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Personality-Based Typology of Adolescent Male Sexual Offenders: Differences in Recidivism Rates, Victim-Selection Characteristics, and Personal Victimization Histories[1]

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California Psychological Inventory scores from 112 adolescent male sexual offenders aged 12–19 (M = 15.59, SD = 1.46) were examined. A cluster analysis of factor-derived scores revealed four personality-based subgroups: Antisocial/Impulsive, Unusual/Isolated, Overcontrolled/Reserved, and Confident/Aggressive. Significant differences were observed between groups regarding history of physical abuse, parental marital status, residence of the offenders, and whether or not offenders received criminal charges for their index sexual assaults. Subgroup membership was unrelated to victim age, victim gender, and offenders' history of sexual victimization. Recidivism data (criminal charges) were collected for a period ranging from 2 to 10 years (M = 6.23, SD = 2.02). Offenders in the two more pathological groups (Antisocial/Impulsive and Unusual/Isolated) were most likely to be charged with a subsequent violent (sexual or nonsexual) or nonviolent offense. The four-group typology based solely on personality functioning is remarkably similar to that found by W. R. Smith, C. Monastersky, and R. M. Deisher in 1987 from their cluster analysis of MMPI scores. In addition to implications for risk prediction, the present typology is suggestive of differential etiological pathways and treatment needs.

KEY WORDS: adolescent sexual offenders; offender typology; personality; recidivism.

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It has been widely noted that adolescent male sexual offenders are a heterogeneous group and that to better understand the etiology and treatment needs for this population, researchers should focus on differences between specific subgroups (Becker, 1998; Davis & Leitenberg, 1987; Kaufman, Hilliker, & Daleiden, 1996; Richardson, Kelly, Bhate, & Graham, 1997; Worling, 1995a). Although there are some data regarding distinct subgroups such as sibling-incest offenders (O'Brien, 1991; Worling, 1995b) and offenders with a history of sexual victimization (Cooper, Murphy, & Haynes, 1996; Worling, 1995c), most investigators have followed the trend in research with adult sexual offenders by comparing adolescents who offend against children to those who assault peers or adults: the "child molester" versus "rapist" distinction (Awad & Saunders, 1991; Carpenter, Peed, & Eastman, 1995; Ford & Linney, 1995; Hagan & Cho, 1996; Hsu & Starzynski, 1990; Saunders, Awad, & White, 1986; Worling, 1995a).

A common assumption is that adolescent sexual offenders who assault children do so because of poor social skills and low self-esteem, and that these offenders avoid intimacy and possible rejection from peers by seeking sexual gratification with younger children (e.g., Becker, 1988; Deisher, Wenet, Paperny, Clark, & Fehrenbach, 1982; Katz, 1990). Results are quite mixed, however, from investigations in which offenders have been compared on the basis of victim age, and personality profiles and background characteristics for the "typical" adolescent rapist and child molester have not been identified. For example, some investigators have found that adolescents who assault children are socially isolated and have low self-esteem (Carpenter et al., 1995; Saunders et al., 1986), whereas others have found no significant differences between groups on these variables (Ford & Linney, 1995; Worling, 1995a). With respect to family history, Worling (1995a) found that adolescents who assault peers or adults were more often recipients of childhood physical discipline in comparison to offenders against young children; Ford and Linney (1995) found the opposite trend. Several researchers have found few meaningful differences between adolescent rapists and child molesters and they question the wisdom of categorizing offenders based on victim age (e.g., Hagan & Cho, 1996; Hsu & Starzynski, 1990).

One possible reason for the inconsistent results is that sample sizes are often quite small (typically $n < 30$ per group), and reliable differences may be observed only when larger groups are studied. Another problematic issue is that victim age and gender are most often confounded: offenders who abuse children offend against males, females, or both, whereas adolescents who assault peers or adults typically offend against females almost exclusively (Worling, 1995a). Most comparisons between adolescent rapists and child molesters are, therefore, simultaneous and unplanned comparisons based partially on victim gender. A further complication in forming subgroups based on victim age is that some offenders commit offenses against *both* children *and* peers/adults (e.g., Wieckowski, Hartsoe, Mayer,

& Shortz, 1998 [27%]; Worling, 1995a [18%]). Although some authors describe how they assign those offenders with victims from both age groups, it is most often unclear whether these offenders have been assigned to one group based on some unknown criteria or excluded altogether. Finally, it is also possible that inconsistent differences have been observed because distinct personality profiles of adolescent rapists and child molesters do not exist. Although the division of adolescent sexual offenders based on the age of their victims is appealing given both the ease of this distinction and the parallel to research with adult offenders, it may be that the formation of meaningful and reliable subgroups has little to do with the age of the victims whom they select.

