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Social Network Influences on Adolescent Sexual Attitudes and Behaviors

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Within a socialization paradigm, a model was developed and tested to examine social network influences on adolescent sexual behavior and contraceptive use. It was hypothesized that the social network influences of parents and peers would affect the contraceptive knowledge and premarital sexual attitudes of adolescents. In turn, knowledge and attitudes were expected to influence sexual behavior and contraceptive use. The sample comprised 161 male and 200 female high school students. Results from the LISREL analyses indicated that the model was a good fit to the data and that the model differed significantly between males and females and between virgins and nonvirgins. Approximately 50% of the variance was explained for virgin and nonvirgin females, and for virgin males. Parents were more influential for males, whereas friends were more important for females. The transition to nonvirginity seems to produce a greater change in the social environment of females than of males.

The last decade has witnessed an emergence of research on the antecedents of sexual intercourse, including biological determinants (Westney, Jenkins, & Benjamin, 1983); psychological determinants (Faulkenberry, Vincent, James, & Johnson, 1987), and social influences (Daugherty & Burger, 1984; Hogan & Kitagawa, 1985; Miller, McCoy, Olson, & Wallace, 1986). Similarly, contraceptive use by adolescents has attracted the interest of many social scientists because of the negative consequences of early childbearing for the adolescent parents and offspring (Hayes, 1987). However, the research on both adolescent sexual behavior and contraceptive use has tended to be atheoretical and correlational (Miller & Fox, 1987). New statistical methods (e.g., covariance structural equation modeling) have enabled researchers to test paths of influence among variables using such

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correlational data. As such, the purpose of the present study was to develop, within the socialization paradigm, a multivariate causal model of the influences on adolescent sexual behavior and contraceptive use. Consistent with Miller and Fox (1987), the focus was on heterosexual behaviors closely tied to reproduction. The basis of the model was a survey of the literature on relationships among the following variables: sexual behavior; contraceptive use; premarital sexual attitudes of adolescents, parents and peers; and communication with parent and peers. The goal of review was to detail a theoretically consistent causal ordering of these variables.

Within the socialization paradigm, sexual attitudes and behaviors are learned (Miller & Fox, 1987). During adolescence, the socialization approach has posited that parents and peers, the two major socialization agents, will influence the sexual attitudes and behaviors of adolescents. Research has shown that adolescents who received their sexual and contraceptive information from their parents engaged in intercourse less frequently, had fewer sexual partners, and initiated intercourse at a later age than did adolescents who received their information from peers (DeLamater & MacCorquodale, 1979; Lewis, 1973; Spanier, 1977). Adolescents who communicated with their parents about sex and contraception were also more likely to use contraception (Fox, 1981; Furstenberg, 1976; Thomson, 1982).

The perceived attitudes of parents and peers also seem to influence the behavior of adolescents. Adolescents who viewed their friends and/or parents as approving of their sexual behavior were more likely to engage in sexual intercourse than were adolescents who perceived their parents or friends as disapproving of their sexual behavior (Jessor & Jessor, 1977; Thomson, 1982).

In part, the influence of the social network may have been operating through the attitudes of adolescents. Adolescents who held attitudes about appropriate premarital sexual behaviors that were similar to their parents' attitudes engaged in intercourse less frequently and were less likely to use contraception than were adolescents who had attitudes about premarital sex like their friends. On the other hand, adolescents who had attitudes about premarital sexual behaviors which were more similar to their friends than to their parents held more permissive premarital sexual attitudes, engaged in intercourse more frequently, and were more likely to use contraception (Reiss, 1967; Shah & Zelnik, 1981).

Research has documented a strong relationship between premarital sexual attitudes and sexual behavior, such that individuals who held more permissive sexual attitudes were more likely to engage in more intimate behaviors (DeLamater & MacCorquodale, 1979; Jørgensen & Sonstegard, 1984; Reiss, 1967). In contrast, the findings from the research on the relationship between

premarital sexual attitudes and contraceptive use have been inconsistent. Herold (1981) found that female high school and college students who held permissive attitudes about premarital sexual behaviors were more likely to use contraceptives consistently and to use medical methods than were females who held attitudes about premarital sexual behaviors which were low in permissiveness. On the other hand, in a sample of male and female adolescents between the ages of 14 and 19 years, McCormick, Izzo, and Folcik (1985) found no relationship between premarital sexual attitudes and contraceptive use.

