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Research Article

Sexual Addiction and Adult Attachment in Incarcerated Sexual Offenders and a Matched Community Comparison Group

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Abstract

This paper examines sexual addiction and adult attachment in incarcerated sexual offenders and a socioeconomically matched community comparison group. Previous research has shown sexual offenders to have greater problems with sexual addiction and be more likely to report an insecure attachment style than matched community comparisons. However, there are no known examinations of the relationship between sexual addiction and attachment in sexual offenders. One hundred and forty five participants completed the Sexual Addiction Screening Test and the Relationship Questionnaire. Consistent with previous reports, results show sexual offenders to have greater problems with sexual addiction and attachment than the socioeconomically matched community comparison group. Sexual offender sexual addicts also reported greater insecure attachment than non-sexually addicted sexual offenders. Implications for treatment are discussed.

Keywords: Sex addiction; Attachment; Sex Offenders; Hypersexuality; Sexual Preoccupation

Introduction

Sexual offending is a serious social issue that has profound negative consequences for victims [1]. Although there are now treatments for sexual offending which appear to be effective [2,3] the magnitude of the effect of treatment has been described as “not large” [4]. Consequently, it is important to examine and better understand dynamic risk for recidivism factors to be able to enhance the effectiveness of treatment in order to reduce future risk for recidivism among known sexual offenders. Of the identified dynamic risk for sexual recidivism factors, problems in interpersonal relationships and sexual preoccupation are two of the strongest predictors of risk for recidivism [5-7]. However, although there have been studies conducted on these risk issues independently, and one study examined these issues in adolescent male sexual offenders [8], there currently exist no examinations of the relationship between these risks for recidivism

factors in adult incarcerated male sexual offenders. The current study aims to examine whether there exists any relationship between interpersonal relationship issues, namely attachment style, and sexual preoccupation in incarcerated sexual offenders.

Sexual Preoccupation

We have previously shown sexual preoccupation to have extensive conceptual overlap with sexual addiction, and a measure of sexual addiction, the Sexual Addiction Screening Test, to reliably differentiate between non-offenders and sexual offenders better than other measures of sexual addiction, sexual preoccupation, sexual compulsivity, or hypersexuality [9]. Therefore, the focus of this examination of sexual preoccupation in sexual offenders will use the term sexual addiction and the associated measure (i.e., the Sexual Addiction Screening Test).

The concept of humans experiencing and acting on an excessive desire for sexual behavior has been evident for many years in terms such as hypersexuality, sexual impulsivity, sexual compulsion [10]. In the 1980's, the term sexual addiction was popularized in the book *Out of the Shadows* [11] by Patrick Carnes. Carnes described sexual addiction as the experience of compulsive sexual feelings, as well as the probable likelihood of following through with behaviors that reflect these feelings. The term sexual addiction has not yet been included as a diagnosis in the Diagnostic and Statistical Manual of Mental Disorders (currently DSM-V) [12] or been well received in other areas of psychology and psychiatry [13,14].

Estimates of the prevalence (3-6%) of sexual addiction in the general community [15] suggest it to be a serious social problem however there is currently a paucity of research on prevalence rates in the general population. Benotsch and colleagues [16] surveyed HIV-positive men and women and report 16.6% of them to have high scores on a measure of sexual compulsivity. If this result does reflect prevalence among this group, it would suggest that HIV-positive men and women have a prevalence of sexual addiction rate nearly three times that of Carne's [15] estimate in the general population.

In a facility specializing in the treatment of people with chemical dependence problems who had relapsed, the prevalence of a comorbid sexual addiction ranged from 25% to 33% [17] which is, again, significantly higher than in the general population. These prevalence rates suggest that for special populations characterized by behavioral dysregulation, the prevalence of sexual addiction is likely to be significantly higher than the estimates of the prevalence of sexual addiction in the general population.

