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PSYCHOPATHOLOGY OF SEX OFFENDERS
A Comparison of Males and Females Using Latent Profile Analysis

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Although male sex offenders have been the focus of numerous empirical investigations, there exists little data examining the characteristics of female sex offenders. This study examined personality profiles of incarcerated male and female sex offenders by utilizing Latent Profile Analysis (LPA) to categorize offenders based on their responses on the Personality Assessment Inventory (PAI). Building on previous research (see Turner, Miller, Henderson, 2008), the current sample of male and female sex offenders is best described using a 4-class model: Moderate Defensiveness, Elevated Alcohol and Drug Use, Moderate Psychopathology, and Elevated Psychopathology. Analyzing covariates and group membership, results indicated that male sex offenders were more likely to be included in the Elevated Drug and Alcohol group, whereas the female sex offenders were more likely to be included in the Moderate or Elevated Psychopathology group. Additional results of psychopathology and gender difference, as well as treatment implications are discussed.

Keywords: female sexual offenders; sexual offenders; offender psychopathology; sex offender treatment; latent profile analysis

Numerous highly publicized cases of sexually based crimes over the past two decades have resulted in increased public, legal, political, and academic awareness of sex offenders. Although this increased awareness has brought forth a surge in research and knowledge, the majority of this research has focused on characteristics, personality, and treatment of male sex offenders (Sandler & Freeman, 2007; Strickland, 2008; Vandiver & Kercher, 2004). The extent to which male sex offender findings generalize to female sex offenders is unknown. Moreover, there are likely important differences between male and female sex offenders that could have implications for treatment, risk assessment, and, in turn, management of this population (Freeman & Sandler, 2008; Poels, 2007; Turner, Miller, & Henderson, 2008).

To date, there have been a few noteworthy studies comparing the characteristics of male and female sex offenders (e.g., Allen, 1991; Freeman & Sandler, 2008; Miccio-Fonseca, 2000; Vandiver & Walker, 2002). Findings from these studies reveal that (a) females tend to be slightly younger at the time of their arrest, (b) males have a slightly greater number
of sex offenses in their criminal histories, (c) females are more likely to victimize relatives and less likely to be arrested for offenses involving strangers (although opposite findings were reported in Freeman and Sandler’s 2008 study), (d) females are more likely to offend against males whereas males are more likely to offend against females, (e) females are more likely to commit a sex offense as their first known offense, (f) females are more likely to offend sexually with a male accomplice, (g) females may engage in more prosocial behaviors prior to committing their offense than male offenders, and (h) females are significantly less likely to recidivate sexually, violently, or generally than male sex offenders. As a whole, the female sex offender population had fewer sex partners, had fewer legal problems, and was more likely to initiate psychotherapy than their male counterparts (Vandiver & Walker, 2002). As a consequence, female sex offenders may not fit neatly into the same typologies and risk patterns that have been developed for male sex offenders.

**RESEARCH ON MALE AND FEMALE SEX OFFENDER TREATMENT PROGRAMS**

Sex offender treatment programs are unique in that the most important goal is for offenders to refrain from committing future sex offenses (Grossman, Martis, & Fichtner, 1999), and more traditional goals such as psychosocial adjustment, improved self-esteem, and improved quality of life are secondary (Wakefield & Underwager, 2005). The results of research on the effectiveness of sex offender treatment have been equivocal. Several large-scale evaluations and meta-analyses have concluded that there is little clinical evidence that traditional sex offender treatment effectively reduces recidivism in a male sex offender population (Furby, Weinrott, & Blackshaw, 1989; Hanson, Bloom, & Stephenson, 2004; Hanson & Morton-Bourgon, 2005; Marques, Wiederanders, Day, Nelson, & van Ommeren, 2005). Other studies and meta-analyses have been more optimistic in terms of sex offender treatment effectiveness (Hall, 1995; Hanson, 2003; Polizzi, MacKenzie, & Hickman, 1999).

In addition to the well-documented methodological flaws of several studies evaluating the effectiveness of sex offender treatment (Center for Sex Offender Management, 2001; McConaghy, 1999; Seager, Jellicoe, & Dhaliwal, 2004; Wakefield & Underwager, 1991), one possibility for the inconsistent research findings is that researchers have incorporated heterogeneous samples in their groups of sex offenders. For example, Schwartz and Cellini (1997) contend that “mixing an antisocial rapist with a socially skilled fixated pedophile with a developmentally disabled exhibitionist may indeed produce a hodgepodge of results” (p. 2).

