

# AN EXPLORATORY EXAMINATION OF OBSESSIVE, SCHIZOTYPAL, AND NARCISSISTIC TRAITS AMONG SEXUAL OFFENDERS

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Sexual offenders demonstrate errors in judgment and deficits in interpersonal functioning that may be attributed to elevations in obsessional, narcissistic, and schizotypal traits. Twenty-five sexual offenders completed a series of personality measures and were compared to 45 non-offending students and 15 mentally ill offenders. Compared to the control groups, sexual offenders showed significant and expected elevations of obsessional features and more schizotypal features compared to nonoffenders. However, contrary to our hypotheses, narcissism was not found to be elevated in sexual offenders. Implications for the treatment and assessment of psychopathological traits and their relation to sexual offending will be discussed in the article.

Key words: sexual offenders, obsessive, schizotypal, narcissistic, forensic

All too often sexual offender research focuses too narrowly on sexual deviancy and arousal patterns while ignoring deficits in social and personality functioning that has been observed in sexual offenders (Hanson & Morton-Bourgon, 2005; Marshall, 1996). Yet clinical attention is commonly given to social and relationship deficits in various programs in the U.S. and Canada (McGrath, Cumming, Burchard, Zeoli, & Ellerby, 2010). Researchers have recognized that the deficits in social and cognitive functioning and their relationship to underlying psychopathology and personality disorders have merit in our understanding of sexual offending behavior (Kafka & Prentky, 1994; McElroy et al., 1999; Whitaker et al., 2008). Many of the deficits that are found in sexual offenders, such as poor social skills (Whitaker et al., 2008), inability to read social cues (Dreznick, 2003), lack of empathy (Fernandez & Marshall, 2003), and cognitive distortions (Segal & Stermac, 1984; Wood & Riggs, 2009) make up part of the symptomatology of major psychopathological and personality disorders. Thus it is quite possible that some sexual offenders have an un-

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derlying disorder which may facilitate poor decisions and cognitive distortions (Ahlmeyer, Kleinsasser, Stoner, & Retzlaff, 2003). Therefore, gaining an understanding of what underlying features are more elevated among sexual offenders may provide better insight into the possible causes and contributing factors to sexual offending. The current study examines whether obsessive traits, schizotypy, and narcissism are associated with sexual offending behavior.

When examining general obsessionality in sexual offenders, Egan, Kavanagh, and Blair (2005) found that obsessional tendencies seemed to be an important influence on the feelings and behaviors of sexual offenders. General obsessive-compulsive traits were related to the cognitive distortions supporting sex with children. While the current definition of obsessions according to the DSM-IV-TR (American Psychiatric Association, 2000) states that the thoughts associated with obsessions are inherently egodystonic, many sexual offenders experience recurrent or persistent thoughts that are egosyntonic. Sexually arousing fantasies, sexual urges, or behaviors that may involve nonhuman objects, the suffering and humiliation of oneself or one's partner, or children or other non-consenting individuals are collectively known as paraphilias. Because some sexual offenders may not experience distress from having paraphilic interests (APA, 2000), these sexual offenders do not appear to meet the criteria for obsessions. However, paraphilias appear to share similarities with obsessive-compulsive disorder (OCD). Both OCD and paraphilias appear to have an onset in adolescence, which continues into adulthood. The compulsive rituals that are seen in OCD appear to be mirrored by compulsive masturbation and other sexual behaviors of persons with paraphilias (Bradford, 1999). Some theorists also claim that paraphilias overlap with features associated with obsessive-compulsive disorder and that areas of the brain responsible for obsessive-compulsive disorder have also been implicated in the creation of paraphilias (Balyk, 1997). Another form of obsessive-compulsive difficulties can be seen in those with obsessive compulsive personality disorder (OCPD). Although Bogaerts, Vanheule, and Declercq (2005) did not find differences on an OCPD scale between their child molesting sample and their matched non-offender control group, OCPD features were found more prevalent among paraphilic child molesters than non-paraphilic molesters in a later study (Bogaerts, Daalder, Vanheule, Desmet, & Leeuw, 2008).