Based on their work with adolescent sexual offenders, O'Brien and Bera (1986) developed a classification system based on factors such as personality, victim age, family functioning, general delinquency, and sexual history. The seven subgroups that were identified included the following: Naive Experimenter, Undersocialized Child Exploiter, Pseudosocialized Child Exploiter, Sexual Aggressive, Sexual Compulsive, Disturbed Impulsive, and Group Influenced. Although this popular typology extends beyond distinctions based solely on victim age, there are no empirical data to support this taxonomy.

To date, only one study has been focussed on the detection of personality-based subgroups of adolescent sexual offenders. Using data from 262 adolescent male sexual offenders, Smith, Monastersky, and Deisher (1987) performed a cluster analysis on four factor scores derived from participants' MMPI protocols. The authors found that the 178 adolescents who were successfully classified were best represented by four groups: Group I described as shy, emotionally overcontrolled, and isolated; Group II found to be narcissistic, disturbed, insecure, and argumentative; Group III rated as outgoing, honest, yet prone to violent outbursts; Group IV described as impulsive, mistrustful, and undersocialized. Further analyses revealed that, contrary to expectations, group assignment was not related to victim-selection characteristics such as victim age or gender. The authors also commented that there were very few differences between the groups with respect to "referral offense characteristics, clinical presentation, or historical variables" (p. 426). Unfortunately, there is no additional information regarding the nature of these variables, and the authors abandoned further analysis of these personality-based subgroups because there was no association with victim-selection factors. An additional complication is that "Fake good" and "Fake bad" MMPI protocols were not excluded from the analyses. Despite these caveats, however, the results suggest that there may be personality-based subgroups of adolescent sexual offenders irrespective of victim-selection factors.

The primary purpose of the present study was to replicate the work of Smith et al. (1987) and to attempt to define personality-based subgroups of adolescent male sexual offenders. No predictions were made regarding the association between potential subgroup membership and victim-selection factors such as victim

age, gender, and relationship to offender given the tremendous inconsistencies in the literature.

The secondary purpose was to determine whether or not there was any relation between subgroup assignment and sexual or nonsexual recidivism. It was noted recently that The Association for the Treatment of Sexual Abusers supports "research efforts directed at creating a juvenile sex offender typology and linking offender classification with risk assessment" (1997, p. 3). Given the recent completion of a 10-year follow-up study with an overlapping sample of adolescents (Worling & Curwen, 2000), it was possible to determine whether recidivism rates varied as a function of personality-based group assignment.

METHOD

Participants

Assessment data from 112 adolescent male sexual offenders who completed the California Psychological Inventory (CPI) (Gough, 1987) as part of an assessment by the Sexual Abuse: Family Education & Treatment (SAFE-T) Program were used in this investigation. At the time of assessment, the adolescents ranged in age from 12 to 19 years ($M = 15.59$, $SD = 1.46$). All offenders were convicted of or acknowledged their sexual assaults or both, and offenders reflected the cultural diversity of the Greater Toronto area. Documentation regarding the sexual assault behaviors for all participants was available from Probation and Community Services or child welfare agencies or a combination of these. The victims of the offenders were children (50.9%) (see *Demographic Variables*, below, for a definition of an offense against a child), peers/adults (37.5%), or both (11.6%); extrafamilial (50.9%), intrafamilial (26.8%), or both (22.3%); female (67%), male (13.4%), or both (19.6%).

Measures

The CPI (Gough, 1987) is a popular personality test for individuals aged 12 and over, designed to assess 20 variables related to both interpersonal and intrapersonal functioning. The test manual reports adequate levels of internal consistency (median $\alpha = .72$ for male respondents) and test-retest reliability (median $r = .68$ for male adolescents over a 12-month interval). The CPI manual also presents extensive information regarding both factorial and concurrent validity.

Scores from the Physical Punishment scale of the Assessing Environments (III) Scale (AEIII) (Berger, Knutson, Mehm, & Perkins, 1988) were used as a measure of physically abusive parental discipline. This 12-item scale samples a history of events such as spanking, hitting, kicking, and choking. Based on data from an

overlapping clinical sample of adolescents and adults ($n = 209$), the internal consistency (KR-20) estimate for this scale was .82 (Worling, 1995b). In accordance with previous studies (Berger et al., 1988; Bower & Knutson, 1996; Lawrence, Cozolino, & Foy, 1995; Zaidi, Knutson, & Mehm, 1989), physical abuse was coded as present for scores greater than 3. Berger et al. (1988) have demonstrated that this cutoff score differentiates physically abused from nonabused adolescents.

Demographic Variables

If the offender was at least 4 years older than the victim and the victim was under 12 years of age, the offense was categorized as one against a child; otherwise, the offense was categorized as an offense against a peer (if the victim was under age 18) or an adult (if the victim was age 18 or over). This age difference has been used previously (Awad & Saunders, 1991; Smith et al., 1987; Worling, 1995a). An offense was coded as intrafamilial if the victim was a family member (full, half, step, adopted, or foster). In the present investigation, this included siblings, cousins, nieces, and nephews. Given that 69% (31 of 45) of the intrafamilial offenders assaulted siblings, sibling incest was also examined separately. History of sexual victimization was coded as present if the adolescent reported (i) experiencing any unwanted sexual contact, or (ii) sexual contact with a person who was at least 4 years older than the adolescent at the time of the incident.