Even though research indicates that the traditional treatment methods used with male sex offenders may be minimally effective in reducing recidivism rates among men, these same treatment methods are often used to treat female sex offenders. However, it can be safely theorized that female sex offenders have very different issues from male sex offenders; thus, foci of therapeutic intervention may be qualitatively different. Currently, very few areas in the United States have female sex offender treatment programs. Of the programs that do exist, few treat more than 20 offenders at one time, complicating efforts to evaluate the effectiveness of their interventions (Texas Department of Criminal Justice [TDCJ], 2004). Therefore, very little research has explored treatment effectiveness for female sex offenders on a large scale. However, studies on the personality characteristics
of female sex offenders may be used to generate hypotheses concerning effective interventions for these women.

**TYPOLOGY AND PSYCHOPATHOLOGY OF FEMALE SEX OFFENDERS**

Several researchers have attempted to type female sexual offenders (e.g., Mathews, Mathews, & Speltz, 1989; Mayer, 1992; Nathan & Ward, 2002; Sarrel & Masters, 1982; Turner et al., 2008; Vandiver & Kercher, 2004). For example, Mathews et al. reported five types of female sex offenders including the teacher/lover, predisposed molester, male-coerced molester, experimenter/exploiter, and psychologically disturbed. Sarrel and Masters (1982) described four types, including forced assault, babysitter abuse, incestuous abuse, and dominant woman abuse. Although typologies may provide information on the cause or motivation for the offending, female sex offender typologies have not been consistently replicated (Ferguson & Meehan, 2005; Sandler & Freeman, 2007; Turner et al., 2008). In addition, most of the previous female sex offender typology studies have only included offending characteristic variables (e.g., age of victim, gender of victim, presence of co-offender). It is unlikely that typologies simply based on these characteristics will aid in the treatment and management of this population. In fact, statistically testing for typologies based solely on offense characteristics was not found to be significant in Turner et al.’s 2008 examination of 90 incarcerated female sex offenders. Thus, Turner et al. attempted to assess possible typologies by examining personality and psychopathology.

Turner et al. (2008) used self-reported psychopathology in an attempt to determine whether different types of female sex offenders could be identified on the basis of symptom patterns. Turner et al. used latent profile analysis (LPA) to examine potential types of 79 female sex offenders based on their personality characteristics as measured by the Personality Assessment Inventory (PAI; Morey, 1991). This resulted in identifying three groups that had different levels of psychopathology and alcohol or drug problems. The first group identified female sex offenders who had below clinical range PAI scores on all scales but reported higher scores on the Alcohol and Drug Problems scales. The second group had at-risk PAI scale scores in the areas of anxiety, depression, paranoia, schizophrenia, and borderline personality. This group had similar scores on the Alcohol and Drug Problems scales as the first group and was termed the Moderate Psychopathology type.

The third female sex offender type identified by Turner et al. (2008) was termed the Extensive Psychopathology type. This group had few members but was identified as being substantially different from the rest of the women in the sample. These offenders scored in the clinically significant range on most of the PAI clinical scales, including Somatization, Anxiety and Anxiety-Related Disorders, Depression, Paranoia, Schizophrenia, and Borderline Personality Disorder. In addition, the women in this group had similar scores (below clinical range) on the Alcohol and Drug Problems scales.

Although the authors encouraged interpreting results with caution as the second analysis of the study included only 79 female sex offenders, the findings provided possible implications for the treatment of this population (Turner et al., 2008). For example, results of the study suggest that a large portion of female sex offenders warrant treatment that addresses substance abuse and previous victimization. These results and suggestions are similar to previous psychopathology examinations of female sexual offenders (Christopher,

This study seeks to extend Turner et al. (2008) by comparing a larger group of female sex offenders with a sample of male sex offenders assessed and treated in the same state prison system. This study will examine potential gender differences in self-reported psychopathology and discuss the treatment implications of findings. The authors hypothesize that (a) there are several types of sex offenders based on their reported psychopathology and (b) group membership for males and females would differ such that men would be more prevalent in some groups and women more prevalent in others. Specifically, based on information from previous studies (i.e., Turner et al., 2008; Vandiver & Walker, 2002), the authors believed that female sex offenders would be more prevalent than male sex offenders in a group of sex offenders reporting extensive and severe symptoms of psychopathology.

METHOD

PARTICIPANTS

All female and male sex offenders in this study were either currently or previously incarcerated in the TDCJ and had been selected to receive treatment in the Sex Offender Treatment Program either at the Goree, Hightower, or Hilltop (female) units. All offenders in the treatment program were serving the last 2 years of their sentence and progressed through three treatment phases prior to their release. Phase 1 is devoted to education concerning sex offending and offense cycles, whereas Phase 2 focuses on individual and group cognitive restructuring. Offenders are then prepared for reintegration into the community and are taught relapse prevention skills during Phase 3.