Knowledge of contraception is another variable which has been considered as a possible precursor to effective contraceptive use. A number of studies have found a positive relationship between contraceptive knowledge and contraceptive use (Oskamp & Mindick, 1983; Reichelt & Werley, 1981). However, other studies have demonstrated either no relationship or a weak positive relationship between contraceptive knowledge and contraceptive use (Burger & Inderbitzen, 1985; Cvetkovich & Grote, 1983).

These studies were correlational and provided no indication as to whether sexual behavior or contraceptive use preceded or resulted from sexual attitudes or contraceptive knowledge. In social psychology, the causal ordering of attitudes and behaviors has been the subject of much debate (Kahle & Berman, 1979; Kelman, 1974; Wicker, 1969). However, since attitudes about sexuality emerge earlier than sexual intercourse (Herold & Goodwin, 1981), attitudes were placed first in the model for this research.

In view of these findings, a causal model of the influence of parents and peers on adolescent sexuality was proposed (see Figure 1). Specifically, it was hypothesized that discussion with parents and peers and parental and peer approval of the respondent's sexual behavior would influence the contraceptive knowledge and the sexual attitudes of adolescents. In turn, contraceptive knowledge and premarital sexual attitudes were expected to affect sexual behavior and contraceptive use.

Research on adolescent sexuality has revealed many sex differences. Adolescent males were found to be less knowledgeable about contraception (Freeman et al., 1980; Hansson, Jones, & Chernovetz, 1979; Reichelt & Werley, 1981) and to hold attitudes about premarital sex which were more permissive than those of adolescent females (DeLamater & MacCorquodale, 1979; DelCampo, Sporakowski, & DelCampo, 1976). Mothers were found to communicate more with their daughters than with their sons about contraception (Fox, 1980; Thornburg, 1981). Thus the model was tested separately for males and for females.

Likewise, once the adolescent has engaged in sexual intercourse, sexual behavior may predict sexual attitudes rather than the reverse. Cognitive

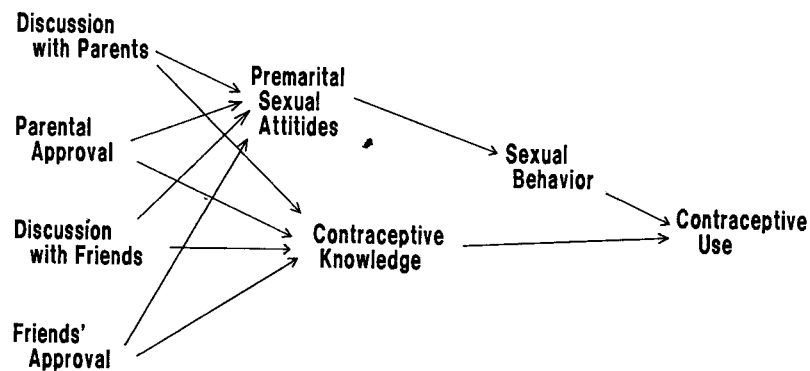


Figure 1. Hypothesized model of the relationship among social network variables, sexual attitudes, and sexual behavior.

dissonance theory (Festinger, 1957) leads to the prediction that nonvirgins would hold sexual attitudes which are more accepting of premarital sexual intercourse and would perceive the attitudes of friends and parents as being permissive. To entertain the possibility that the model would be a more adequate representation of the influences on sexuality for virgins than for nonvirgins, the model was tested separately for these two groups.

METHOD

Sample

Participants were 161 males and 200 female high school students recruited from three schools in New Jersey. The sample was predominantly White (89%) with a mean age of 16.5 years ($SD = 1.25$). Using Hollingshead's (1975) ratings, the median occupational status of the parents was 6 (e.g., technician, semiprofessional, or small business owner) for mothers and 7 (e.g., manager, minor professional, entertainer, or artist) for fathers. Of the participants, 49% were sexually active, and the mean age at first intercourse was 14.9 years.

