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The Adolescent Sexual Interest Card Sort: Test-Retest Reliability and Concurrent Validity in Relation to Phallometric Assessment

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Test-retest reliability and concurrent validity studies on the Adolescent Sexual Interest Card Sort (ASIC) were conducted in two samples of 38 juvenile sexual offenders, each. Of the 64 items of the ASIC, 60 were found to be significantly correlated across test administrations. Cronbach's coefficient alpha was employed to determine the internal consistency of ASIC items. Coefficients ranged from .62 to .96 across categories, with an overall alpha of .97. Client ratings of sexual interests via the Card Sort were correlated with phallometric response to similar categories of stimuli. Significant correlations were found for only 4 of the 14 categories examined, suggesting little correspondence between client report of sexual interest on the ASIC and phallometric assessment of the same. Findings are consistent with the adult sex offender literature suggesting that self-report measures are particularly vulnerable to dissimulation and often at variance with more objective measurement. Clinical and research issues pertinent to the measurement of sexual arousal and interest in juvenile sexual offenders are discussed.

KEY WORDS: juvenile sex offenders; phallometry; arousal assessment; self-report.

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INTRODUCTION

The assessment of deviant sexual arousal and interest has become a relatively standard component of the evaluation of both adult and juvenile male sexual offenders (Barbaree, 1990; Becker, Hunter, *et al.*, 1992). Such assessments are typically conducted in the form of either phallometric measurement of erectile responding to auditory and/or visual stimuli, or use of client self-report instruments. Phallometric assessment of adult and juvenile sexual offenders produces reliable patterns of responding and is generally considered to be of diagnostic and treatment planning utility (Hunter and Becker, 1994). However, this form of assessment is labor-intensive and relatively expensive, and has generated some controversy regarding its use with juveniles.

Self-report sexual interest instruments have been developed, for both adult and juvenile sexual offenders, that offer simplicity of administration and avoidance of issues of physical invasiveness. However, client self-report of arousal and interest appears to be subject to dissimulation and has been shown to be poorly correlated with phallometric assessment in studies of adult sexual offenders (Quinsey and Earls, 1990; Freund, 1981). No existent studies have addressed whether self-report measures of sexual interest for juvenile sexual offenders offer reliable and valid results. The present study was designed to assess the test-retest reliability and concurrent validity (correlation with phallometric assessment) of one popular sexual interest self-report instrument for juvenile sexual offenders, the Adolescent Sexual Interest Card Sort (ASIC; Becker and Kaplan, 1988).

METHOD

Instrument

The Adolescent Sexual Interest Card Sort is a 64-item self-report measure of sexual interest, and is based on a revision of the one developed by Abel (1979). The ASIC consists of a series of sexual vignettes that the adolescent rates on a 5-point scale indicating whether he is aroused by thoughts of engaging in that behavior (higher scores reflect greater interest). For purposes of analysis of internal consistency the individual vignettes were combined into 17 content-related categories (see Table 1).

Research Participants and Procedure

Reliability

Test-retest reliability of the ASIC was assessed by administering this instrument on consecutive days to a sample of 38 adolescent sexual offenders. This sample was drawn from two primary sources: referrals to a New York City-based outpatient program for juvenile sexual offenders; and juveniles referred to outpatient and residential treatment programs for youthful sexual offenders in Virginia. These youths were all administered the instrument as part of a comprehensive evaluation which included a clinical interview, psychophysiological assessment of the sexual arousal pattern, and psychometric assessment. The administration of these instruments was conducted prior to the initiation of treatment services. These research participants ranged in age from 13 to 19, with a mean age of 15.4 years. Racial composition was 50.0% Caucasian, 42.1% African American, and 7.9% other. All had acknowledged the commission of one or more acts of sexual perpetration against another individual and had been referred for evaluation and treatment.