The Hilltop unit, in Gatesville, Texas, has treated approximately 150 female sex offenders since 2001. This sample includes 128 of the female sex offenders who average 32 years of age. The majority of the sample is White (65%, N = 83), with the other 35% split between Hispanic (N = 25) and Black (N = 19) women. The women in this sample were more likely to have been convicted for committing a violent crime (e.g., assault or aggravated assault) than a nonviolent crime (e.g., indecency with a child, child pornography, compelling prostitution) and had an average Static-99 (risk for sexual recidivism) score of 2 (see Table 1).

The male sex offender participants (N = 136) in the sample are from a previous data collection effort (Miller, 2006). The sample consists of 51% White (N = 93), 21% Black (N = 38), 15% Hispanic (N = 27), and 2% other race (N = 4) offenders with an average age of 40 years. The majority of the male sex offenders in the sample had violent charges (e.g., assault or aggravated assault) rather than nonviolent charges (e.g., indecency with a child, child pornography) and an average Static-99 score of 3 (see Table 1).

MEASURES

Personality Assessment Inventory. The PAI (Morey, 1991) is a 344-item self-report measure of personality and psychopathology that provides information on validity scales, clinical scales, and treatment scales. All PAIs were administered at the beginning of the treatment program. The validity and reliability of the PAI is well established in clinical and forensic settings.
The Static-99 is a 10-item actuarial measure developed to predict sex recidivism (Hanson & Thornton, 2000) through file review. The Rapid Risk Assessment for Sex Offence Recidivism (RRASOR) and the Structured Anchored Clinical Judgment–Min (SACJ-Min) were combined to develop the Static-99. A risk score places an offender in one of four risk categories: low, medium-low, medium-high, or high. According to Hanson and Thornton, this instrument shows moderate predictive accuracy for sexual reoffense ($r = .33$, area under the curve (AUC) = $.71$). However, all information and development of the Static-99 have used male sex offenders.

To our knowledge, Turner et al. (2008) was the first study to report Static-99 scores for female sex offenders. In that study, the Static-99 was basically unrelated to previous sexual offending behavior (−.05) and moderately related to previous general offense (.30) and the PAI Antisocial scale (.22). Given that this study added several female offenders to this sample, the authors again examined the relationship between the Static-99 and PAI indicators. In this sample of female sex offenders, the Static-99 was moderately related to the PAI Antisocial scale (.36), PAI Drug Problems scale (.26), and the Aggression scale (.28). These data provide some evidence of convergent validity for the Static-99 with female sex offenders. However, until predictive validity is examined, it is not possible to determine whether the Static-99 truly predicts sexual recidivism for female sex offenders, as it does for male sex offenders.

**PROCEDURE**

Archival data from the TDCJ female and male Sex Offender Treatment Programs in Gatesville, Dayton, and Huntsville, Texas, were used in this study. The data were obtained through a preexisting agreement between Sam Houston State University and TDCJ from files of offenders either currently enrolled or discharged from the treatment program. Researchers created a data-coding sheet that included demographic and testing information.

**DATA ANALYSIS**

LPA seeks to sort individuals into similar groups (latent classes) with respect to a set of observed (manifest) continuous variables as measures of a singly underlying (latent) categorical variable. LPA is useful when studying populations with heterogeneous characteristics, as demonstrated in Turner et al. (2008). The LPA model assumes that individual observed scores

<table>
<thead>
<tr>
<th>Variable</th>
<th>Entire Sample (N = 290)</th>
<th>Female Offenders (n = 128)</th>
<th>Male Offenders (n = 162)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age (M, SD)</strong></td>
<td>36 (10)**</td>
<td>32 (9)</td>
<td>40 (10)</td>
</tr>
<tr>
<td><strong>Race (N, %)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>57 (18)</td>
<td>19 (15)</td>
<td>38 (21)</td>
</tr>
<tr>
<td>White</td>
<td>176 (57)</td>
<td>83 (65)</td>
<td>93 (51)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>52 (17)</td>
<td>25 (20)</td>
<td>27 (15)</td>
</tr>
<tr>
<td>Other</td>
<td>5 (2)</td>
<td>1 (1)</td>
<td>4 (2)</td>
</tr>
<tr>
<td><strong>Violent offense (N, %)</strong></td>
<td>174 (60)</td>
<td>72 (56)</td>
<td>100 (62)</td>
</tr>
<tr>
<td><strong>Static-99 (M, SD)</strong></td>
<td>2.5 (1.7)**</td>
<td>2.1 (1.4)</td>
<td>3.0 (1.8)</td>
</tr>
</tbody>
</table>

*Note. Asterisks indicate significant tests of gender differences.***$p < .001$. 