Instruments

Because the validity of the results of causal modeling rests in part on the reliability of the measures used, careful attention was paid to the psychomet-

ric properties and adequate dimensionalization in selecting the instruments. In addition, 58 college students were administered the questionnaires in the same format used in the study to examine 2-week, test-retest reliabilities (Treboux, 1989).

The *Parental Approval of Sexual Behavior (PASB) Scale*, a 32-item scale, was based on the Premarital Permissiveness Scale (Thomson, 1982) and on the Parental Approval of Problem Behavior Scale (Jessor & Jessor, 1977). The PASB measured adolescents' perceptions of both maternal and paternal approval for the respondent engaging in different sexual behaviors within the context of different types of relationships. Specifically, the PASB asked participants how their mother and father would react if they knew the participant was engaging in kissing, light petting, heavy petting, or sexual intercourse with someone they had gone out with once or twice, someone with whom they were going steady, someone with whom they were in love, and someone they were planning to marry. Participants reported their responses on a 4-point Likert scale, ranging from 4 = *approval* to 1 = *strong disapproval* and answered separately for mothers and fathers. The items were summed to yield the total parental approval score which ranged from 32 (strong disapproval) to 128 (approval). In this sample, the coefficient alpha was .96 for the PASB; the test-retest reliability coefficient with the college students was .84.

The *Friends' Approval of Sexual Behavior (FrASB) Scale* assessed adolescents' perceptions of their friends' approval for engaging in sexual behavior. The FrASB was identical to the PASB, except that the referent was friends. The 16 items were summed to yield a total friends' approval score, with high scores indicating approval. The FrASB had a coefficient alpha of .92 in this sample and a test-retest reliability coefficient of .81.

The *Discussion of Sexual Topics with Parents (DSTP) Checklist* assessed communication about sex and contraception between parents and adolescents. The DSTP was adapted from the Sex Education Inventory (Bennett & Dickinson, 1980). The DSTP required respondents to indicate which of the 17 topics (e.g., pregnancy, contraception, and "how far to go" on a date) were discussed with their parents. The number of topics discussed with mother or father was used as the score, which ranged from 0 to 17. The DSTP yielded a coefficient alpha of .90 in this sample and a test-retest reliability coefficient of .82 with the college students.

The *Discussion of Sexual Topics with Friends (DSTFr) Checklist* assessed the amount of communication about sex and contraception which had transpired between adolescents and their friends. Like the DSTP, the DSTFr required respondents to indicate which of the 17 topics listed were discussed with their friends. The DSTFr yielded one score indicating the total number

of topics discussed with friends. The coefficient alpha for the DSTFr was .90 in this sample, and the test-retest reliability coefficient with the college students was .79.

The *Premarital Sexual Attitudes Scale (PSAS)* measured adolescents' sexual attitudes about appropriate premarital sexual behaviors within the context of different types of relationships. The PSAS was based on the Premarital Sexual Permissiveness Scale (PSPS) developed by Reiss (1967). The PSPS was modified by (a) increasing the number of sexual behaviors (kissing, light petting, heavy petting, and sexual intercourse), and by (b) changing the referent to the self—a method used by Herold (1981) to measure premarital sexual attitudes. One item from the PSAS was "Kissing is okay for me before marriage when I've gone out once or twice with my partner." Scoring of the PSAS was based on a 5-point Likert scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*. Responses were summed to provide the total sexual permissiveness score, which had a possible score ranging from 16 (less permissive sexual attitudes) to 80 (highly permissive sexual attitudes). The PSAS yielded a coefficient alpha of .91 in this sample; the test-retest reliability coefficient with the college students was .68.

The *Contraceptive Knowledge Questionnaire (CKQ)*, developed by Reichelt and Werley (1981), measured the contraceptive knowledge of participants. The questionnaire was modified to include 26 statements about reproduction and specific methods of contraception. Participants were asked to respond to each statement by circling either *true*, *false*, or *don't know*. Correct responses were summed to compute the total contraceptive knowledge score, which ranged from 0 to 26. The coefficient alpha for this sample was .96, and the test-retest coefficient was .90.