Socioeconomic status (SES) was based on the Blishen system for rating Canadian occupations (Blishen & Carroll, 1978; Blishen & McRoberts, 1976). These ratings are based on Canadian occupations, and the higher SES rating was assigned in the case of two-parent families. Scores for specific occupations were assigned to 1 of 6 categories according to criteria outlined by the authors.

Additional dichotomous variables examined included the offenders' place of residence at the time of assessment (i.e., at home—including foster home or the home of a relative—versus in a custodial or noncustodial residential placement), whether or not the offenders' parents were still married and living together, whether or not the offenders had younger siblings in their families, and whether or not offenders received criminal charges as a result of their index sexual assault.

Recidivism

Data regarding subsequent criminal charges were available from a longitudinal study of treatment efficacy for a larger group of 148 adolescent sexual offenders (Worling & Curwen, 2000). Through an order from a Youth Court Judge, both youth (age 12–17) and adult (age 18 and over) records held by the Canadian Police Information Centre (CPIC) were accessed. The CPIC database is a national registry of criminal arrests and convictions maintained by the Royal Canadian Mounted

Police. The follow-up period ranged from a minimum of 2 years post initial contact to a maximum of 10 years ($M = 6.23$, $SD = 2.02$). Following work by Proulx et al. (1997), Rice, Quinsey, and Harris (1991), and Firestone et al. (1999), subsequent criminal charges were grouped into one of three tiered categories: any Canadian Criminal Code offense; any violent offense (any sexual offense, as outlined below, or any charge involving actual or threatened physical harm to a person such as assault, robbery, forcible confinement, and uttering threats); sexual offense only (Canadian Criminal Code charges of a sexual nature).

Cluster Analysis

As Hair and Black (2000) note, one of the most common uses of cluster analysis techniques is to explore the "natural" groupings of observations or participants. The goal of cluster analysis is to form meaningful groups, or clusters, of observations whereby within-cluster similarity is maximized and between-cluster similarity is minimized (Hair & Black, 2000).

Clusters of participants are formed by calculating the distances between each participant and then grouping participants into homogeneous clusters based on the computed distances. There are a variety of ways to calculate the distances between observations when conducting a cluster analysis (e.g., squared Euclidean distance) and there are also a variety of popular algorithms that can be used to develop the resulting clusters (e.g., Ward's method). It is important to stress that the final cluster solution is significantly influenced by both the distance measure and the algorithm that is chosen; therefore, it is advisable for researchers to use several distance measures and algorithms and compare the results before selecting a final cluster solution (Hair & Black, 2000). For this investigation, it was decided that three different clustering techniques would be used, and that discriminant analyses would be conducted to assess the performance of the various clustering techniques.

RESULTS

To ensure that only valid CPI protocols were included, participants' scores were assessed using the equations presented in the CPI manual for detecting invalid results. No protocols were categorized as "Fake Good"; however, 7 were omitted because of a "Fake Bad" designation and 8 were excluded for "Random Responding." Although it was surprising that no offenders were presenting an overly favorable self-image, Gough (1987) reported a similar finding based on a sample of 96 juvenile delinquents. With the invalid protocols excluded, CPI data from 97 adolescent sexual offenders were used in subsequent analyses.

A principle-components analysis with Varimax rotation was conducted with the 20 CPI scales to reduce the number of variables for subsequent cluster analyses.

Table I. Rotated Factor Loadings of CPI Scores

CPI variable	Factor 1	Factor 2	Factor 3	Factor 4
Dominance	.338	.811**	−.166	−.062
Capacity for Status	**.372**	.594**	.293	.003
Sociability	**.142**	.819**	−.009	.362
Social Presence	−.209	.561**	.389	.486
Self-acceptance	−.074	.787**	.131	.168
Independence	**.501**	.557**	.367	−.089
Empathy	**.239**	.629**	.274	.273
Responsibility	.752**	.198	−.140	.314
Socialization	.850**	−.041	−.139	.132
Self-control	.932**	−.184	.086	−.085
Good Impression	.908**	−.053	.039	−.079
Communality	.199	.107	−.100	.873**
Sense of Well-being	.780**	.171	.262	.193
Tolerance	.704**	.064	.577**	.147
Achievement via Conformance	.839**	.325	−.895	.114
Achievement via Independence	.667**	.270	.549**	−.011
Intellectual Efficiency	.681**	.294	.434	.234
Psychological-mindedness	.674**	.392	.329	−.041
Flexibility	.056	−.003	.907**	−.069
Femininity/Masculinity	.214	−.560**	.121	.245

** $p < .01$.

This analysis yielded four factors (eigenvalues > 1) accounting for 75.1% of the total variance. The rotated factor matrix is presented in Table I, and factor loadings above |.51| are considered significant for this sample size (Stevens, 1986). The resulting factor structure is remarkably similar to that obtained from the CPI normative population. Specifically, factor loadings for Factors 2 and 4 were identical, and three scales (Tolerance, Achievement via Independence, and Intellectual Efficiency) with higher loadings on Factor 3 in the normative group had higher loadings on Factor 1 in the present investigation.