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on the PAI validity and clinical scales were drawn from a mixture of subpopulations (the latent classes) with differing distributional characteristics (i.e., different means, variances, and covariances). The objective of the analysis is to determine the number of latent classes and describe the classes both in terms of the manifest variables on which they are derived (i.e., the PAI scores) and substantively meaningful covariate relationships. For example, in this application, we examined whether male and female sex offenders differed on their personality profiles, and as such, we examined gender as a covariate of latent class membership. The model estimates class-specific means, variances, and covariances, and classes are determined by minimizing differences on the manifest variables within class and maximizing their differences across classes. Therefore, the defining characteristics of each class are empirically derived rather than determined a priori.

LPA possesses several advantages over traditional methods, such as cluster analysis, in that LPA models use (a) maximum likelihood estimation to obtain the estimated probabilities of class membership to account for the probabilistic nature of class assignment (i.e., all individuals have an estimated probability of belonging in each class); (b) latent variables to reduce measurement error; (c) structural models that include contextual variables to help characterize the latent classes (i.e., covariates can be added to the models to examine their association with class membership); and (d) all participants’ data, even if incomplete (unlike listwise deletion procedures in which participants are dropped from the analysis if they are missing any of the variables included in the models; Turner et al., 2008). Furthermore, the data are analyzed using a model-based approach to estimating heterogeneity in subscale scores; as a result, fit criteria with known statistical properties can be used to guide the selection of the optimal latent class model (Lubke & Muthén, 2005; Nylund, Asparouhov, & Muthén, 2007; Vermunt & Magidson, 2002).

Starting with a one-class model, this analysis estimated a series of LPA models; each successive model included one additional latent class. The decision concerning the model with the correct number of latent classes is typically made on the basis of a convergence of model fit criteria, along with substantive considerations, as traditional likelihood ratio tests for comparing nested models cannot be used to statistically determine the optimal number of classes (McLachlan & Peel, 2000). Instead, other noninferential criteria such as the Bayesian information criterion (BIC; Schwarz, 1978) are used to guide this decision. The results reported below compare the BIC values across the models with varying numbers of latent classes, with lower values indicating a preferred model. Entropy, the Lo-Mendell-Rubin Likelihood Ratio Test (L-M-R LRT), and the bootstrap LRT (BLRT) were also used to select the final LPA model. The L-M-R LRT (Lo, Mendell, & Rubin, 2001) compares the improvement in fit between neighboring class models (i.e., comparing k-1 and the k-class models) and provides a statistical test that can be used to determine if there is a significant improvement in fit for the inclusion of one more class. The BLRT (Nylund et al., 2007) is similar to the L-M-R LRT, but instead of assuming that the difference test statistic follows a known distribution (e.g., the chi-square distribution), it uses bootstrap samples to estimate the distribution of the log likelihood difference test statistic. A model with a lower BIC, higher entropy, and significant L-M-R and BLRT tests indicates better fit to the data.

Finally, predictors of class membership were examined to determine whether male and female sex offenders provided different personality profiles. This analysis was conducted in two stages, first examining gender alone. Next, we included the Static-99 and whether or not
the women had committed a violent index offense (along with gender) as covariates of class membership. This two-stage procedure was used because of the controversy surrounding the use of the Static-99 with female offenders; therefore, it could be ensured that any gender differences were not confounded by risk of reoffense. Examining these covariates addressed the central research questions; in addition, examining covariates in such a manner further characterizes them, helping to lend credence to their construct validity (Muthén, 2003). Significant predictors of the underlying latent class variable were assessed using pseudo $z$ statistics, calculated by dividing the regression coefficient by the standard error.

All of the models presented in this article were estimated using Mplus, Version 5.1 (Muthén & Muthén, 1998-2008). Mplus employs the Expectation-Maximization (EM) algorithm under the assumption that data are missing at random (MAR) to compute maximum likelihood estimates of the given model parameters (Muthén & Shedden, 1999). Mplus also provides the posterior class probabilities for each individual’s likelihood of belonging to each latent class based on the estimated parameters. It also has the capacity to generate a specified number of random start values and corresponding likelihood solutions to guard against the well-known danger in latent class analysis and other mixture modeling approaches of arriving at a local rather than global maximum for the likelihood function (Hipp & Bauer, 2006).