Research on the treatment of sexual offenders also lends support to this association between sexual offending and obsessive compulsive features. Sexual offenders are often treated with selective serotonin reuptake inhibitors (SSRIs) and offenders report that sexually deviant thoughts seem to decrease upon treatment with the use of an SSRI (Abouesh & Clayton, 1999; Bradford, 2001; Kafka, 1991). This does not provide sufficient evidence that disorders in the obsessive-compulsive spectrum is necessarily comorbid in sexual offenders. Instead, it suggests that sexual offenders may demonstrate elevated obsessional and compulsive traits beyond that of a nonoffending and perhaps even a mentally ill population. However, this has yet to be examined.

In addition to obsessive traits, there is some clinical documentation that individuals with certain forms of schizophrenia display chaotic sexuality. This suggests that schizotypic traits, which are associated with variable levels of cognitive slippage, interpersonal

difficulties, and disorganized thinking, may be associated with aberrant sexual behavior and fantasy patterns. For example, an early study by Frost and Chapman (1978) revealed that individuals with schizotypic signs, such as magical ideation and perceptual aberration, showed atypical sexual behaviors. Subsequent research, using the Minnesota Multiphasic Personality Inventory (MMPI), has shown that consistent elevations in the Schizophrenia Scale (Sc) are related to the tendency to display sexual disturbances (Henderson & Kalichman, 1990; Levin & Stava, 1987). Although Bezeau and Jung (2001) and Bogaerts et al. (2008) did not find elevations of schizotypal traits among sexual offenders, much of the research linking schizotypal traits to sexual offenders have found that sexual offenders appear to exhibit some schizotypal personality traits and more than non-sexual offenders (Ahlmeier et al., 2003; Bogaerts et al., 2005; Langevin et al., 1988).

Other researchers have proposed that schizotypic personality organization offers a valid explanation to the thought distortions and interpersonal deficits often seen in sexual offenders (Bogaerts, Vervaeke, & Goethals, 2004; Henderson & Kalichman, 1990). In fact, when a logistic regression was performed on 13 of the MMPI scales with paraphilias entered as dependent variables, schizotypy had one of the strongest relationships with paraphilias, suggesting that schizotypy may be present in a subset of offenders (Henderson & Kalichman, 1990). Although this is suggestive of a relationship between schizotypy and sexual offending, current empirical work has been limited.

A more commonly examined personality trait in the forensic literature is narcissism. Many have indicated that sexual offenders often endorse the view that their needs come before other people's needs, suggesting sexual offenders have more narcissistic traits (Baumeister, Catanese, & Wallace, 2002; Ward & Keenan, 1999). Bushman, Bonacci, van Dijk, and Baumeister (2003) advanced this theory by conducting a three-part study that examined how narcissistic individuals use sexual coercion. First, they found that narcissism correlated to acceptance of rape myths and negatively towards empathy for rape victims. Second, they showed that narcissistic individuals responded more favorably to depictions of rape on video, particularly when the woman was seen as encouraging the man. Third, narcissists reacted more negatively and tended to be more punitive when a female refused to read a sexually explicit passage. From their series of studies, Bushman et al. (2003) concluded that narcissistic men may be more likely to use sexual coercion on a victim if they feel as though that person has reneged on an offer of sexual stimulation. Gilgun (1988) also suggested that individuals who show narcissistic characteristics may also attempt to reaffirm their ego by selecting targets that would be less likely to reject them (e.g., child molesters and their choice of child victims), or they may perform behaviors that do not give the victim a real opportunity to reject them (e.g., exhibitionism). An early study by Chantry and Craig (1994) showed no difference between those who sexually aggress and those who do not. However, more recent studies appear to support a relationship between narcissism and sexual aggression (Bushman et al., 2003; Bogaerts et al., 2004, 2005). Hence, the association warrants further investigation.

*Aim of the Current Research*

The current study investigates the differences in psychopathological traits among sexual offenders, mentally ill offenders, and nonoffenders. We predicted that sexual offenders would show elevations in obsessions, narcissism, and schizotypal traits, demonstrating possible factors that may contribute to the cognitive distortions found in sexual offenders. Mentally ill offenders were recruited as a control group as it was expected this may provide a more conservative comparison than other offenders, since research has often shown mentally ill offenders score higher than the general and correctional populations on psychopathological measures (Roman & Gerbing, 1989; Wise, 2009). The goal of this research is to contribute to a unifying theory based on empirical findings that may explain how the underlying psychopathology of sexual offenders may affect their cognitive processes.