The first CPI factor, accounting for 43.4% of the variance, was composed of the following 10 CPI scales: Responsibility, Socialization, Self-Control, Good Impression, Sense of Well-Being, Tolerance, Achievement via Conformance, Achievement via Independence, Intellectual Efficiency, and Psychological-Mindedness. According to the CPI manual, individuals with high scores on these variables are emotionally overcontrolled, responsible, reserved, and reliable. The second factor, accounting for 17.1% of the variance, was represented by significant loadings on Dominance, Capacity for Status, Sociability, Social Presence, Self-acceptance, Independence, Empathy, and Femininity/Masculinity. High scores on these variables (and low scores on the F/M given the negative factor loading) are attributed to confident, self-centered, sociable, aggressive, and outgoing individuals. The third factor was represented by the Flexibility scale, with secondary loadings on the Tolerance and Achievement via Independence Scales. This factor accounted for 8.3% of the variance, and those with high scores on these variables

are trusting and spontaneous. The fourth factor, accounting for 6.2% of the variance, was represented by the Communality scale, and high scores reflect those individuals who are dependable, organized, and optimistic.

The four CPI factor scores were then submitted to three cluster analysis procedures: Ward's method using squared Euclidean distances, Within-groups linkages using squared Euclidean distances, and Between-groups linkages using cosine of vectors values. Inspection of the scree plots of coefficients from the agglomeration schedule for all clustering methods suggested a four-cluster solution (i.e., coefficients' inflection point at 5 clusters). Discriminant analyses were then performed on the CPI factor scores to assess optimal group membership as assigned by the three clustering techniques. The agreements in classification for Ward's, Within-groups linkage, and the Between-groups-cosine procedures were 91.8%, 85.6%, and 94.8%, respectively. Given the superiority of the Between-groups-cosine procedure with respect to discriminant analyses, clusters based on this technique were used in subsequent analyses. To further assess the validity of group assignment based on Between-groups cosine values, oneway ANOVAs were computed for each of the 20 original CPI scales. With the exception of the Femininity/Masculinity scale, $F(3, 93) = 1.93$, $p > 1$, there were significant differences between the four groups on the original CPI variables, all Fs$(3, 93) > 7.78$, all ps $< .0001$.

Tukey's HSD test was then performed on the four CPI factor scores to determine how the groups differed with respect to personality. The CPI factor means and standard deviations for each group are displayed in Table II, and the resultant personality descriptors of the four groups are listed in Table III. As noted in Table III, the suggested names for the groups are Antisocial/Impulsive, Unusual/Isolated, Overcontrolled/Reserved, and Confident/Aggressive.

Data related to all subsequent between-group comparisons are presented in Table IV. The four groups were comparable with respect to age, $F(3, 93) = 1.15$, $p > .10$, and SES, Kruskal–Wallis $H = 6.1$, $p > .10$; therefore, it was not necessary to control for these potentially confounding variables in subsequent analyses. Chi-square analyses were then performed to determine whether victim-selection characteristics were related to group membership. To avoid cells with

Table II. CPI Factor Score Means and Standard Deviations by Offender Group

	Group 1 ($n = 43$)	Group 2 ($n = 15$)	Group 3 ($n = 20$)	Group 4 ($n = 19$)
Factor 1	$-.85\ (.53)_a$	$.41\ (.64)_b$	$1.25\ (.59)_c$	$.27\ (.57)_b$
Factor 2	$-.23\ (1.00)_a$	$-.02\ (.79)_a$	$-.54\ (.64)_a$	$1.11\ (.55)_b$
Factor 3	$-.16\ (.96)_{a,c}$	$.75\ (.78)_b$	$-.66\ (.58)_a$	$.46\ (1.05)_{c,b}$
Factor 4	$.08\ (.81)_a$	$-1.48\ (.85)_b$	$.24\ (.69)_{a,c}$	$.71\ (.55)_c$

Note. Means in the same row that do not share the same subscript differ at $p < .05$ in the Tukey honestly significant difference comparison.