RESULTS

DESCRIPTIVE STATISTICS

Table 2 provides the means and standard deviations for the following PAI scales: Negative Impression Management (NIM), Positive Impression Management (PIM), Somatic Complaints, Anxiety, Anxiety-Related Disorders, Depression, Mania, Paranoia, Schizophrenia, Borderline Features, Antisocial Features, Alcohol Problems, and Drug Problems. As can be seen in Table 2, the female sex offenders scored higher on most PAI

<table>
<thead>
<tr>
<th>PAI Scale</th>
<th>Entire Sample</th>
<th>Female Offenders</th>
<th>Male Offenders</th>
</tr>
</thead>
<tbody>
<tr>
<td>NIM</td>
<td>56.2 (14.6)</td>
<td>61.8 (51.7)</td>
<td>51.3 (11.3)</td>
</tr>
<tr>
<td>PIM</td>
<td>47.4 (11.8)</td>
<td>42.6 (11.2)</td>
<td>51.7 (10.7)</td>
</tr>
<tr>
<td>Somatic Complaints</td>
<td>54.0 (11.9)</td>
<td>57.7 (11.6)</td>
<td>51.6 (11.6)</td>
</tr>
<tr>
<td>Anxiety</td>
<td>56.1 (13.8)</td>
<td>63.3 (13.7)</td>
<td>49.8 (10.3)</td>
</tr>
<tr>
<td>Anxiety-Related Disorders</td>
<td>58.3 (13.8)</td>
<td>65.1 (12.4)</td>
<td>52.2 (12.1)</td>
</tr>
<tr>
<td>Depression</td>
<td>57.6 (14.9)</td>
<td>64.3 (15.7)</td>
<td>51.7 (11.3)</td>
</tr>
<tr>
<td>Mania</td>
<td>50.7 (10.9)</td>
<td>53.4 (11.0)</td>
<td>48.3 (10.3)</td>
</tr>
<tr>
<td>Paranoia</td>
<td>57.5 (11.9)</td>
<td>62.1 (11.3)</td>
<td>53.4 (10.9)</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>56.3 (15.1)</td>
<td>62.6 (14.6)</td>
<td>50.7 (13.3)</td>
</tr>
<tr>
<td>Borderline Features</td>
<td>58.4 (10.6)</td>
<td>66.8 (12.5)</td>
<td>52.8 (10.8)</td>
</tr>
<tr>
<td>Antisocial Features</td>
<td>59.4 (13.6)</td>
<td>59.4 (11.5)</td>
<td>57.5 (9.7)</td>
</tr>
<tr>
<td>Alcohol Problems</td>
<td>58.4 (16.4)</td>
<td>57.0 (15.5)</td>
<td>59.6 (17.1)</td>
</tr>
<tr>
<td>Drug Problems</td>
<td>61.8 (17.3)</td>
<td>64.5 (17.6)</td>
<td>59.5 (16.7)</td>
</tr>
<tr>
<td>Aggression</td>
<td>51.2 (13.0)</td>
<td>54.8 (14.6)</td>
<td>48.1 (10.5)</td>
</tr>
</tbody>
</table>

Note. NIM = Negative Impression Management; PIM = Positive Impression Management.
scales, except for PIM and Drug Problems. In terms of offense characteristics, the female and male sex offenders did not differ significantly on rate of violent offense, $\chi^2(1, N = 309) = 1.19, p = .28$. In addition, male sex offenders were older and had higher scores on the Static-99 (see Table 1).

**LATENT PROFILE ANALYSIS OF PERSONALITY VARIABLES**

*Latent class enumeration.* Examination of Table 3 indicates that relative to the models with fewer classes, the four-class model had a smaller BIC and similar entropy. Using simulation studies, Nylund and Masyn (2008) have determined that BIC does a better job of identifying the correct latent class model than other fit indices. Furthermore, although the L-M-R LRT was not significant, it had a low probability value, and the BLRT was statistically significant. Relative to the five-class model, the four-class model provided a very similar BIC value, a nonsignificant L-M-R LRT, with a much higher probability value than the test comparing the four-class to the three-class LPA model, and the BLRT did not converge. In addition, Muthén (2003) argues that substantive as well as statistical considerations should guide the decision on the number of classes to retain in the final model. As described more fully below, the four-class model provided more consistency with previous LPA research (Turner et al., 2008) and identified a class high in positive impression management that was not observed in the three-class model. For these statistical and substantive reasons, these results indicated to us that the four-class model provided the best representation of the data.