Concurrent Validity

The relationship between self-rated sexual interest and phallometrically measured arousal was assessed by correlating the average client response on the ASIC with his average maximum tumescence response to phallometric assessment for each of the 14 common stimulus categories described in Table II. Responses were averaged due to both instruments typically containing more than one stimulus cue per category. Maximum tumescence response scores were used as they have been found to be empirically meaningful in the classification of juvenile sexual offenders (Becker, Kaplan, and Tenke, 1992). Both measures were administered within the first 3 weeks of admission to either the residential or outpatient treatment programs. Thirty-eight youths from the Virginia data collection site were utilized for this segment of the study. Three of these also participated in the test-retest study. The mean age of these youths was 16.0, with a range from 13 to 18 years. Racial composition was 68.0% Caucasian, 24.0% African American, and 3.0% other. All had also acknowledged the commission of one or more acts of sexual perpetration against another individual and had been referred for evaluation and treatment.

Phallometric Measurement

Informed consent was obtained from the youth and his guardian prior to assessment. All assessments were conducted in a laboratory setting that involved the participant being seated in a sound-attenuated room free of extraneous and potentially distracting stimuli, and which afforded privacy. The technician sat in an adjoining room that contained the recording apparatus. The technician communicated with the participant through a door which remained closed during the assessment. Participants were instructed to place the gauge halfway down the penile shaft and told that they would listen to 19 scenarios through a standard earphone headset. The technician would occasionally ask each participant to repeat the content of the cue after it was completed to ensure that he was listening.

The stimuli consisted of 2-min verbal portrayals of sexual interactions between the adolescent and other individuals, and covered the areas of sexual activity described in Table II. These stimuli have been found to produce reliable patterns of responding in adolescent sexual offenders (Becker, Hunter, *et al.*, 1992). A more detailed description of their content can be found in the above referenced article.

Psychophysiological assessment of changes in penile circumference was conducted utilizing the CAT 200/300/400 Systems designed by Farrall Instruments. The Farrall System is computer-operated and records changes transmitted by an Indium-Gallium strain gauge. Each gauge was calibrated using standard calibration cones prior to each assessment to reflect changes from zero to 50 mm.

Phallometric response scores were calculated based upon the average peak response (percentage full erection) to cues in each category of interest. Full erection was estimated as the maximum circumferential change (≥ 19 mm) to either an assessment cue or an attempt to achieve full tumescence (using whatever method the subject preferred) following the assessment. The criterion of ≥ 19 mm was based upon data suggesting that the range of circumferential change associated with full erection in juvenile sexual offenders is between 19 and 50 mm (Becker, 1992).

RESULTS

Of the 64 items on the ASIC, 60 produced statistically significant test-retest correlations using the Pearson r method. These significant correlations ranged from .44 to .98 ($p < 0.01$). Table I depicts the results of Cronbach's alpha computations for item clusters, as well as the overall test.

Table I. Alpha Correlations for ASIC Item Clusters

Scale description	ASIC item Nos.	Cronbach's α
Aggressive sex adult female	1, 28, 43, 57	.86
Violence only adult female	13, 60	.68
Aggressive sex same-age female	12, 33, 36, 40	.93
Consensual sex same-age female	10, 37, 52, 59	.94
Aggressive-sex young female	15, 24, 29, 38, 49	.91
Nonaggressive sex young female	5, 6, 50	.85
Violence only young female	17, 26	.83
Aggressive sex same-age male	11, 34, 39, 58	.96
Consensual sex same-age male	18, 30, 48, 55	.82
Aggressive sex young male	2, 8, 16, 31, 35, 47, 54	.96
Nonaggressive sex young female incest	4, 20	.62
Aggressive sex young female incest	42, 64	.88
Aggressive sex young male incest	14, 22, 25, 63	.93
Frottage	7, 21, 51, 61	.92
Voyeurism	3, 27, 44, 62	.95
Exhibitionism	19, 23, 46, 53	.88
Filler items	9, 32, 45, 56	
Overall alpha		.97

Table II illustrates the average group response to each common category of interest per instrument, and the correlation between client responses to each measure. Statistically significant correlations between client response to each instrument were found for only 4 of the 14 common categories. As reflected in Table II, only 2 categories of sexual interest (consensual sex with a same-age female, and voyeurism) produced group means in the positive direction on the ASIC.