Carnes' [18] describes three levels of sexual addiction with the highest level (three) being those behaviors that are both illegal and harmful to others, such as sexual offending. In previous research, we have shown sexual offenders to have high rates (~36%) of sexual addiction [9]. Although not all sexual addicts engage in criminal behavior and in fact most do not, there are some for whom sexual addiction can escalate to behaviors that are harmful to others such as in the case of sexual offending. For some sexual addicts, sexual behaviors that are initially satisfying lose their ability to satisfy sexual needs leading some of these addicts to seek greater excitement [15] which may result in criminal behavior.

A central concept to Carnes' definition of sexual addiction is that sexual addicts are so consumed by and preoccupied with sexual thoughts or behaviors that they rarely focus on or have the energy for anything of substance in their life, such as seeking and working on a secure relationship with another adult [19]. One possible etiological explanation for the diversion of interest from making healthy adult relationships to fuelling an addiction can be found in extant literature suggesting that early childhood experiences

of trauma, such as poor parenting, death of a loved one, or abuse, play a key role in problems with establishing healthy relationships in adulthood [19,20]. Indeed, Carnes reports that sexual addicts have higher rates than non-addicts of experiencing relationship disruptions in childhood [15] suggesting that early childhood attachments may play a key role in the development of an adulthood sexual addiction.

As noted before, there is much conceptual overlap between the terms sexual addiction, sexual preoccupation, hypersexuality, sexual compulsivity, etc. [9]. To maintain clarity and in deference to authors cited, these terms will be used interchangeably in this report. That is, where a cited author refers to this problem with a specific title, such as hypersexuality or sexual compulsivity, the same term used by the author will also be used in this paper but the term and results are believed to be relevant to sexual addiction.

Attachment

Attachment theory proposes and research supports the idea that early experiences with caregivers give children a template for future relationships [21-23]. An infant's crying causes a receptive and caring mother to respond by comforting and tending to the infant's needs thereby teaching the child that others are available and reliable, in times of need and that the infant is worthy of the love and attention of others. Whereas, caregivers who either ignore the child's needs or are inconsistent in their responses, teach a child that others are unreliable or that the child is not worthy of love and affection. This interplay between the caregiver and child results in what Bowlby calls internal working models of self and others.

These internal working models can be either positive or negative. A negative internal working model of others is reflective of a belief that others are not capable of giving love, whereas, a positive internal working model of others reflects a belief that others are trustworthy and capable of being loving. A negative internal working model of self indicates that the child does not believe they are capable of inspiring love in others, whereas, a positive internal working model of self reflects a belief that the child can inspire love in others. Clearly, these internal working models of self and others have serious implications for the development of intimate relationships. For example, insecure attachment can cause infants to develop a strategy of coping with distress by avoiding others, such as removing themselves from the distressing situation to play alone [24], as in the case of those infants who develop a negative internal working model of others. Or, those children who develop a negative internal working model of self and become anxious about the availability of others, may cling to caregivers for fear that they will not be available when the child needs comfort.

Building on a rather extensive literature on attachment in childhood and in order to examine attachment behavior

and styles in young adults, Bartholomew and Horowitz [25] described a dimensional model of attachment based on view of self and others. They retained Bowlby's secure attachment style (positive view of self, positive view of others) and described three insecure attachment categories: Preoccupied (negative view of self/positive view of others), Dismissive (positive view of self/negative view of others), and Fearful (negative view of self/negative view of others). Bartholomew and Horowitz's [25] theory has received extensive empirical support in, amongst other populations, young adults [26,27], the elderly [28,29] and sexual offenders [30,31].

Sexual addiction and attachment

There exists no known research on the relationship between sexual addiction and attachment within an adult male sexual offender population. There has however been research on attachment and hypersexuality (sexual preoccupation/ sexual addiction) in adolescent sexual offenders [8]. This research demonstrated a statistically significant but indirect relationship between attachment problems (particularly attachment anxiety), hypersexuality, and sexual offending. Although not directly testing the link between attachment and hypersexuality, attachment anxiety was found to affect involvement with peers and to be related to feelings of interpersonal inadequacy. Feelings of interpersonal inadequacy combined with hypersexuality and a positive view of others differentiated those adolescents who offended against children from those who sexually offended against peers or adults, and non-sexual offenders.