Table III. Personality Descriptors for Adolescent Sexual Offender Subgroups

Group	CPI[a] factor scores	Personality descriptors
1 Antisocial/Impulsive ($n = 43$)	Low Factor 1	Antisocial, impulsive, anxious, unhappy, and rebellious
2 Unusual/Isolated ($n = 15$)	Low Factor 4	Unusual, undependable, isolated, and confused
	High Factor 3	Trusting and spontaneous
3 Overcontrolled/Reserved ($n = 20$)	High Factor 1	Emotionally overcontrolled, responsible, reserved, and reliable
	Low Factor 3	Suspicious of others and rigid
4 Confident/Aggressive ($n = 19$)	High Factor 2	Confident, self-centered, outgoing, aggressive, and sociable
	High Factor 4	Dependable, organized, and optimistic

[a]California Psychological Inventory.

expected frequencies of less than 5, victim age, gender, and relationship were coded as two-category variables: ever children versus only peers/adults (victim age); ever male versus only female victims (victim gender); ever intrafamilial versus only extrafamilial (victim relationship); and ever a sibling versus only nonsiblings. There was no significant relationship between offender group classification and victim age, $\chi^2(3, N = 97) = 1.65$, $p > .10$, or victim gender, $\chi^2(3, N = 97) = 3.33$, $p > .10$. Although not statistically significant, note that somewhat fewer Confident/Aggressive offenders assaulted male victims relative to the other groups, $\chi^2(3, N = 97) = 3.16$, $p = .08$.

There was no significant difference between the four groups with respect to victim relationship whether this was defined as any intrafamilial offense, $\chi^2(3, N = 97) = 5.76$, $p > .10$, or sibling incest specifically, $\chi^2(3, N = 97) = 3.75$, $p > .10$. However, when compared to Overcontrolled/Reserved and Unusual/Isolated adolescents combined, the Antisocial/Impulsive and Confident/Aggressive subgroups were significantly more likely to assault intrafamilial victims, $\chi^2(1, N = 97) = 4.93$, $p < .05$, and somewhat more likely to assault siblings, $\chi^2(1, N = 97) = 3.60$, $p = .06$. It is important to note, however, that in comparison to Overcontrolled/Reserved and Unusual/Isolated offenders, adolescents in the Antisocial/Impulsive and Confident/Aggressive groups were more likely to have younger siblings in their families, $\chi^2(1, N = 97) = 3.38$, $p = .06$.

With respect to the offenders' victimization history, 39.2% (38/97) of the participants disclosed a history of childhood sexual victimization, and frequencies of sexual abuse were comparable across the four groups, $\chi^2(3, N = 97) = 1.44$, $p > .10$. The proportion of offenders reporting physical abuse by their parents was significantly different across the 4 groups, $\chi^2(3, N = 91) = 11.79$, $p < .01$. Although 62% (26/42) of the Antisocial/Impulsive adolescents reported physical abuse by a parent(s), 31% (15/49) of offenders in the other groups reported physically abusive discipline, and frequencies were comparable across these three groups, $\chi^2(2, N = 49) = 3.31$, $p > .10$.

Table IV. Age, SES, and Number (and percent) of Offenders Within Categories of Dichotomous Variables

	Group 1 Antisocial/ Impulsive ($N = 43$)	Group 2 Unusual/ Isolated ($n = 15$)	Group 3 Overcontrolled/ Reserved ($n = 20$)	Group 4 Confident/ Aggressive ($n = 19$)
Age[a]	15.70 (1.41)	15.07 (1.94)	15.90 (1.17)	15.84 (1.30)
SES (lower score denotes higher SES)[a]	5.14 (1.32)	4.93 (1.49)	5.00 (1.30)	4.16 (1.64)
Ever a male victim	16 (37%)	5 (33%)	8 (40%)	3 (16%)
Ever a child victim	26 (61%)	8 (53%)	12 (60%)	14 (74%)
Ever an intrafamilial victim	24 (56%)	6 (40%)	5 (25%)	10 (53%)
Ever a sibling victim	16 (37%)	3 (20%)	4 (20%)	8 (42%)
Younger siblings in family	31 (72%)	8 (53%)	11 (58%)	15 (79%)
Childhood sexual victimization	19 (44%)	5 (33%)	6 (30%)	8 (42%)
Childhood physical victimization	26/42 (62%)	6/14 (43%)	3/19 (16%)	6/16 (38%)
Living at home (vs. in a residential setting)	18 (42%)	13 (87%)	14 (70%)	8 (42%)
Charged with index sexual assault(s)	39 (91%)	9 (60%)	15 (75%)	15 (79%)
Parents still married and living together	17 (40%)	3 (20%)	13 (65%)	9 (47%)
Sexual reoffense at follow-up	6 (14%)	2 (13%)	1 (5%)	2 (11%)
Violent reoffense (including sexual) at follow-up	16 (37%)	7 (47%)	3 (15%)	3 (16%)
Any reoffense at follow-up	23 (54%)	9 (60%)	5 (25%)	8 (42%)

[a] Values are means and standard deviations (in parentheses).

There was a significant difference between groups regarding parental marital status, $\chi^2(3, N = 97) = 7.61$, $p = .05$. Whereas 56% (22/39) of offenders in the 2 relatively "healthier" groups (Overcontrolled/Reserved and Confident/Aggressive) had parents who were still married and living together, only 35% (20/58) of parents of offenders in the Unusual/Isolated and Antisocial/Impulsive groups were still married or living together or both.