DISCUSSION

Results from the current study raise questions about the validity of the ASIC with juvenile sex offenders. Although this instrument appears to offer high indexes of internal consistency and test-retest reliability, self-report ratings of sexual interest were generally in the negative direction (denial of interest) and did not significantly correlate with phallometric measurement. As such, this study lends support to the findings from the adult sex offender literature suggesting that dissimulation is a major limitation of sexual interest self-report measures, and that sex offenders are prone toward minimization or denial of deviant sexual interests in spite of acknowledgment of having engaged in such behaviors.

The finding that only one category of deviant sexual interest (voyeurism) produced a group mean in the positive direction suggests that juveniles

Table II. Relationship Between ASIC and Phallometric Responses

Category	<i>n</i>	\bar{x} ASIC value	\bar{x} phalometric value (%)	Pearson coefficient <i>r</i>
1. Nonaggressive sex with young male	36	-1.3	45.9	.29
2. Aggressive sex with young male	38	-1.2	39.9	.16
3. Nonaggressive sex with young female	37	-0.5	67.3	.27
4. Aggressive sex with young female	38	-0.7	54.7	.44 ^b
5. Nonaggressive sex with young female—incest	38	-1.0	46.9	.12
6. Consensual sex with same-age female	38	1.4	74.2	.23
7. Consensual sex with same-age male	36	-1.2	38.2	.52 ^b
8. Aggressive sex with same-age female	38	-0.3	61.2	.46 ^b
9. Aggressive sex with same-age male	36	-1.3	44.6	.31
10. Frottage	38	0.0	55.6	.06
11. Voyeurism	38	0.5	40.7	.11
12. Aggressive sex with adult female	36	-0.6	68.9	.35 ^a
13. Exhibitionism	38	-0.5	57.9	.12
14. Violence only—same-age female	36	-1.3	30.3	.11

^a*p* < 0.05.

^b*p* < 0.01.

may be even more sensitive than their adult counterparts to the social implications of acknowledging deviant sexual interests. Interestingly, 3 of the 4 areas of significant correlation between the two instruments pertain to sexual aggression directed at females. Although these correlations were modest, and may have been the result of random factors, it can be speculated that they reflect an area of relatively lower social inhibition. Sex offenders have been described as frequently possessing distorted cognitions regarding the acceptability of sexual aggression against females (Murphy, 1990), with some theorists believing that these disturbed thinking patterns are derivative of gender biases inherent in the values and norms of our society at large (Koss and Harvey, 1991). The only other area of significant correlation found between the measures used in this study relates to consensual sexual activity with a same-age male. The youths in this study tended to both deny an interest in such activity and show only modest arousal to the same.

In conclusion, there appears to be little correspondence between phalometric and self-report measures of sexual arousal in juvenile offenders. Self-report measures such as the ASIC appear to be compromised by the potential for dissimulation and may not offer valid findings. Practitioners are therefore urged to be cautious in the use of such measures and not view them as interchangeable with phallometry in the evaluation of deviant sexual arousal and interest.

The authors acknowledge limitations of this study and identify areas where future research is needed. This study did not allow for an analysis of the precise effects of differential administration intervals on test correspondence. Conceivably, the correlations between instruments may have been significantly stronger had both measures been consistently administered on the same day. Furthermore, while these results cast doubt on the utility of sexual interest self-report measures with juvenile sex offenders, there is a need for further validity studies. In particular, the field would benefit from research directed at exploring the predictive validity of these and other commonly used juvenile sex offender assessment measures.

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