**METHOD***Participants*

Three male participant groups were recruited for this study and they include a sexual offender group, a mentally ill offender group, and a non-offending student group. The sexual offender group consisted of 25 males who ranged in age from 25 to 60 years with a mean age of 43.1 years ( $SD = 8.7$ ). Thirteen participants reported their educational level, and for those participants the mean education level was 13.14 years ( $SD = 2.04$ ). Ten offenders were recruited from the inpatient sex offender treatment program. Forty percent of the sex offender sample reported that they were taking prescription medication, but none of the sexual offenders in our sample were diagnosed with a psychotic disorder. Only participants who had been officially convicted of a sexual offense were included; 20 offenders (80%) had committed offenses directed at children with the remainder offending against adult victims.

Fifteen mentally ill offenders who were receiving services from forensic psychiatric services as a result of their criminal behavior and who were being treated for their mental illness were recruited. Their age ranged from 23 to 50 years with a mean age of 35.9 years ( $SD = 9.25$ ). The mean education level was 12.75 years ( $SD = 3.90$ ). All of the participants in this group indicated that they were receiving prescription medication, and none of the participants in this group had any prior formal convictions for sexual offending.

The non-offender group consisted of 45 male undergraduate students who ranged in age from 18 to 31 years with a mean age of 21.27 years ( $SD = 3.26$ ) and had a mean educational level of 13.14 years ( $SD = 0.93$ ). Of the sample of nonoffenders, 6.7% ( $n = 3$ ) reported taking prescription medication.

*Measures*

Obsessive Beliefs Questionnaire (OBQ). The OBQ is an 87-item questionnaire that measures components of obsessive beliefs as outlined by the Obsessive Compulsive Cognitions Working Group (2003). The OBQ is based on a 7-point Likert scale that requires respondents to indicate their level of agreement with each statement. Within the

OBQ, there are six subscales that represent key belief domains of obsessive compulsive disorder (OCCWG, 2003), and they include: (a) tolerance for uncertainty (i.e., the belief that unpredictability is a cause for concern and will lead to a negative outcome; 13 items); (b) threat estimation (i.e., exaggeration related to the probability and cost of a harmful event; 14 items); (c) control of thoughts (i.e., the belief that one must have complete control over their thoughts; 14 items); (d) importance of thoughts (i.e., the idea that the mere presence of a thought signifies its importance; 14 items); (e) responsibility (i.e., the belief that one has pivotal power to cause or prevent an event; 16 items); and (f) perfectionism (i.e., the belief that there exists a perfect solution and that there are consequences to even a minor mistake; 16 items). Internal consistency of the OBQ and its subscales is good, as Cronbach alphas range from 0.79 to 0.93 (Frost & Steketee, 2002).

*Brief Version of the Schizotypal Personality Questionnaire (SPQ-B).* The SPQ-B is a short 22-item questionnaire that is a condensed version of the original 76-item Schizotypal Personality Questionnaire (Raine & Benishay, 1995). The SPQ-B contains the most psychometrically reliable items from the SPQ. The SPQ-B yields a total score as well as three scores based upon three subfactors of schizotypy: (a) interpersonal (i.e., social anxiety, no close friends, constricted affect, and paranoid ideation); (b) cognitive-perceptual (i.e., odd beliefs or magical thinking, paranoid ideation, ideas of reference, and unusual perceptual experiences); and (c) disorganized (i.e., odd behavior and odd speech). Internal reliabilities range from 0.72 to 0.80 with a mean of 0.76. Intercorrelations between the SPQ and SPQ-B factors range from 0.89 to 0.94 with a mean of 0.91 (Raine & Benishay, 1995).

*Narcissistic Personality Inventory shortened version (NPI-16).* The NPI-16 used within this study is a shortened form of the original Narcissistic Personality Inventory (NPI) and this shortened form consists of 16 items (Ames, Rose, & Anderson, 2006). The items on the shortened form of the NPI were chosen to represent the various facets of the original measure (i.e., self-ascribed authority, superiority, entitlement, and self-absorption). The correlation between the total for the 40-item scale and the total for the shortened 16-item scale is 0.90 (Ames et al., 2006). This questionnaire is in a forced choice format in which respondents must place an 'x' beside one of two statements that they feel best represents them for each question. Internal consistency for the NPI-16 is around 0.72 (Ames et al., 2006).