In sexually addicted non-offending adult males, Leeds [32] reported that 95% of sexual addicts in his study displayed an insecure attachment style, with 68% having an avoidant attachment style (analogous to Bartholomew & Horowitz's dismissive and fearful attachment styles) and 27% having an anxious attachment style (analogous to preoccupied attachment style). Unfortunately, the method of assigning a specific attachment style to the study participants was not reported by Leeds making it difficult to interpret, replicate, and verify these results.

Corley and Kort [33] examined attachment style in males who reported having been married to a woman at some point in their lives and had also entered treatment for addictive sexual behavior that included sexual contact with other males. None of the respondents in Corley and Kort's [33] study reported a secure attachment style, with the most predominant insecure style being dismissive (avoidant), which is characterized in Bartholomew and Horowitz's dimensional model [25] as a positive view of self but a negative view of others.

Zapf and his colleagues, [34,35] found that sexual addicts had greater attachment anxiety (preoccupied attachment style) and avoidance (dismissive and fearful attachment

styles) than did non-addicts. This pattern of attachment insecurity, anxiety and avoidance, is most closely reflected in Bartholomew and Horowitz's [25] fearful attachment style, which is characterized by a negative internal working model of self and others. In the only other report on attachment in sexual addicts we could find using the PsychInfo search engine, Brooks [36] reported that 70% of the men in a residential treatment facility for a sexual addiction problem displayed insecure attachment. Unfortunately, no breakdown of the distribution of the insecure attachment styles was available at the time of writing this paper.

Although there are some differences in the patterns of attachment problems reported, all of these examinations of a relationship between sexual addiction and attachment demonstrated insecure attachment to be a significant problem for sexual addicts. The research on sexual offenders cited above shows a similar pattern of attachment problems among these offenders. Consequently, it is reasonable to expect sexual offender sexual addicts to report insecure attachment style. The issues raised by our review suggest the following hypotheses: 1. Sexual offenders will be more likely to report being sexually addicted than a community comparison group. 2. Sexual offenders will be more likely to report insecure attachment styles than a community comparison group. 3. Sexual offenders who meet criteria for sexual addiction will display greater attachment insecurity than non-addicted sexual offenders.

Method

Participants

Overall, one hundred and forty five adult males participated in this study; fifty of whom were non-offenders from a mid-sized city in Canada and ninety-five of whom were incarcerated sexual offenders. Each participant in the study signed a consent form prior to any testing, and was assured of his anonymity for the purposes of reporting the study.

The community participants (N=50) were recruited via signs posted at cafés and employment agencies in the local area and compensated \$20.00 for their participation in a larger battery of self-report testing. The community participants were thoroughly screened for any evidence of past sexually offensive behavior, no participant was removed from the study as a result of the screening procedure. These participants ranged in age from 19 to 62 years (M=35.19, SD=12.11).

The convicted sexual offenders (N=95) were all volunteers recruited from the Canadian prison system. The sexual offenders in this study ranged in age from 23 to 70 years (M=44.27, SD=10.92), and included both rapists (N=33) ranging in age from 23 to 58 years (M=38.08, SD=10.59), and child molesters (N=62) ranging in age from 26 to 70 years (M=46.54, SD 9.45). A statistically significant

difference in age was found between rapists and child molesters, $t(93)=3.98$, $p < .001$. Although the community and sexual offender volunteers did not differ on educational achievement ($p=.09$) and most recent employment status ($p=.27$), they did significantly differ in age, $t(143)=3.89$, $p < .001$. This reflects a common problem in the sexual offender field, getting middle-aged community males to participate in this type of research. Age was entered as a covariate in the analyses reported below but made no significant difference to the results and therefore the results are reported without age as a covariate.

