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Assessment of Sexual Knowledge and Attitudes in an Adolescent Sex Offender Population

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A total of 213 inner-city male adolescent sex offenders were administered a standardized test of sexual knowledge, attitudes, and values during an initial assessment and after participation in a 40-week group treatment program, during which 4 weekly group sessions were devoted to sex education. There was a large attrition rate. Only 127 subjects entered treatment, and of those, only 52 (40.9%) completed 70% or more of the group treatment sessions. Results indicated that subjects who completed the entire program, including pre- and posttests (n = 45), significantly shifted their sexual attitudes and values. Improvements in the knowledge portion of the test were statistically reliable only for subjects who completed all items on the test (n = 19). Results indicate that a 4-session sex education program may be too short for this population, and the findings underscore the importance of attention to individual differences in experience and capability when assessing sexual knowledge.

Sex education programs have been widely implemented in school systems throughout the country in an effort to postpone the onset of sexual activity, lower the teenage pregnancy rate, and prevent the spread of sexually transmitted diseases. Sex education has also been used as a component in the treatment of adult sex offenders, because a subset of this population has been shown to lack adequate knowledge of sexual skills to deal appropriately with adult partners (Abel, Becker, Rathner, Kaplan, & Reich, 1984); in addition, sex offenders characteristically lack

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knowledge about positive and consensual sexuality (Knopp, 1982; Knopp, Rosenberg, & Stevenson, 1986).

Despite the attention devoted to sex education in most sex offender treatment programs, there has been little empirical information on the extent of the deficits in sexual knowledge, beliefs, and attitudes shown by adolescent sex offenders. Additionally, it has not been established that the brief intervention characteristic of many programs is sufficient to improve sexual knowledge (Hains, Herrman, Baker, & Graber, 1986). Finally, the applicability of standard sex education tests to this population has never been addressed.

The purpose of the current study was twofold: (1) to examine the performance of a group of adolescent sex offenders on a standard test of sexual knowledge and attitudes; (2) to assess the efficacy of a brief intervention in improving sexual attitudes and knowledge in this population.

METHOD

Subjects

Participating in the study were 213 male adolescent sex offenders aged 12.1 to 19.0 (mean 15.4), who had been referred to an outpatient evaluation and treatment program. The majority had admitted to or had been convicted of a sexual crime. Subjects were referred from the following: 23.7% from parole or probation, and 41.2% from the court or lawyers; 13.8% were referred from the State Division for Youth; and 21.3% were either from the Bureau of Child Welfare or private referrals and not officially charged with sexual crimes. Of these participants, 29.9% denied all sexual allegations against them.

Informed consent was obtained from each adolescent and his parent or legal guardian. All participants completed an evaluation that consisted of a clinical interview, a battery of psychometric tests, and psychophysiologic assessment.

Of the subjects, 61.8% were Black, 25.9% were Hispanic, and 11.8% were Caucasian. Although some (9.6%) of these subjects were not enrolled in school at the time of their initial evaluation, the school grade of the remaining subjects was typically lower high school (mean and median grade = 9; 49.7% in grades 9-10). Subjects in grades 7-8 were about twice as frequent as those in grades 11-12 (31.2% vs. 14.8%).

Procedure

After the initial evaluation, over half (59.6%) of the participants entered a 40-week structured cognitive-behavioral treatment program that consists of the following components: cognitive restructuring, satiation,

covert sensitization, social skills training, anger control training, sex education, and relapse prevention. All treatment components except satiation and covert sensitization were conducted in a group format. Groups were conducted by a male and female therapist, and met weekly for 1 hour. The sex education component is 4 sessions in duration. The topics covered are the following:

Session I: Introduction, changes in puberty, sexual myths
Session II: Anatomy and physiology slides, anonymous questions written and answered
Session III: Teenage pregnancy prevention, birth control, sexually transmitted diseases
Session IV: Communicating attitudes and feelings, decisions about relationships, and values clarification

This assessment and treatment program has been described in detail elsewhere (Becker & Kaplan, 1988, 1989), as has treatment outcome for this population (Becker, Kaplan, & Kavoussi, 1988).

Reason for Attrition

Many adolescents who are evaluated do not enter treatment for the following reasons: (*a*) they are sent to inpatient programs or are incarcerated instead; (*b*) they do not require specialized treatment for sexual disorders; or (*c*) they choose not to enter treatment. Our treatment program is considered by the judicial system as an alternative to incarceration. Therefore, most of the adolescents are on probation or under some legal jurisdiction with a stipulation to attend treatment. In many cases, as soon as that stipulation is over, the adolescent drops out; in other cases youths are rearrested for nonsexual crimes during treatment and sent to jail, or abscond. Therefore, although a large number of youths are evaluated and accepted into treatment, a smaller number actually enter due to these reasons, and this number continues to decline as treatment progresses.

It should also be noted that the sex education component is not started until the 16th session of group treatment (behavioral treatment to reduce deviant sexual urges is given at the beginning). Therefore, youths who drop out during the treatment may drop out before the 16th session and never receive the sex education component.