Relative to the other three groups (72%, or 39/54), Antisocial/Impulsive offenders were most likely (91%, or 39/43) to have received criminal charges for their index sexual assaults, $\chi^2(1, N = 97) = 5.19$, $p < .05$. Both Antisocial/Impulsive and Confident/Aggressive offenders (58%, or 36/62) were more likely to be living in a residential setting rather than a family home in comparison to Overcontrolled/Reserved and Unusual/Isolated adolescents (23%, or 8/35), $\chi^2(1, N = 97) = 11.19$, $p < .01$.

As both date of initial assessment and date of subsequent criminal charges were known, recidivism rates were compared using Kaplan–Meier nonparametric estimates of the survival functions (Kaplan & Meier, 1958). Tests for differences between survival functions are reported as χ^2 values based on the Log Rank, or Mantel–Cox (Mantel, 1966), statistic. This form of χ^2 analysis is both more meaningful and efficient than the more common χ^2 comparison of simple proportions (Greenhouse, Stangl, & Bromberg, 1989).

Kaplan–Meier survival curve estimates for sexual, violent (including sexual and nonsexual), and any criminal reoffence are displayed in Fig. 1. Although only 33% (13/39) of offenders in the two relatively healthier groups (Overcontrolled/Reserved and Confident/Aggressive) had subsequent criminal charges for any type of criminal offense after a mean of 6 years, 55% (32/58) of the offenders from the Antisocial/Impulsive and Unusual/Isolated groups had further charges, and this difference was significant, $\chi^2(1, N = 97) = 4.48$, $p < .05$. For violent offenses involving sexual or nonsexual assaults or both against a person, the Antisocial/Impulsive and Unusual/Isolated groups were again significantly more likely (40% or 23/57) to have subsequent criminal charges in comparison to the two relatively healthier groups (15%, or 6/39), $\chi^2(1, N = 97) = 7.41$, $p < .01$. Overall, 11% (11/97) of the adolescents in this study received subsequent charges for sexual offenses and there were no significant differences across the four personality-based groups, $\chi^2(3, N = 97) = 1.15$, $p > .10$, or when the Overcontrolled/Reserved and Confident/Aggressive offenders were combined and contrasted with the Antisocial/Impulsive and Unusual/Isolated offenders, $\chi^2(1, N = 97) = 0.88$, $p > .10$.

DISCUSSION

A cluster analysis of personality variables derived from the CPI resulted in a four-group typology of adolescent male sexual offenders: Antisocial/Impulsive, Unusual/Isolated, Overcontrolled/Reserved, and Confident/Aggressive. Although there were no significant differences between groups regarding offender age, SES, or history of childhood sexual victimization, there were several significant group differences that provide external validation for the resultant four-cluster solution.

The largest group of offenders (representing almost half of the participants) have "delinquent" and impulsive personality traits and were labeled "Antisocial/Impulsive." These adolescents were the most likely to have received criminal charges for their index sexual assaults, and to have been recipients of abusive physical discipline from their parents. The link between abusive parental discipline and subsequent antisocial attitudes and behavior in adolescence is well established (e.g., Dodge, Pettit, Bates, & Valente, 1995; Fergusson & Lynskey, 1997). Together with the Confident/Aggressive adolescents, the Antisocial/Impulsive offenders were also most likely to be living in a residential (custodial or noncustodial) setting.