Measures

The measures used in this article were the Sexual Addictions Screening Test [15] and the Relationship Questionnaire [24]. Each of these questionnaires is a paper and pencil self-report instrument.

The Sexual Addiction Screening Test (SAST) [15] contains 25-items. Respondents answer 'yes' or 'no' to questions meant to be indicative of problems with sexual addiction. Questions gauge the participant's sexually compulsive behavior by asking about past and current sexual experiences and behaviors [37]. Each question answered with a 'yes' is assigned one point. Scoring involves summing the points for a total score. Categorization as a sexual addict requires a total score of 13 or higher; those scoring lower than 13 are considered non-addicts. Carnes [38] demonstrated that this cut off point adequately identifies sexual addicts. The internal consistency of this measure has been found to be excellent, Cronbach's alphas of between .85 and .95 [14].

The Relationship Questionnaire (RQ) was developed as a measure of attachment style in young adults [25]. Section 1 of the RQ requires participants to choose one of four attachment styles (Secure, Preoccupied, Dismissive, Fearful) based on how well the detailed description most closely describes their relationship behavior (RQ1). In Section 2 of the RQ, respondents make a Likert scale rating of how well each of the previously mentioned descriptions reflects their attachment style. The participant can choose from 1, being 'Not at all like me' to 7, being 'Exactly like me'. There are a number of methods of scoring the RQ with the most obvious being the assignment of the participant to an attachment style based on their choice in Section 1.

Attachment style can also be ascribed by using the Section 2 ratings either by observing which description of attachment style the participant rated the highest (RQ2), or by using a formula to derive models of self and others as positive or negative and then ascribing an attachment style (model of self=[Secure + Dismissive] - [Preoccupied + Fearful]; model of others=[Secure + Preoccupied] - [Dismissive + Fearful]) (RQ3). Using the RQ3 method,

scores on view of self and others can range from -12 to +12, with positive scores reflecting a positive view and negative scores being indicative of a negative view.

Results

The results of this study will be reported in three separate sections, which are arranged as follows: 1) The first section will focus on the relative prevalence of sexual addiction in the community participants and sexual offenders using the Sexual Addiction Screening Test (SAST); 2) the second section will focus on attachment categorization in the community participants and sexual offenders using the Relationship Questionnaire (RQ); 3) finally, the relationship between sexual addiction and attachment will be examined in both the community respondents and sexual offenders using the RQ and the SAST.

Psychometrics

In this study the SAST demonstrated excellent internal consistency, Cronbach's $\alpha=.91$, and a strong factor structure, with one factor accounting for 32% of the variance in SAST scores.

Prevalence of sexual addiction

Analyses revealed the lower socioeconomic community respondents to have a statistically significantly lower mean score ($M=4.88$, $SD=4.64$) on the Sexual Addiction Screening Test (SAST) than did sexual offenders ($M=10.29$, $SD=6.33$), $t(143)=3.87$, $p < .001$. Using the SAST as a categorical measure by dividing the respondents into sexual addicts and non-addicts based on their total scores (i.e., less than 13 for non-addicts and greater than or equal to 13 for addicts), the prevalence rate of sexual addiction was significantly lower in the community males (12.0%) than in the incarcerated male sexual offenders (40.0%), Fisher's exact test $< .001$. There was also a statistically significant difference in the prevalence of a problem with sexual addiction between rapists (24.2%, $M=8.03$, $SD=5.09$) and child molesters (48.4%, $M=11.52$, $SD=6.63$) both categorically, Fisher's exact test $=.02$, and using the SAST as a continuous measure, $t(93)=2.63$, $p=.01$.