### *Procedure*

Non-offending participants were undergraduate students attending an undergraduate university. They were prescreened to ensure that all participants who were eligible to participate were male, were 18 years of age or older, and had no prior criminal history. Participants completed the questionnaires independently but in a small group setting. Following their consent, participants were given a questionnaire booklet containing three questionnaires (OBQ, NPI-16, and SPQ-B) to complete, and they were debriefed and given course credit for their participation. Data from the non-offender sample was collected over a four-month period from November 2008 to February 2009.

Forensic participants, including both mentally ill and sexual offenders, were recruited for the study via the distribution of an information poster to both inpatient and outpatient facilities. Participants who wished to participate in the study were instructed to contact the primary researcher to set up an available appointment for individual data collection. Researchers conducted data collection at the forensic facilities either before or after group therapy meetings in order to accommodate participants. Offenders who chose to participate were then informed that the nature of the study was to aid in the understanding of the belief systems that were held by the criminal offender population. If participants felt uncomfortable answering any of the questionnaires they were informed that they could choose not to respond to them or they could choose not to continue answering the questions and their data would be removed from the study. All participants, regardless of completion status, received a nominal reimbursement for their time. Upon completion, participants were thoroughly debriefed. Collection of data from the sexual offender population was continued over a 20-month period from November 2008 to July 2010.

## RESULTS

Intercorrelations were conducted on the dependent variables measured by the OBQ, NPI-16, and SPQ, and internal consistency was also examined for each questionnaire using Cronbach's alpha. The subscales of the OBQ were moderately correlated with one another and highly correlated to the total score. Three subscales, tolerance for uncertainty, threat estimation, and perfectionism, were also moderately correlated with the SPQ and its subscales. However, the OBQ was not related to the NPI. The NPI was significantly and moderately correlated to the overall SPQ score and the interpersonal subscale. Cronbach's alphas for each measure were calculated and were deemed good. Intercorrelations and alphas are listed on Table 1.

Due to convenience sampling, the age of the participants varied between groups. Hence, in addition to conducting analyses of variance (ANOVAs) of the offender type on each of the total scores and subscales for each measure, we also conducted analyses of covariance (ANCOVA) with age as a covariate. However, the results remained the same as the ANOVAs. Using the general linear model, ANOVAs were conducted using the participant group as the fixed variable and the total scale and subscales independently as dependent variables. Significant main effects were examined by a post hoc analysis using the Bonferroni procedure. A comparison-wise error of 0.05 was used.

In comparing sexual offenders with mentally ill offenders and non-offending students, a main effect was found on self-reported obsessive beliefs, namely, the total score on the OBQ and its six subscales (see Table 2 for means, standard deviations, and ANOVAs)<sup>1</sup>. For the total OBQ score, sexual offenders endorsed more obsessive beliefs than nonoffenders (Cohen's  $d = 1.32$ ) and mentally ill offenders (Cohen's  $d = 0.79$ ). When the individual subscales of the OBQ were examined, sexual offenders endorsed greater importance of thoughts (Cohen's  $d = 0.96$ ), need for control of thoughts (Cohen's  $d = 1.06$ ), concern about unpredictability and uncertainty (Cohen's  $d = 1.04$ ), responsibility to prevent events (Cohen's  $d = 0.72$ ), threat estimation (Cohen's  $d = 1.00$ ), and concern for perfectionism

**Table 1**  
**Intercorrelations among variables and internal consistencies (Cronbach alphas)**

	OBQ						SPQ			NPI		
	Total	1	2	3	4	5	6	Total	1		2	3
OBQ	.953	.705***	.751***	.882***	.703***	.855***	.780***	.496**	.440***	.344**	.275*	-.113
1-Importance of thought	.847	.655***	.478***	.478***	.433***	.499***	.329**	.261*	.270*	.152	.095	-.173
2-Control of thoughts	.776	.517***	.529***	.511***	.339**	.339**	.215	.313**	.297**	.215	.127	-.174
3-Tolerance for uncertainty	.802	.512***	.784***	.740***	.536***	.500***	.380***	.291**	.500***	.380***	.291**	-.152
4-Responsibility	.171	.820	.394***	.265*	.171	.131	.233*	.001	.131	.233*	.001	-.147
5-Threat	.503**	.876	.688***	.503**	.503**	.393***	.359***	.390***	.393***	.359***	.390***	-.085
6-Perfectionism	.489**	.898	.413***	.489**	.489**	.413***	.325**	.348**	.413***	.325**	.348**	-.015
SPQ	.846	.815***	.690***	.846	.815***	.690***	.776***	.776***	.815***	.690***	.776***	-.285**
1-Interpersonal	.836	.836	.496***	.836	.496***	.496***	.492***	.496***	.836	.496***	.492***	-.492***
2-Cognitive-Perceptual	.694	.694	.345**	.694	.345**	.345**	.062	.345**	.694	.345**	.062	.062
3-Disorganized	.752	.752	-.151	.752	-.151	-.151	.754	-.151	.752	-.151	.754	-.151
NPI	.754	.754	.754	.754	.754	.754	.754	.754	.754	.754	.754	.754