The *Sexual Behavior Inventory (SBI)* measured heterosexual involvement in the past two years. The SBI was based on the Sexual Experience Inventory developed by Bennett (1984). Respondents indicated the frequency of each of four types of sexual behavior ("tongue kissing," "light petting," "heavy petting," and "sexual intercourse") on a 4-point Likert scale (*never, once or twice, sometimes, frequently*). A zero score was given to all *never* responses. To assign more weight to light petting than to kissing, to heavy petting than to light petting, and to intercourse than to heavy petting, the following scores were assigned. Kissing was scored as 1, 2, and 3 for *once or twice, sometimes, and frequently*, respectively; light petting was scored as 3, 4 and 5; heavy petting was scored as 8, 9, and 10; and sexual intercourse was scored as 19, 20, and 21. The scores of the four items were summed to yield the total sexual behavior score. Thus, for example, a respondent who engaged in kissing, light petting, and heavy petting, but never engaged in sexual intercourse received a maximum score of 18, while the nonvirgin respondent received a

minimum score of 19. Total sexual behavior scores ranged from 0 to 39 and yielded a test-retest reliability coefficient of .91.

To measure *contraceptive use*, respondents were asked what type of contraceptive method they used the first time that they had sexual intercourse. Based on the work of Sack, Billingham, and Howard (1985), the following scores were used. Highly effective methods (e.g., pill and condom) were given a score of 8; less reliable methods (e.g., foams and jellies) were given a score of 4; unreliable methods (e.g., withdrawal and douche) were given a score of 2; and lack of any contraceptive use was given a score of 0. The test-retest reliability for the score was .83.

Procedure

The participating schools were responsible for obtaining informed consent from both parents and students; virtually all students and their parents gave consent. New Jersey mandates sex education, so the questionnaire was administered during health classes. The order of the questionnaires was counterbalanced in a Latin square design to insure the confidentiality of responses and to eliminate order effects in responding to the questionnaires.

RESULTS

Preliminary analyses included generating frequency distributions and transforming any variables which were not normally distributed. Premarital sexual attitude scores were transformed with square roots, and logarithmic transformations were applied to friends' approval of sexual behavior and contraceptive knowledge scores.

The LISREL VI program (Jöreskog & Sörbom, 1986) in SPSSX (SPSS, 1984) was used to analyze the goodness-of-fit of the model. Correlations were used as the input to allow ease of interpretation of the path weights. Because some transformed variables were used, appropriate checks for errors were run. In particular, the diagonals of the reproduced correlation matrices were 1.0.

A multisample analysis was conducted to compare the goodness-of-fit of the model for each sex. The results were significant, $\chi^2(10) = 31.54, p < .001$, indicating that the models differed for each sex. Similarly, a multi sample analysis indicated that the model differed significantly between virgins and nonvirgins, $\chi^2(10) = 22.58, p < .05$. Hence separate LISREL analyses were conducted for male virgins, female virgins, male nonvirgins, and female nonvirgins.

The path weights of the model were estimated by the method of maximum likelihood in LISREL VI. For female virgins ($n = 106$), the chi-square goodness-of-fit index indicated a modest fit of the data to the model, $\chi^2(5) = 12.46$, $p < .05$. The goodness-of-fit index was strong (.97, adjusted to .93); the root mean square residual was .05. An examination of the modification indices suggested freeing a path between premarital sexual attitudes and contraceptive knowledge.¹ The results of the revised model indicated that the data adequately fit the model: $\chi^2(4) = 7.34$, $p = .12$; the goodness-of-fit index was .98 (adjusted to .96); and the root mean square residual was .04. The revised model was a significant improvement over the original model, as indicated by the difference in the chi-square statistics, $\chi^2(1) = 5.12$, $p < .05$.