Attachment categorization

In order to minimize the chance of finding a significant relationship due to multiple comparisons (Type I error), we examined the relationship between the three methods of attachment categorization described above (RQ1, RQ part 2 highest score [RQ2], RQ model of self and others [RQ3]) and found them to be highly correlated: RQ1 with RQ2 $r=.68$, $p < .001$; RQ1 with RQ3 $r=.61$, $p < .001$; RQ2 with RQ3 $r=.76$, $p < .001$. Therefore, we will report only the results of the third method of categorization as this also allows analyses of the RQ models of self and others as continuous measures. We later repeated all of the analyses

below for each of the other methods of categorization (RQ1 & RQ2) and, not surprisingly, found nearly identical results. As shown in Table 1, no statistically significant difference in attachment style was found between community participants and sexual offenders, $\chi^2(3, N=145)=0.76, p=.86$. However, a statistically significant difference was found in attachment style distribution between rapists and child molesters, $\chi^2(3, N=95)=18.45, p=.001$.

There was no statistically significant difference in view of self and view of others between community participants (self: $M=0.65, SD=4.53$, others: $M=0.50, SD=3.09$) and sexual offenders (self: $M=1.08, SD=4.50$, others: $M=-0.31, SD=4.26$): view of self, $t(143)=0.50, p=.62$; view of others, $t(143)=1.20, p=.23$. A statistically significant difference was found between child molesters ($M=-0.09, SD=4.37$) and rapists ($M=3.07, SD=4.11$) in view of self, $t(93)=3.15, p=.002$, and in view of others, child molesters ($M=0.69, SD=4.02$), rapists ($M=-2.13, SD=4.15$), $t(93)=3.06, p=.003$.

Table 1. Attachment style distribution by type of participant.

	Attachment Style			
	Secure	Fearful	Preoccupied	Dismissive
Community	35.0%	27.5%	17.5%	20.0%
Sexual Offenders	32.6%	26.3%	16.8%	24.2%
(Rapists)	(33.3%)	(21.2%)	(0.0%)	(45.5%)
(Child Molesters)	(32.3%)	(29.0%)	(25.8%)	(12.9%)
Total	33.3%	26.7%	17.0%	23.0%

Sexual Addiction and Attachment

In order to be sure that any differences are not simply a result of aging processes, as has been shown in other research on attachment and aging [28,29], we conducted Student t-tests between addicts and non-addicts for all participants, and community respondents and sexual offenders separately. These analyses revealed, collapsed over all of the participants in this study, no statistically significant difference between the ages in years of addicts ($M=43.65, SD=9.25$) and non-addicts ($M=39.54, SD=13.30$), $t(143)=1.20, p=.23$. There was also no statistically significant difference between the age of community sexual addicts ($M=35.25, SD=13.91$) and community non-addicts ($M=34.73, SD=11.95$), $t(48)=0.08, p=.93$, and sexual offender sexual addicts ($M=43.53, SD=9.05$) and sexual offender non-addicts, ($M=45.71, SD=11.83$), $t(93)=0.63, p=.53$.

Overall results comparing sexual addicts and non-addicts on attachment styles are presented in Table 2. A statistically significant difference in the distribution of attachment styles was found between sexual addicts and non-addicts, $\chi^2(3, N=145)=14.31, p=.003$. As shown in Table 3, there was no statistically significant difference in the distribution of attachment styles amongst community sexual addicts and community non-addicts, ($\chi^2 N=50$)=3.71, $p=.29$, however, there was

a statistically significant difference between sexual offender sexual addicts and sexual offender non-addicts, $\chi^2(3, N=95)=11.71, p=.008$.

Table 2. Entire sample, attachment style distribution of non-addicts and sexual addicts.