\*p < .05; \*\*p < .01; \*\*\*p < .001. Cronbach's alphas listed on the diagonal.

(Cohen's  $d = 3.27$ ), compared to the non-offending student population. No differences were noted between sexual offenders and the mentally disordered offenders, or the mentally disordered offenders and the students on these six OBQ subscales.

**Table 2**  
**Means and standards deviations for each sample on each dependent measure**

Variable	Non-offenders (n = 45)	Mentally Ill offenders (n = 24)	Sexual offenders (n = 15)	F	Effect size, R <sup>2</sup>
<b>OBQ<sup>a,b</sup></b>	248.57 (47.12)	273.29 (64.15)	324.81 (66.56)	11.77***	.260
Importance of thoughts <sup>b</sup>	27.80 (8.36)	32.40 (12.34)	39.87 (15.64)	7.90***	.172
Control of thoughts <sup>b</sup>	44.75 (9.86)	49.20 (16.36)	55.18 (9.87)	6.29**	.139
Tolerance for uncertainty <sup>b</sup>	40.60 (9.32)	43.71 (10.99)	52.27 (12.75)	8.94***	.186
Responsibility <sup>b</sup>	59.11 (13.42)	59.73 (12.06)	69.82 (16.08)	4.58*	.105
Threat estimation <sup>b</sup>	35.45 (12.74)	37.07 (11.59)	50.71 (17.40)	9.42***	.195
Perfectionism <sup>b</sup>	44.53 (12.64)	55.80 (19.33)	59.61 (20.21)	7.17***	.155
<b>SPQ<sup>b</sup></b>	7.80 (5.03)	10.93 (4.45)	11.74 (5.15)	5.49**	.123
Interpersonal <sup>b</sup>	2.59 (2.34)	4.29 (1.86)	5.48 (2.81)	11.33***	.225
Cognitive-perceptual	2.66 (2.16)	3.73 (2.09)	3.26 (2.26)	1.56	.038
Disorganized	2.55 (1.86)	2.67 (2.02)	3.00 (2.20)	0.40	.010
<b>NPI<sup>b</sup></b>	5.69 (3.43)	5.27 (3.31)	3.33 (2.70)	4.29*	.096

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ . Significant post hoc Bonferroni values denoted in the following comparisons: <sup>a</sup>Mentally ill offenders compared to sexual offenders; <sup>b</sup>Non-offenders compared to sexual offenders.

In addition to the differences found between groups on the OBQ, a main effect of the offender type on schizotypal traits emerged. Specifically, ANOVAs revealed differences on the total score and one of the three subscales (see Table 2 for means, standard deviations, and ANOVAs)<sup>2</sup>. Sexual offenders were found to endorse having more schizotypal features than non-offending students (Cohen's  $d = 0.77$ ), and specifically sexual offenders reported more interpersonal features associated with schizotypy, such as social anxiety and restricted emotions than non-offenders (Cohen's  $d = 1.07$ ). No differences with the

1. ANCOVA results revealed F-values as follows: total OBQ score, 9.47 ( $p < .001$ ); importance of thoughts subscale, 7.09 ( $p < .001$ ); control of thoughts, 5.53 ( $p < .001$ ); tolerance for uncertainty, 6.60 ( $p < .001$ ); responsibility, 3.28 ( $p < .05$ ); threat estimation, 8.24 ( $p < .001$ ); perfectionism, 4.61 ( $p < .001$ ).



mentally ill offenders emerged. Also, significant findings did not emerge for the cognitive-perceptual or disorganized subscales of the SPQ.

Similar findings emerged with the NPI. A main effect of the offender group was found (Table 2) but in an unexpected direction<sup>3</sup>. Sexual offenders were found to endorse fewer narcissistic traits than nonoffenders (Cohen's  $d = 0.76$ ). No statistically significant differences emerged when comparing sexual offenders and non-offenders with the mentally ill sample.