Measures

The Math Tech Sex Education Test (Kirby, 1984) was used to test sex knowledge and attitudes. Evidence for the reliability and validity of this instrument has been reported elsewhere (Kirby, 1984). This instrument is

a two-part test. The knowledge part is a 34-item multiple choice test that consists of the 7 sections illustrated in Table 1. The second part is an attitude and value inventory and consists of a series of 70 items using a 5-point Likert scale in each of the 14 categories listed in Table 1.

Standard sexuality education textbooks and questionnaires were used to generate knowledge questions. Existing psychological scales were used to generate items for the attitude and value inventory. Test-retest reliability has been established on the knowledge portion on 58 adolescents. The reliability coefficient is .89. Reliability coefficients were established for the scales in the attitude and value inventory by test-retest correlation and Cronbach's alpha.

Statistical Procedures

Although subjects were instructed to complete all items on the test, many did not comply. In addition to examining the mean scores for each portion of the test, subgroups were therefore examined that excluded subjects who did not answer all questions, thus improving the reliability of the measure. A criterion of 70% completion on both knowledge and attitude portions of the test was used to exclude participants who were unable or unwilling to comply. For the knowledge section, the final score was expressed as the total number of correct answers. A smaller subset was also examined, consisting of subjects who completed 100% of all questions.

In the attitude section of the test, questions were equated for the direction of the attitude expressed; that is, statements that referred to the omission of a behavior were coded in the opposite direction to those referring to the expression of the same behavior. Within each category, mean answers were computed and rescaled between −10 and +10. The direction was selected so that +10 indicated an answer that was the most socially responsible or responsive one possible, or, for clarity and satisfaction categories, an answer that indicated the most certainty and satisfaction.

RESULTS

Subject Attrition, Attendance, and Compliance

Of 213 subjects who were evaluated, 127 (59.6%) entered treatment. Only 52 (40.9%) consistently attended treatment sessions (attended 70% or more of the group sessions). Almost all (50/52) of these consistently attending subjects completed 70% or more of both portions of the test. Although 12 of the consistent attenders missed more than one sex edu-

TABLE 1. Knowledge and Attitude Areas Covered by the Math Tech Sex Education Test

Knowledge areas
Adolescent physical development
Relationships
Sexual activity
Pregnancy and probability of pregnancy
Marriage
Birth control
Sexually transmitted diseases
Attitude categories
Clarity of long-term goals
Clarity of personal sexual values
Understanding of emotional needs
Understanding of personal social behavior
Understanding of personal sexual response
Attitude toward various gender role behaviors
Attitude toward sexuality in life
Attitude toward the importance of birth control
Attitude toward premarital intercourse
Attitude toward the use of pressure and force in sexual activity
Recognition of the importance of the family
Self-esteem
Satisfaction with personal sexuality
Satisfaction with social relationships

cation class, over half went to all of the sex education classes. Most subjects (45/52) also completed 70% or more of the posttreatment test as well; only 19 completed all questions. This subgroup of reliably measured subjects did not differ significantly from the initial sample of 213 subjects in age (mean = 15.7 ± 0.3 SE vs. 15.4 for the larger sample) or grade (9.5 ± 0.3 vs. 9.0). However, there was a suggestive decrease in the proportion of Hispanics in this subset (continuity corrected χ^2 = 3.57, $df = 1$, $p > .05$).

Pretreatment Knowledge

The mean number of correct items on the knowledge test was 15.4 ± .42 SE. As illustrated in Figure 1, grade was significantly correlated with pretreatment performance on the knowledge test ($r = .41$; $p < .001$). Performance levels among our most reliably measured subjects are

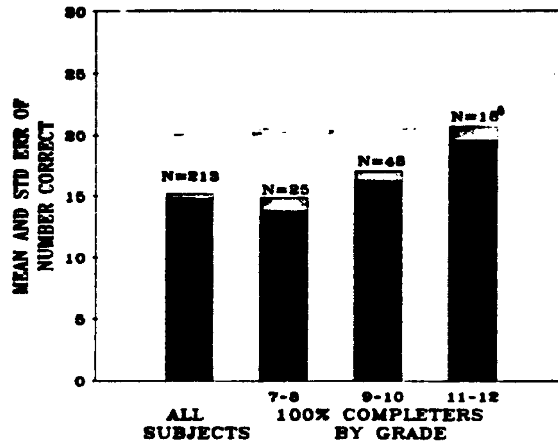

Figure 1. Pretreatment knowledge test score by grade. All subjects are included.

consistent with those reported in other studies of high school students (mean = 17.2; N = 216; grades 10–12 in the university city high school sample of Kirby, 1984). The overall performance of our total sample is therefore related to: (1) the mixed grade levels characteristic of our population and (2) failure to answer all questions.