	Attachment Style			
	Secure	Fearful	Preoccupied	Dismissive
Non-Addicts	35.9%	21.7%	13.0%	29.3%
Sexual Addicts	22.7%	40.9%	27.3%	9.1%

Table 3. Attachment style distributions in community males and sexual offenders by addiction

	Attachment Style			
	Secure	Fearful	Preoccupied	Dismissive
Community				
Non-Addicts	34.3%	25.7%	17.1%	22.9%
Sexual Addicts	0%	66.7%	33.3%	0.0%
Sexual Offenders				
Non-Addicts	36.8%	19.3%	10.5%	33.3%
Sexual Addicts	26.3%	36.8%	26.3%	10.5%

Student t-tests between sexual addicts and non-addicts were also conducted on the dimensions of self and others from the Relationship Questionnaire (RQ). Collapsed across all respondents, there was a statistically significant difference between sex addicts ($M=-1.26, SD=4.16$) and non-addicts ($M=1.89, SD=4.35$) in their RQ ratings of view of self, $t(143)=3.82, p < .001$, but no statistically significant difference between sex addicts ($M=0.74, SD=4.23$) and non-addicts ($M=-0.20, SD=3.89$) in their RQ ratings of view of others, $t(143)=1.23, p=.22$.

No statistically significant difference in a view of self was observed between non-offender community sexual addicts ($M=-3.67, SD=4.04$) and non-offender community non-addicts ($M=0.91, SD=4.53$), $t(48)=1.68, p=.10$, and, in view of others between community sexual addicts ($M=-2.33, SD=5.69$) and community non-addicts ($M=0.69, SD=2.87$), $t(48)=1.62, p=.11$.

Examining incarcerated sexual offenders only, a significant difference in view of self was found between sexual offender sexual addicts ($M=-1.06, SD=4.17$) and sexual offender non-addicts ($M=2.51, SD=4.15$), $t(93)=4.01, p < .001$, but no statistically significant difference between sexual offender sex addicts ($M=1.00, SD=4.08$) and sexual offender non-addicts ($M=-0.76, SD=4.35$) in their RQ ratings of view of others, $t(93)=1.94, p=.056$.

Table 4 presents the results of the mean scores (positive or negative) reported above in terms of the overall attachment style for the community and sexual offender, addicts and non addicts.

Table 4. Attachment styles of respondents based on overall mean view of self and others scores

		Attachment View of		Attachment Style
		Self	Others	
Community	Non-addicts	+	+	Secure
	Sexual Addicts	-	-	Fearful
Sexual Offenders	Non-addicts	+	-	Dismissive
	Sexual Addicts	-	+	Preoccupied

Discussion

This paper sought to examine the relationship, if any, between sexual addiction and attachment style in incarcerated male sexual offenders and socioeconomically matched community males. The results of this study suggest that sexual addiction and attachment style are indeed related and further investigations into this relationship are warranted. In discussing the results of this study, we will first discuss the results on sexual addiction. Then we will discuss the results on attachment style. Finally, we will discuss the results on the relationship between sexual addiction and attachment style. The implications of the results of this study for the treatment of both sexual addicts and sexual offender sexual addicts will be outlined.

Prevalence of Sexual Addiction: Similar to our previous reports [9,38-41] and consistent with our hypothesis on sexual addiction in these two groups, sexual offenders (40.0%) and the socioeconomically matched community sample (12.0%) exhibited higher rates of sexual addiction than those predicted by Carnes [15] for the general population (3-6%). Sexual offenders, then, have been consistently found to be more likely to exhibit sexual addiction as measured by the Sexual Addiction Screening Test than either the estimates of the prevalence in the general community, and in socioeconomically matched males. Given the consistency of our findings it surprises us that more researchers, theorists, and treatment providers in the sexual offender field have not paid more attention to this issue. This is particularly surprising since Hanson and Morton-Bourgon [7] report the strongest predictor of reoffending among sexual offenders to be sexual preoccupation, which is essentially another term for sexual addiction. Although researchers in the sexual offender field have used other terms for sexual behavior problems that have significant similarities to sexual addiction, such as sexual preoccupation, we have found the SAST to be the only measure of these constructs that reliably differentiated sexual offenders from community comparison subjects [9].

The observed prevalence of sexual addiction in the socioeconomically matched community group (12%) is significantly higher than Carnes' [15] estimate of the prevalence of sexual addiction in the general community (3-6%). This result, however, is based on a small number (N=6) of community sexual addicts and therefore is to be interpreted with caution. This results is consistent with our previous findings on prevalence rates in socioeconomically matched community comparison groups but more research is needed on the effects of lower socioeconomic status on the development of a sexual addiction.