## DISCUSSION

The aim of the current research was to examine whether sexual offenders would exhibit elevated obsessions, narcissism, and schizotypy when compared to their non-sexual offending forensic counterparts and nonoffenders. Our findings support some of our original hypotheses, although sexual offenders were not elevated on all subscales. We found that sexual offenders carried more obsessive beliefs than both mentally ill offenders and nonoffenders overall. Sexual offenders tended to be more supportive of the underlying assumptions that are associated with obsessive-compulsive disorder as identified by the OCCWG (2003). However, when the belief domains were examined, differences were only noted between sexual offenders and nonoffenders. Although disordered offenders scored between sexual offenders and nonoffenders on all OBQ scales and the total score, perhaps with a larger sample, significant differences may have emerged<sup>4</sup>. Some researchers suggest that sexual offenders may sexually obsess and this obsession may lead to using sex as a coping strategy (Cortoni & Marshall, 2001). Also, sexual offenders, particularly child molesters, score higher on sexual coping measures, than violent offenders (Feelgood, Cortoni, & Thompson, 2005).

The literature on using sexual activities, such as masturbation or fantasizing, as a coping strategy supports that this may be an area of interest (Buschman & van Beek, 2003; Looman, 1995; Proulx, McKibben, & Lasignan, 1996). Moreover, sexual self-regulation has been identified as a dynamic risk variable (Hanson & Harris, 2000); that is, low self-control may play a central role in the increase of risk for sexual recidivism. Given there is evidence that not all sexual offenders engage in sexual behaviors to cope (Marshall, Marshall, Sachdev, & Kruger, 2003) and that those who have poor self-regulation are at a higher risk to reoffend (Hanson & Harris, 2000), there may be substance to consider prob-

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2. ANCOVA results revealed F-values as follows: total SPQ score, 3.76 ( $p < .05$ ); interpersonal subscale, 7.49 ( $p < .001$ ); cognitive-perceptual, 2.47 (ns); disorganized, 0.32 (ns).
  3. ANCOVA results revealed an F-value of 2.99 ( $p < .05$ ) for the NPI total score.
  4. When effect sizes were calculated in comparing sexual offenders and mentally ill offenders, effect sizes were moderate to large (Cohen, 1988) for the total OBQ (Cohen's  $d = -.79$ ) and 5 subscales—importance of thought (-.53), control of thoughts (-.44), tolerance for uncertainty (-.72), responsibility (-.71), and threat estimation (-.92). The effect size for the perfectionism subscale was small (-.19).

lems with self-regulation, specifically coping with sex, as an indicator of risk and an area to both closely manage and address in treatment. Since sexual offenders tend to be more sexually preoccupied (Cortoni & Marshall, 2001) and sexual gratification can lead to a temporary reduction in negative mood states due to the biological and hormonal responses of the body, sexual offenders may be more apt to use sex as a coping strategy when in negative mood states. Therefore, it becomes important to address how sexual offenders cope with their negative mood states and provide them with methods to effectively deal with their thought patterns. This tendency to carry obsessional beliefs may lead them to have great difficulty in thought suppression, and thus this may cause marked anxiety if they feel that they cannot control them (Wegner, Shortt, Blake, & Page, 1990). The emphasis on thought suppression using cognitive-behavioral modalities in treatment is warranted for those with elevated levels of obsessions.

The present study also revealed that sexual offenders may be elevated in one schizotypal domain but only when compared to nonoffenders. Sexual offenders appeared to show significant deficits in interpersonal functioning but failed to show significant differences on the cognitive-perceptual and disorganized components of schizotypal personality. Having elevated scores on the interpersonal subscale suggests that sexual offenders tended to have greater social anxiety, fewer close friends, and more paranoid ideation. This could explain why certain sexual offenders seem to show poor social functioning, lack of intimate attachments, and have difficulty in heterosocial interactions (Dreznick, 2003; Segal & Stermac, 1984) while being able to maintain a high level of functioning in other areas of their lives (Ahlmeyer et al., 2003). The sample in the current study did not allow for comparisons between older and younger sexual offenders, but according to a study by Fazel, Hope, O'Donnell, and Jacoby (2002), differences in schizoid traits were found among the elderly sexual offenders when contrasted with comparison groups of offenders. The interaction between schizoid or schizotypal traits and the age of the offender may be an area to pursue with a larger sample and a wider range of age that includes older offenders. Similar to the OBQ results, no differences were found between mentally ill offenders and the other groups on the SPQ total or the interpersonal subscale, despite scores falling between the nonoffender and sex offender samples. With a larger sample, the difference in the interpersonal subscale between the mentally ill offender and sexual offender groups may have emerged in the statistical analyses.<sup>5</sup>