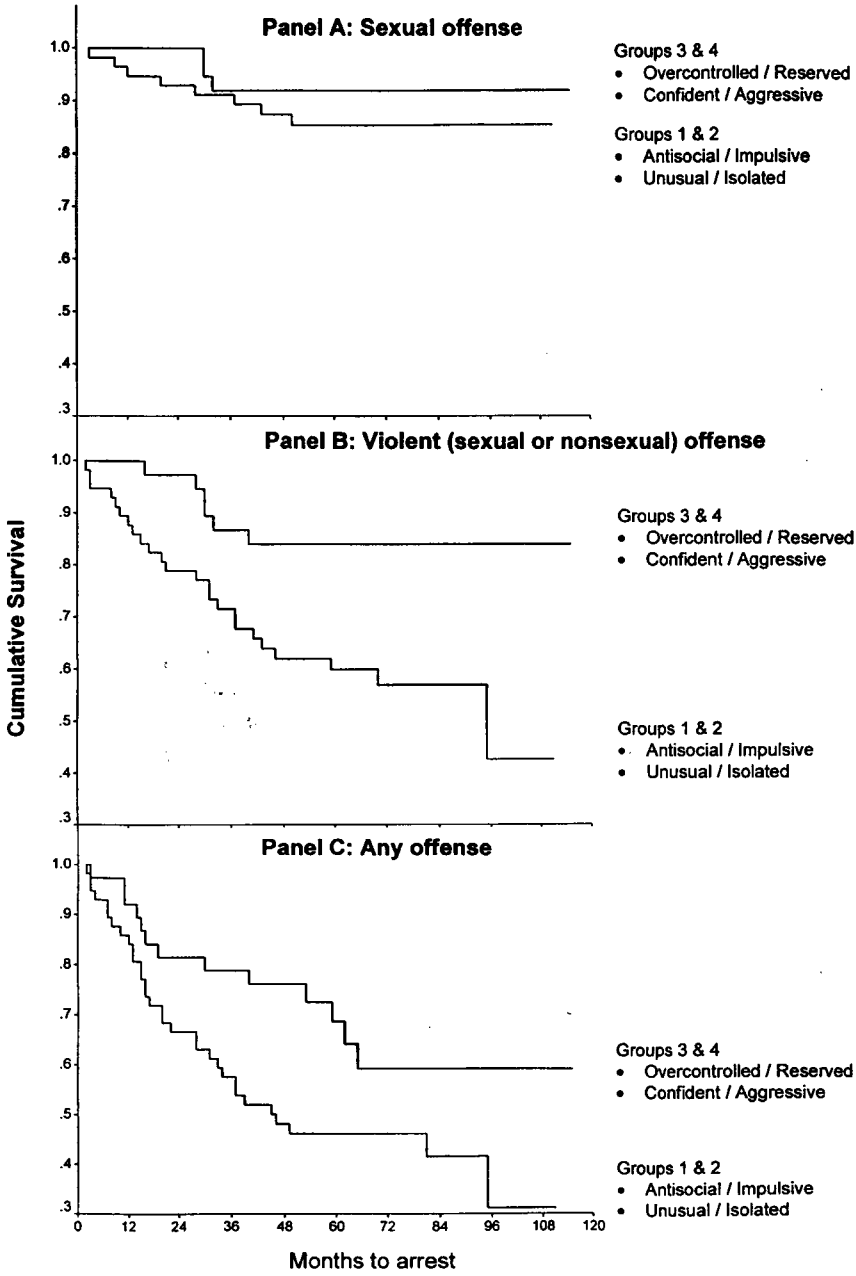

Fig. 1. Kaplan—Meier survival curve estimates for sexual, violent (including sexual), and any subsequent arrests.

Although there were no significant differences between groups with respect to sexual assault recidivism specifically, the two relatively more pathological groups, Antisocial/Impulsive and Unusual/Isolated offenders, were most likely to have been charged with a subsequent violent (sexual or nonsexual) or nonviolent offense after a mean follow-up period of 6 years. Pathological personality factors have long been associated with persistent criminal behavior in adolescents (see Elkins, Iacono, Doyle, & McGue, 1997, for review), and the present results suggest that personality factors may be used to predict risk of violent or nonviolent recidivism for adolescent male sexual offenders. Offenders in these two more pathological groups were also most likely to have parents who were separated or divorced at the time of assessment, and the link between marital conflict and general (i.e., nonsexual) delinquency has also been well documented (e.g., Loeber, 1990).

Perhaps the most striking finding from this study is the similarity between these results and those reported by Smith et al. in 1987. In both investigations, two relatively healthy personality-based groups were identified: one group of emotionally overcontrolled and socially reserved adolescents (Smith et al.'s Group I and my Group 3) and one group of honest and outgoing offenders who are prone to aggression towards others (Smith et al.'s Group III and my Group 4). Similarly, two more pathological groups were identified in each study: one group of antisocial and impulsive teenagers (Smith et al.'s Group IV and my Group 1) and one group of emotionally disturbed and insecure offenders (Smith et al.'s Group II and my Group 2). Furthermore, in neither investigation was victim age or victim gender significantly related to subgroup assignment. The comparability of results is remarkable given that the two investigations were conducted during different decades, in different countries and, more importantly, using different personality tests. Although there is certainly need for further validation and refinement, the results of both investigations suggest four distinct personality-based subgroups of adolescent sexual offenders.

As noted above, there were no between-group differences with respect to victim age and victim gender. Furthermore, the small difference observed between groups regarding familial relationship to the victim appears primarily attributable to the availability of younger siblings in the family: offenders more prone to select intrafamilial victims were also those offenders more likely to have younger siblings in their families. Adolescent sexual offenders are more fluid with respect to their sexual preferences given their stage of psychosexual development (Hunter & Lexier, 1998); therefore, the age and gender of their victims may be less a marker of sexual preference than is the case for adult offenders. This may explain the lack of consistency in results when researchers attempt to define the prototypical adolescent rapist and child molester by making comparisons based solely on the age of the victims whom they select.

The four-group typology is suggestive of differential etiological pathways and treatment needs. To illustrate the likely differences in treatment needs,

specific skills from the popular training program—*Skillstreaming the Adolescent* (Goldstein & McGinnis, 1997)—will be highlighted for each offender group. This is a behavioral program for teaching 50 different social skills to adolescents, using principles of modeling, practice, and reinforcement.