Attachment: Interestingly, despite research showing sexual offenders to more likely to be insecurely attached than non-offenders [42] and non-sexual offenders [29], in the present study sexual offenders did not display a significantly different distribution of attachment styles

or view of self or view of others than did the community non-offenders. Although this might initially suggest that there are no differences between sexual offenders and community respondents in terms of attachment styles, we will see later that differences appear when considering the impact of sexual addiction. Further, most existing research on attachment and sexual offending compares sexual offenders to what we believe to be non-matched groups, such as university students.

The current study suggests that rates of insecure attachment style may not necessarily differentiate sexual offenders from non-offenders when using a socioeconomically matched non-offending sample. In previous research and in this study we have also found lower socioeconomic non-offending males to exhibit greater rates of sexual addiction (~12%) than the estimated prevalence rate of sexual addiction in the general community (3-6%). After getting this result in a previous study [9], we hypothesized that sex addiction is cheaper and therefore more easily available to those with little money than other addiction problems, such as gambling or drugs. This may also be the case for some sexual offenders however more research is needed to better understand these findings.

The results of this study showed statistically significant differences in attachment style and view of self and others between child molesters and rapists. This finding offers support for Ward and his colleague's [42] theory on the relationship between the attachment styles of sexual offenders and their type of offending. Specifically, these authors suggested that aggressive forms of sexual offending, such as rape, would more likely be associated with an avoidant style of attachment reflected in a negative view of others. Those sexual offenders with an anxious attachment style, reflected in a negative view of self, Ward et al. suggested would be more likely to use low levels of coercion and engage in more grooming behavior, and that these types of sexual offenders would target children. The present results support both of Ward et al.'s predictions.

Sexual Addiction and Attachment: Including all respondents, both sexual offenders and community comparisons, there was a statistically significant difference in the distribution of attachment styles based on the prevalence of sexual addiction with sexual addicts appearing to have higher rates of insecure attachment style (>75%) than non-addicts (<65%). Similar to previous examinations of attachment in sexual addicts [32,33,35,36] attachment insecurity appears to be a significant problem for sexual addicts. However, unlike Corley and Kort [33] who report the predominant attachment style for sexual addicts to be dismissive, few (9.1%) of the sexual addicts in this study reported a dismissive attachment style. This could be due to the unusual population used in Corley and Kort's study. They examined males who reported having been married to a woman at some point in their lives and

had also entered residential or outpatient treatment for addictive sexual behavior that included sexual contact with other males.

The community comparison sexual addict group appears to be more insecure in their attachment styles than the community non-addicts. Again, however, none of the community sexual addicts evidenced a dismissive attachment style and neither did any of them report a secure attachment style. However, the number of community sexual addicts was quite low (N=6) resulting in four cells with less than the minimum expected count (5) and caution should be taken when interpreting these results.

The sexual offender sexual addicts displayed higher attachment insecurity (~75%) than did sexual offender non-addicts (<65%). Although no statistical significance calculations were conducted, the rates of fearful and preoccupied attachment style reported by the sexual offender sexual addicts appear to be greater than the percentage of secure and dismissive attachment style suggesting a negative view of self is the crucial element to a sexual offender developing or having a sexual addiction. This presents as an interesting avenue for future research. As noted before, Ward and his colleagues [42] have hypothesized a relationship between attachment style and type of sexual offending (e.g., adult versus child victim, force versus coercion). The results of this study appear to support Ward et al.'s theory and in previous research we specifically examined the offence features of sexual offenders who reported a preoccupied attachment style and also found support for this theory in that sexual offenders with a preoccupied attachment style were more likely to groom their victims and use lower levels of force in the commission of their crime [43].