Contrary to the proposed hypotheses, sexual offenders did not endorse having more narcissistic features than the mentally disordered offenders or the nonoffenders. Surprisingly, the non-offender population were more narcissistic than sexual offenders and, although not significantly different, the nonoffending sample appeared to be more narcissistic than mentally disordered offenders.<sup>6</sup> This finding does not support the implicit theory of sexual offending that was proposed by Ward and Keenan (1999), which suggests that narcissism is a perpetuating factor in sexual offending. One potential reason that this

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5. When effect sizes were calculated for comparing sexual offenders and mentally ill offenders, the effect sizes was moderate for the interpersonal subscale (Cohen's  $d = -.50$ ) and small for the total SPQ score (Cohen's  $d = -.17$ ).

study's finding may not have been consistent with this theory is that the sexual offenders recruited in this study primarily consisted of sexual offenders who victimized children. Past research has suggested that child molesters have lower self-esteem and score lower on narcissism measures than rapists (Hosser & Bosold, 2006; Shine, McCloskey, & Newton, 2002). In light of this empirical evidence that suggests individuals who tend to be more violent tend to show higher levels of narcissism, it is expected that a more heterogeneous sampling of offenders, that includes violent sexual offenders, would likely demonstrate greater narcissism.

Another consideration is the generality of the measure used in our study. Sexual offenders may show narcissistic tendencies specific to sexual situations and the NPI-16 does not address narcissism in sexual situations. Individuals with narcissistic tendencies may have inappropriate assumptions and disturbed thought patterns regarding sex, and thus when these individuals are faced with a situation where they feel their choices of sexual partners have been stifled they may be more likely to engage in narcissistic reactance which then leads them to sexually offend. This would be consistent with the theory proposed by Baumeister and colleagues (2003). Some researchers argue that there is no such thing as sexual addiction but rather that individuals show a tendency towards sexual narcissism, which is considered a more enduring pattern of traditional and dysfunctional sexual interaction characterized by an inability to experience intimacy (Apt & Hurlbert, 1995; Widman & McNulty, 2010).

Although these findings contribute to our understanding of psychopathological traits and their relationship to sexual offending, it is important to note the methodological limitations of this study. The current study is limited by the small sample sizes and therefore may not be representative of the targeted groups. Although the age of the participants varied between groups, the analyses accounted for age as a possible correlate. We were also unable to control for differences in educational levels among the groups. In order to improve upon the current study, future research should include a more representative non-offender sample in which age and education ranges are not so markedly restricted. Also, the measures were not administered in a counterbalanced order, and therefore order effects have the potential to limit the internal validity of our findings.

In conclusion, sexual offenders seem to show an increase in obsessional thinking and in schizotypal traits, which suggests that their social and cognitive functioning deficits may be a result of an underlying psychopathology. The presence of one or more of these traits may increase the risk of recidivism as those individuals will be likely to show marked deficits in their ability to form and maintain relationships as well as their capacity to rationalize and cope with stressful situations. Therefore, an important next step in understanding how psychopathology may affect a sexual offender's ability to function and cope with stressful life events would be to examine any differences among subgroups of sexual

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6. Although non-significant, a moderate effect size emerged for comparing sexual offenders and mentally ill offenders (Cohen's  $d = .64$ ), with sexual offenders scoring lower in narcissism than mentally ill offenders.

offenders and whether they meet clinical thresholds (e.g., compared to non-mentally ill offenders or to “normal” individuals; see Nunes, Babchishin, & Cortoni, 2011). Moreover, identifying both the areas of clinical concern and the groups of sexual offenders who exhibit such elevations may guide the intervention and management approaches used to reduce their dynamic risk by addressing their criminogenic needs (Andrews & Bonta, 2006). Hence, advancing this understanding is both relevant and necessary in order to improve the effectiveness of assessment and treatment of sexual offenders, and further research that examines the complex relationship between psychopathological traits and the diversity in sexual offending behavior is warranted.

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