**Description of the four-class LPA model.** Class-specific means and variances for the PAI scores of the four latent classes are shown in Table 4 and graphed in Figure 1. For the most part, the classes were separated by severity of symptoms, with one class (Extensive Psychopathology) consisting of 11% ($N = 28$) of the offenders having most PAI scales in the clinically significant range, a second class (Moderate Psychopathology) consisting of 25% ($N = 63$) of the offenders with several scales elevated in the clinically significant range, although not to the extent of the Extensive Psychopathology class, and the other two classes having most subscale scores below the clinically significant range (Morey, 1991). The most prominent class, comprising 36% ($N = 91$) of the sample, consisted of a class of individuals with otherwise non-elevated clinical subscale scores but with Drug and Alcohol Problems scores in the clinically significant range. The fourth class (29%, $N = 74$) was characterized primarily by its scores on PIM, which was slightly elevated, and accompanied by fairly low scores on most clinical indices (elevated PIM).
As expected, given that a portion of the female offenders was also included in Turner et al. (2008), the profiles are similar to what we found in that study. However, these findings support the validity of the small class of women \((n = 10)\) identified by Turner et al. with extensive psychopathology, which we indicated at that time would need further validation. This class still comprised a small proportion of the sample \((11\%)\) but consisted of 28 men and women. Furthermore, these results suggest that when examining heterogeneity in sex offenders’ personality profiles, the PAI validity scales also provide substantively meaningful information to the LPA. That is, we identified a class of individuals characterized primarily by their PIM in this study, which we did not identify in Turner et al. because we did not include validity indices in the LPA.

**Correlates of class membership.** Our primary interest in conducting this study was to examine how male and female sex offenders differed in their personality profiles. Therefore, gender was included as a correlate of class membership in a second LPA model. We were also interested in the extent to which the classes differed on their risk for sexual recidivism and examined the Static-99 as a correlate of class membership in a third model along with whether the women were charged with committing a violent index offense. Examining correlates of class

**TABLE 4:** Class Means, Variances, and Proportions of Most Likely Class Membership for Four-Class Model

<table>
<thead>
<tr>
<th>Class 1: Moderate Defensiveness ((N = 74, 29%))</th>
<th>Class 2: Elevated Drug and Alcohol Use ((N = 91, 36%))</th>
<th>Class 3: Moderate Psychopathy ((N = 63, 25%))</th>
<th>Class 4: Extensive Psychopathy ((N = 28, 11%))</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean (Negative Impression Management)</td>
<td>45.98</td>
<td>49.81</td>
<td>65.28</td>
<td>82.40</td>
</tr>
<tr>
<td>Mean (Positive Impression Management)</td>
<td>58.40</td>
<td>46.96</td>
<td>41.89</td>
<td>32.94</td>
</tr>
<tr>
<td>Mean (Somatic Complaints)</td>
<td>46.46</td>
<td>51.59</td>
<td>58.52</td>
<td>70.99</td>
</tr>
<tr>
<td>Mean (Anxiety)</td>
<td>43.63</td>
<td>51.78</td>
<td>66.30</td>
<td>79.20</td>
</tr>
<tr>
<td>Mean (Anxiety-Related Disorders)</td>
<td>46.30</td>
<td>54.65</td>
<td>68.99</td>
<td>76.45</td>
</tr>
<tr>
<td>Mean (Depression)</td>
<td>44.95</td>
<td>52.33</td>
<td>66.61</td>
<td>86.79</td>
</tr>
<tr>
<td>Mean (Mania)</td>
<td>42.60</td>
<td>51.22</td>
<td>56.88</td>
<td>56.04</td>
</tr>
<tr>
<td>Mean (Paranoia)</td>
<td>46.68</td>
<td>55.59</td>
<td>64.44</td>
<td>76.06</td>
</tr>
<tr>
<td>Mean (Schizophrenia)</td>
<td>42.43</td>
<td>51.62</td>
<td>67.78</td>
<td>81.06</td>
</tr>
<tr>
<td>Mean (Borderline Features)</td>
<td>45.03</td>
<td>57.11</td>
<td>69.15</td>
<td>81.81</td>
</tr>
<tr>
<td>Mean (Antisocial Features)</td>
<td>52.07</td>
<td>59.31</td>
<td>59.97</td>
<td>68.18</td>
</tr>
<tr>
<td>Mean (Alcohol Problems)</td>
<td>53.30</td>
<td>61.35</td>
<td>61.34</td>
<td>55.45</td>
</tr>
<tr>
<td>Mean (Drug Problems)</td>
<td>52.73</td>
<td>65.50</td>
<td>64.46</td>
<td>67.96</td>
</tr>
</tbody>
</table>

Note. Class-specific means, variances, and proportions derived from final model fixing variances across class and excluding covariates following the recommendation of Nylund and Masyn (2008).
membership with and without the Static-99 allowed us to observe the robustness of the gender effects across models while also allowing us to examine whether some classes were at higher risk of reoffending than others.²