In the next section of the results on sex addiction and attachment, we examined the dimensions of self and others between the community and sexual offender, sexual addicts and non addicts. This revealed some interesting findings, primarily those reflected in Table 4. As noted in the measures section the Relationship Questionnaire (RQ) yields scores on view of self and others that can be either negative or positive. By combining these views of self and others it is possible to assign an attachment style for each participant, or in the current circumstance, each group. This method revealed that for the community comparison group it appears to be a fearful attachment style (negative self, negative others) that is associated with a sexual addiction. In sexual offenders it is a preoccupied attachment style (negative self, positive others) that is associated with a sexual addiction. The difference between non-sexual offender non-addicts and sexual offender non-addicts appears to be in the view of others, with sexual offender non-addicts displaying a negative view of others. These results are consistent with, in particular, Zapf et al.'s [35] findings of high ratings of attachment avoidance and anxiety (fearful attachment) in community sexual addicts. However, there are clearly many community respondents

and sexual offenders whose self-reported attachment style does not neatly fit this finding and therefore each sexual addict needs to be examined for their own particular attachment style whether or not they are a sexual offender.

Implications for Treatment: Although this is the first known examination of these issues (sexual addiction and attachment) in this specific population (incarcerated sexual offenders), this study has many potential implications for the treatment of both sexual addicts and sexual offender sexual addicts. The results presented suggest that sexual addiction is a greater problem for lower-socioeconomic community males but, in particular, for men who have been convicted for a sexual offense, than for middle class men. As was reported in the introduction to this paper, men with behavioral dysregulation problems, such as a drug addiction or engaging in unsafe sexual practices, are more likely to have a comorbid sexual addiction. Consequently, it would seem prudent for community substance abuse and healthy sexual practices treatment providers to also assess and potentially provide treatment for sexual addiction problems. Our findings from this and other research we have conducted suggests that therapists who provide treatment to sexual offenders would also be prudent to screen and provide treatment for sexual addiction problems given the observed high rates of prevalence (~40%) of sexual addiction in sexual offenders. In this and other studies we have found the Sexual Addiction Screening Test to be a psychometrically sound measure of sexual addiction problems in incarcerated sexual offenders and recommend its use for this purpose.

The results of this study on the relationship between sexual addiction and attachment, suggest that sexual addicts, both community-based and sexual offenders, as a group suffer from a negative view of self and may benefit from self-esteem enhancement and assistance with relationship anxiety problems. Community sexual addicts may also benefit from an improved view of others as trustworthy and available in times of need. Treatment for this need can be aided through therapy focused on a positive therapeutic alliance with the client to help them learn to build trust in others and view themselves more positively, as someone who can make positive connections with others. As previously noted, programs aimed at this central issue (i.e., attachment) improve the capacity for communication of thoughts and emotional states. This is accomplished by the modification and revising of maladaptive, misleading cognitive-affective internal working models; improving the person's competence for reflective thought which facilitates the alignment and incorporation of error correcting information [44].

We have recently outlined a strength-based treatment program for sexual offenders [45] that targets among other issues, attachment problems, low self-esteem, and sexual preoccupation. This program has been demonstrated to be effective in reducing the risk for reoffending among sexual offenders (from an expected rate of 16.9% to 3.2% over an

average of 5.4 years at risk, N=535) and this positive-motivational approach may also prove beneficial for the treatment of non-offending sexual addicts.

Conclusion

In this study we sought to examine the relationship between attachment style and sexual offender sexual addiction. Our results clearly indicate a strong relationship between attachment insecurity and sexual addiction, and attachment insecurity and sexual offending. Somewhat surprisingly, non-sexual offender sexual addicts appear to have the most difficulty with attachment security, although sexual offending appears to be importantly related to attachment style. It seems from our results that sexual offender sexual addicts primarily suffer from a negative view of self and that sexual offender non-addicts appear to have a negative view of others. Although more research is needed to replicate and better understand these findings, there are strong implications for the effective treatment of both sexual addiction and sexual offending.

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