The Antisocial/Impulsive adolescents likely have a propensity for rule violation and their sexual offending may, at least initially, be more a result of this factor rather than deviant sexual arousal per se. If this is true, then traditional, sexual-offender–specific relapse prevention treatment would not be terribly successful without concomitant work on those treatment targets that have been shown to be essential in the treatment of general juvenile delinquency such as prosocial attitudes, interpersonal skills, and academic performance (Lipsey, 1995). Using the Goldstein and McGinnis (1997) manual, the Antisocial/Impulsive offenders would likely benefit from instruction on the set of nine social skills categorized as "alternatives to aggression." These include skills labelled as "using self-control," "keeping out of fights," and "avoiding trouble with others," for example. Of course, with repeated sexual offending or conditioning of deviant fantasies through masturbatory behaviors or both, deviant sexual arousal could become an important factor in addition to the more general antisocial attitudes and behaviors. Perhaps within the larger group of Antisocial/Impulsive offenders, therefore, there is a subgroup for whom the additional feature of deviant sexual arousal is an important etiological factor that will require more specific sexual-offense–specific treatment. It is also important to note the high prevalence of childhood physical abuse within the Antisocial/Impulsive group and, therefore, the need to address the sequelae of their physical maltreatment in any intervention plan. Presently, it appears that trauma-specific cognitive–behavioral interventions are the most efficacious for this purpose (Cohen, Berliner, & Mannarino, 2000).

Overcontrolled/Reserved adolescents do not share the delinquent attitudes or interpersonal orientation of the Antisocial/Impulsive offenders. More specifically, Overcontrolled/Reserved adolescents endorse prosocial attitudes, they are cautious to interact with others, and they tend to keep their feelings to themselves. This group of offenders may initiate offending behaviors, in part, as a result of their shy and rigid interpersonal orientation, which may result in limited access to intimate personal relationships. Unlike the Antisocial/Impulsive offenders, these adolescents will need to work on the outward expression of affect and the need to take risks to form social relationships. Using the Goldstein and McGinnis (1997) manual, these adolescents would likely benefit from instruction in skills labeled as "joining in," "expressing your feelings," and "standing up for your rights." Furthermore, in contrast to the Antisocial/Impulsive offenders, this group would not require treatment aimed at the more generic delinquency issues such as impulsivity, pro-criminal attitudes, and educational stability.

An important etiological variable for adolescents in the Unusual/Isolated group may be their peculiar presentation and social isolation. Specifically, the

development and maintenance of a healthy and intimate sexual relationship with a consenting peer may be particularly problematic for these offenders given their awkward personality features. Perhaps in addition to more traditional sexual-offense–specific treatment, these offenders would also require treatment aimed at their unusual interpersonal orientation and the resulting social isolation. Goldstein and McGinnis (1997) outline behavioral instruction in a number of basic, or "beginning," social skills that would likely be helpful for this group such as "listening," "starting a conversation," "asking a question," and "introducing yourself."

In direct contrast, offenders in the Confident/Aggressive group tend to have a much healthier interpersonal presentation, and they can be described as friendly, confident, and optimistic. Unlike the Unusual/Isolated adolescents, therefore, the Confident/Aggressive offenders would not likely benefit from intensive, remedial instruction in basic social skills. On the other hand, Confident/Aggressive offenders can also be described as aggressive and narcissistic; therefore, the initiation of their sexual offending may, at least in part, be related to these issues. Successful interventions with this group may require that their aggressive and self-centered orientation be targeted specifically in addition to sexual-offense–specific treatment. Specific skills described by Goldstein and McGinnis that could be helpful for this group include "sharing something," "understanding the feelings of others," and "being a good sport."

Although there was empirical support for the personality-based clusters in this investigation, the generalizability of these results is limited by the use of cluster analysis techniques. The final cluster solution in any cluster analysis is dependent on the distance measure chosen, the algorithms used to form clusters, the variables used in the analyses, the multi-collinearity of the variables included, and the method used to determine the final number of clusters. Although the results of this investigation are remarkably similar to those found by Smith et al. (1987), it will be important for others to replicate and extend these results. Another limitation is that group sizes in this study are relatively small, and this limits the generalizability of the present findings. It is also important to note that, as in the Smith et al. (1987) investigation, there were a number of offenders who were not classified using the factor-derived personality scores. Perhaps researchers will find additional subgroups that can better account for the heterogeneity observed with respect to the personality characteristics of adolescent sexual offenders.

In a review focussed on the role of antisociality in the development of juvenile sexual aggression, France and Hudson (1993) note that close to half of the adolescent sexual offender samples in the literature could be labeled "conduct disordered" or "delinquent." In accord with this result, recall that the Antisocial/Impulsive group in the present study represent almost half of the participants. France and Hudson stress that although many adolescent sexual offenders have characteristics shared by nonsexual juvenile delinquents, there are many sexual offenders who do

not. Therefore, the quest to understand adolescent sexual offenders by overlaying a generic juvenile delinquency model is both oversimplified and erroneous. The results of this study support the fact that adolescent sexual offenders are not a homogenous group, and that the recognition of significant differences in personality functioning could be important with respect to both etiology and treatment.

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