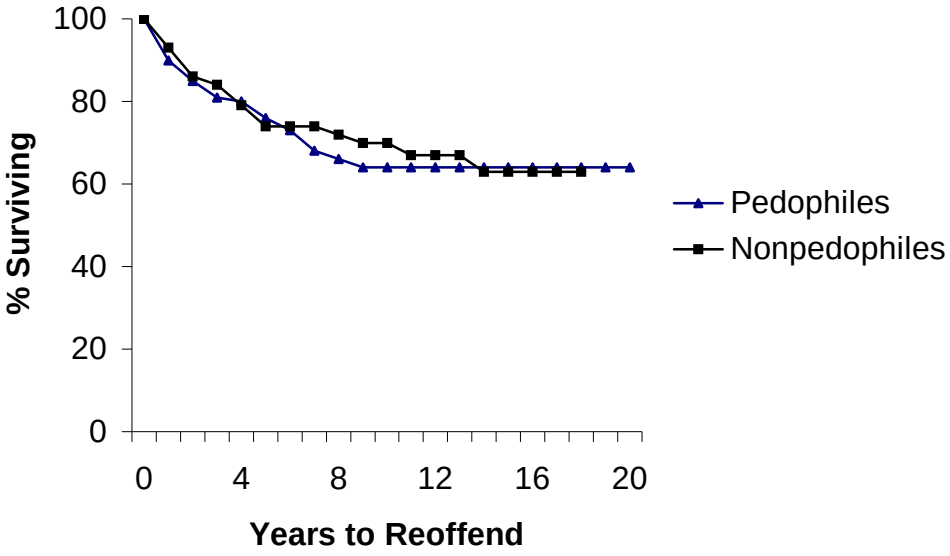
Figure 1.

Survival graphs for violent (including sexual) recidivism up to 20-years

Figure 1.


DSM
100
80
60
40
20
0
% Surviving
0
4
8
12
16
20
Years to Reoffend
Pedophiles
Nonpedophiles
Phallometrics
100
80
60
40
20
0
% Surviving
0
4
8
12
16
20
Years to Reoffend
Pedophiles
Nonpedophiles

DSM+Phallometrics



SSPI