In the model including gender alone, results indicated that gender was reliably associated with latent class membership such that men were more likely than women to be in the high PIM ($b = -2.63$, pseudo $z = -4.47$, $p = .019$, odds ratio [OR] = 0.07) and Elevated Drug and Alcohol Use ($b = -1.47$, pseudo $z = -2.35$, $p = .019$, OR = 0.23) classes. Women were more likely than men to be in the Extensive Psychopathology and Moderate Psychopathology classes than they were the high PIM (Extensive Psychopathology: $b = 2.63$, pseudo $z = 4.47$, $p < .001$; Moderate Psychopathology: $b = 2.91$, pseudo $z = 6.04$, $p < .001$) and Elevated Drug and Alcohol Use classes (Extensive Psychopathology: $b = 1.47$, pseudo $z = 2.35$, $p = .019$; Moderate Psychopathology: $b = 1.75$, pseudo $z = 3.49$, $p < .001$). These gender differences can be interpreted in the opposite direction as well; that is, men were more likely than women to be in the high PIM and Elevated Drug and Alcohol Use classes than they were the Moderate or Extensive Psychopathology classes.

When such variables as risk for sexual recidivism, whether or not the women had committed a violent offense, and gender were added, as covariates in the LPA model, the gender differences were highly consistent with those reported above. All significant results reported above remained significant when we added these covariates.³ In addition, individuals in the high PIM ($b = -0.01$, pseudo $z = -2.06$, $p = .039$) and Elevated Drug and

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**Figure 1: Profile Plot of Male and Female Sex Offender Personality Assessment Inventory (PAI) Mean Clinical Scale Scores for the Four-Class Solution**

*Note.* NIM = Negative Impression Management; PIM = Positive Impression Management.
Alcohol Use \( (b = -0.01, \text{pseudo } z = -2.87, p = .004) \) classes reported higher risk levels on the Static-99 than individuals in the Extensive Psychopathology class. Finally, individuals in the Extensive Psychopathology class were marginally less likely to have committed a violent sexual act than individuals in the high PIM \( (b = -1.02, \text{pseudo } z = -1.83, p = .068) \) and Elevated Drug and Alcohol Use classes \( (b = -1.03, \text{pseudo } z = -1.92, p = .055) \).

**DISCUSSION**

There is an extensive literature examining male sex offenders’ risk and treatment effectiveness. Although the literature provides little evidence supporting the effectiveness of male sex offender treatment, most female sex offender treatment programs are modeled after male programs. In addition, research is just beginning to examine the personality characteristics and possible psychopathology of female sexual offenders. This study sought to extend the Turner et al. (2008) examination of female sex offenders by expanding the sample of female offenders and comparing this larger sample with a male sex offender sample. This examination uses one of the largest samples of female sex offenders that includes psychopathology assessment to examine possible treatment implication.

**SAMPLE CHARACTERISTICS**

As this study examines one of the largest female sex offender samples to date, it is important to discuss some of the overall sample characteristics and compare these with samples of male sex offenders. The demographics of the samples were very similar, with the women being slightly younger (32 years) than the men (40 years) on average. More interesting is that the female sex offenders were just as likely to have a violent offense as the males. Similar to the male sex offenders, the majority of the female offenders had charges that included aggravated sex assault or assault. In addition, the female offenders’ average Static-99 score (2) was, on average, only 1 point lower than the males (3). Although the Static-99 has not been validated for female sex offenders, these score results indicate that the females may be at a similar risk level to the males to sexually recidivate (albeit low for these samples).

Comparing self-reported psychopathology, the female sex offenders scored higher on all of the PAI scales examined except for the PIM and the Drug Problems scales. Previous research indicates that female offenders, in particular violent female offenders, need an “extra push” to engage in violence compared with male offenders (Gorsuch, 1998; Mohan, Scully, Collins, & Smith, 1997). It is possible that higher levels of psychopathology provide the extra push for females to commit sex offenses as well. Whether these results are due to more defensive responding for the males or actual higher levels of psychopathology for the females will have to be examined in further research.

With respect to the latent classes identified in these analyses, two of the classes—Elevated Drug and Alcohol Use and Moderate Psychopathology—were very similar to classes identified in the female-only sample (Turner et al., 2008). Turner et al. also identified a very small class of women reporting highly elevated levels of a number of clinical scales. These analyses found a similar class here that was primarily composed of women but also had some male members. This class is consistent with overall clinical impressions of the treatment
staff (Turner et al., 2008). Therefore, it appears that there is a group of sex offenders who have notable levels of psychopathology; in this sample, elevated depression, schizophrenia, and borderline features. It is also important to note, however, that the average NIM scale score for this class is 82T. Thus, it is possible that this Elevated Psychopathology group is exaggerating their symptoms, or it may indicate a “cry for help,” an extremely negative evaluation of themselves, or most likely, a combination of these factors. Finally, the Moderate Defensiveness class was also unique to this study. The highest PAI scale score was the PIM scale (score average of 58T) with all other clinical scales quite low. Although the clinical scale scores may underestimate actual levels of psychopathology for this class, this class is most likely a group of sex offenders with little overall psychopathology.