Pretreatment Attitude Scores

Using the scaled range of −10 to 10, attitude category means for the complete sample of 213 subjects ranged from 1.72 to 3.69 with three exceptions. Stronger attitudes (>4) were expressed for three categories: recognition of the importance of the family = 4.95; birth control = 5.59; use of force in sex = 5.02. Mean scores across attitude categories were significantly correlated with sexual knowledge (r = .48; $p < .001$), and less strongly with school grade (r = .17; $p < .05$). Attitude means were generally representative of a subject's response across attitude categories; only gender role had a correlation with the mean of less than .5 (r = .43; $p < .01$). However, six categories were correlated with the mean more strongly than the others (r > 7). These categories were: (1) understanding of emotional needs, (2) understanding of social needs, (3) understanding of sexual response, (4) self-esteem, (5) satisfaction with own sexuality, and (6) recognition of the importance of family.

Treatment Effects on Knowledge

The 45 subjects who completed 70% or more of both pre- and posttests had an initial performance of 14.8 ± 0.9 correct questions, and showed unreliable improvements of 0.49 ± 0.69 questions ($t = .71$; $p >> .05$). However, for the 19 most reliably measured subjects (100% of items completed), improvements in the knowledge retest averaged 2.2 ± 0.79 questions, and were quite reliable ($t = 2.40$; $p < .05$).

Treatment Effects on Sex Attitudes

The 45 subjects who completed 70% or more of the pre- and posttests showed increases in mean attitude scores that were quite reliable (mean increase = 1.20 ± 0.31; $t = 3.89$; $p < .001$). Examination of the individual categories comprising the attitude test indicated that changes were largely confined to 5 of the 6 categories most highly correlated with the overall attitude mean. Specifically, these were: (1) understanding of emotional needs ($t = 2.97$; $p = .005$); (2) clarity of sexual values ($t = 3.59$; $p < .001$); (3) understanding of sexual response ($t = 4.08$; $p < .001$); (4) satisfaction with sexuality ($t = 2.96$; $p = .005$); and (5) self-esteem ($t = 3.85$; $p < .001$).

One category of relevance to our population that did not substantially change is attitudes about the use of force in sex ($t = 1.27$; $p > .05$). However, since the pretreatment mean of these subjects for this category was substantially higher than for the other categories (4.6 on a 5-point scale), it is evident that a Likert scale is not adequate to resolve further increases.

DISCUSSION

Care must be made in comparing the overall performance of our sample of adolescent sex offenders with results from other populations. Although our most reliably measured subjects (those answering all questions) perform in accordance with their grade level, it is at the expense of the exclusion of two additional subgroups: (1) individuals who are uncooperative and (2) individuals who consciously forfeit a difficult question (regardless of the instructions) due to a lack of understanding or knowledge about the question. Thus, the removal of these subjects introduces an inherent bias in favor of better performers. However, since unanswered questions on the knowledge portion of the test result in a decrease in performance to below chance levels for these items, inclusion of these subjects leads to an underestimate of performance.

Personal observations have shown that the adolescents who deny that they have committed a sexual crime tend to be less compliant in other tests as well (Becker, Kaplan, & Tenke, 1991). They therefore are disproportionately represented among the excluded subjects who failed to answer all questions. However, exclusion of deniers from our larger groupings did not result in noticeable differences in mean performance.

Our results suggest that attitudes may be more readily influenced than knowledge in a treatment program for this population of adolescent offenders. There are several possible reasons that may account for the difference in scores:

a. Attitudes may have been more readily changed in a small group where processing and role playing of feelings occurred, in contrast to the didactic classroom atmosphere used for teaching the sex education material.
b. The knowledge part of the course may have been too short (1 session), in that there was no possibility of repetition of the newly learned information.
c. Sex offenders may differ as a population in issues of sexual victimization and/or sexual attitudes in the home, which may affect learning.
d. The pre-post test results may not reflect what has been learned because this population may not have the verbal performance level required for the knowledge test.

The suggestive decrease in Hispanic subjects among reliably measured subjects suggests the likelihood of the latter possibility. However, even some of the English-speaking subjects had difficulty understanding and completing the forms. English literacy clearly affects all measures in which responses are confined to pencil-and-paper tests.

Even though adolescents are biologically capable of sexual activity, they are often emotionally unprepared to act responsibly. Teaching responsible sexuality can be especially difficult in a population that is already engaging in high-risk sexual behavior. While the Math Tech Sex Education Test has been shown to be useful in a normal population, our results indicate that care must be taken to assure its reliability for all grade levels and with uncooperative subjects. The use of an alternative measurement instrument appropriate to the motivational and linguistic capabilities of the population is recommended.

In this study, adolescents were mandated to attend the program and were minimally motivated to continue in the program. Therefore, attrition of subjects was a serious problem. In order to increase attendance, it is recommended that incentives to participate be used. These incentives could be individualized and based on what individual offenders find

reinforcing. In addition, although difficult in a city as large as New York, more contact with referral sources would aid in extra motivation from those sources.

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