To provide a broader context on the gender differences we discovered—recall that men were more likely than women to be found in the Moderate Defensiveness and Elevated Drug and Alcohol Use classes whereas women were more likely than men to be found in the Moderate and Extensive Psychopathology classes—45% (n = 57) of the males had the highest probability of class membership in the Moderate Defensiveness class as compared with 13% (n = 17) of the females. Correspondingly, out of the 28 offenders in the Extensive Psychopathology class, 21 (16% of the female sample) were female and only 7 (6% of the male sample) were male. Whether these results indicate true psychopathology differences between female and male sex offenders or simply differences in the willingness to report psychopathology must be examined in further research.

CLINICAL IMPLICATIONS

Although researchers have historically attempted to type offenders, including sex offenders, for various purposes, the most important reason is likely to provide direction for treatment and management. Turner et al. (2008) indicated that classifying female sex offenders by offense characteristics is neither empirically supported nor clinically helpful. Attempting to classify offenders based on variables that will help direct treatment should be the focus of examination, in particular if the focus of rehabilitation includes the risk, need, responsivity (RNR) framework proposed by Andrews, Bonta, and Wormith (2006). These authors report evidence suggesting that treatment is more effective when it is based on risk and criminogenic needs. These results support implications for the RNR framework. If sex offenders empirically can be typed into groups by their level of psychopathology and their risk for sexual recidivism, it provides initial direction for treatment and management of these offenders.

Similar to previous discussion in the Turner et al. (2008) study, there is a significant need to validate and examine risk measures for female sex offenders. Although the female sex offenders in this sample scored very similar to the males on the Static-99, we have no data to indicate that it predicts future sexual offending for females (as we do for male sex offenders). The previous study (Turner et al., 2008) reported moderate relationships between the Static-99 and PAI scales but no relationship with previous sex offenses. With the addition of several female sex offenders, this study supported the convergent validity for the Static-99; however, the results need to be considered with great caution as we cannot at this point truly state that this is a valid risk measure for female sex offenders. Much further research is warranted examining the predictive utility of the Static-99 (or any other risk measure, for that matter) with female sex offenders.
The results of this study provide some validation of previous findings with a smaller sample of female sex offenders. It appears that there are several important treatment issues for sex offenders besides their specific offending behavior. For example, these results indicate that substance use problems warrant treatment attention for a large portion of both male and female sex offenders. In addition, there appears to be a smaller group of sex offenders (more female than male) that may require extensive treatment focused on their notable levels of psychopathology (e.g., anxiety, depression, personality disorder). This is consistent with previous reports that female sex offenders, in particular, are more likely than their male counterparts to exhibit symptoms of a personality disorder (Vandiver & Walker, 2002). These consistent results indicate that perhaps a more long-term type treatment would be warranted for these more disturbed sex offenders.

LIMITATIONS AND CONCLUSIONS

This study examined differences in reported psychopathology among male and female sex offenders. Essentially, the examination of self-reports revealed significant reported differences in mental health, personality, and substance use pathology among male and female sex offenders. The scope of this study is limited, however, in that the participants involve only a circumscribed sample of incarcerated sex offenders. Specifically, this study examined results only from individuals who had been accepted into the Sex Offender Treatment Program. Thus, the sample in this study is likely not representative of the sex offender population as a whole. Moreover, although the authors considered the validity indexes of the PAI in the analyses, there is no guarantee that participants’ responses reflect accurate levels of symptomatology. Accordingly, the clinical picture for this sample may in fact be distorted. In addition, this study should be expanded to include a larger number of sex offenders across various incarceration settings. This study lays a solid foundation to continue the investigation of sex offender personality variables, but there is much left to do to gain a thorough understanding of the heterogeneous personality traits common among this challenging population.

NOTES

1. Static-99 scores range from 0 to 10.
2. We are aware of the controversy surrounding the use of the Static-99 with female offenders, a group with which the instrument has not been adequately normed. Nevertheless, from a practical standpoint, it is being used with women in several jurisdictions, including the Texas Department of Criminal Justice, the setting in which this study was conducted.
3. These results are available from the first author upon request.

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Texas Department of Criminal Justice. (2004). *Texas Department of Criminal Justice Rehabilitation and Reentry Programs Division Sex Offender Rehabilitation Services*. Huntsville, TX: Author.


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