When examining specific relationships between variables, 7 of 12 relationships reached significance ($z > 1.67$, one-tailed²); these significant paths are illustrated in Figure 2. Discussion with parents ($\beta = .29$, $z = 3.01$), parental approval of sexual behavior ($\beta = .29$, $z = 3.48$), discussion with friends ($\beta = .41$, $z = 4.54$), and friends' approval of sexual behavior ($\beta = .42$, $z = 5.15$) all influenced premarital sexual attitudes. In turn, premarital sexual attitudes positively influenced both sexual behavior and contraceptive knowledge ($\beta = .49$, $z = 5.23$; $\beta = .32$, $z = 2.25$, respectively). Discussion with friends had a positive effect on contraceptive knowledge ($\beta = .26$; $z = 1.91$).

The total coefficient of determination for the seven structural equations was .59, indicating good explanatory power for the model. At the level of the individual structural equations, the obtained results were as follows: for premarital sexual attitudes, $R^2 = .56$; for contraceptive knowledge, $R^2 = .18$; and for sexual behavior, $R^2 = .28$.

For male virgins ($n = 77$), the chi-square goodness-of-fit test indicated that the model was a good fit to the data, $\chi^2(5) = 10.48$, $p = .06$. The goodness-of-fit index for the model of .96 (adjusted to .91) also indicated that the model was a good fit to the data, but the root mean square residual of .08 suggested that the model could be improved. The modification indices suggested adding a path from discussion with parents to sexual behavior. The chi-square of the revised model was 1.23 ($df = 4$, $p = .87$), so the difference of 9.25 ($df = 1$, $p < .01$) indicated that the revised model was a significant improvement over the original. The adjusted goodness-of-fit index for the revised model was .99 and the root mean square residual was .02.

The five significant paths are illustrated in Figure 2. Parental and friends' approval of sexual behavior predicted premarital sexual attitudes ($\beta = .41$, $z = 3.53$ and $\beta = .28$, $z = 2.24$, respectively). Premarital sexual attitudes influenced sexual behavior ($\beta = .34$, $z = 2.87$), indicating that the perceived approval of the social network had an indirect effect on sexual behavior. Discussion with parents had a direct effect on sexual behavior ($\beta = .35$, $z =$

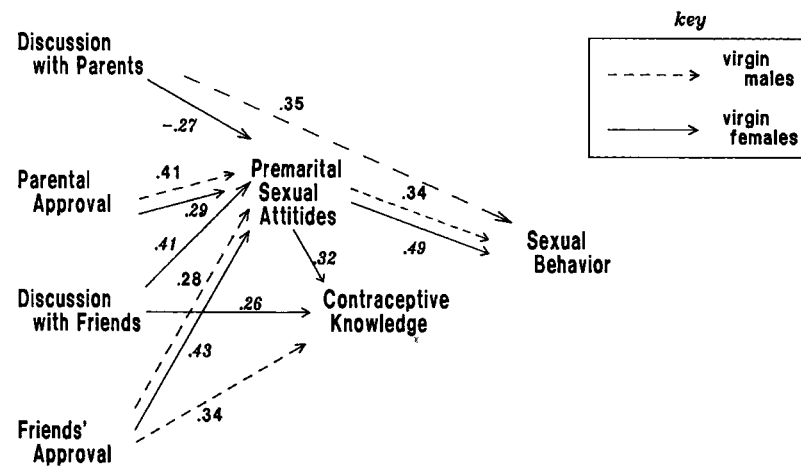


Figure 2. Final solutions for the models of male and female virgins.

3.05). The only influence on contraceptive knowledge was friends' approval ($\beta = .34$, $z = 2.40$).

The coefficient of determination for the structural equations was .43, indicating that all the equations jointly were serving as fairly good indicators of the hypothesized relationships between the variables. For the individual structural equations, the results were as follows: for premarital sexual attitudes, $R^2 = .30$; for contraceptive knowledge, $R^2 = .11$; and for sexual behavior, $R^2 = .22$. Thus more of the variance in sexual attitudes and sexual behavior than in contraceptive knowledge was accounted for by the model.

For nonvirgin males ($n = 84$), the chi-square goodness-of-fit test indicated that the model was a good fit to the data, $\chi^2(10) = 10.67$, $p = .038$. The goodness-of-fit index was strong (.97, adjusted to .94). However, the obtained root mean square residual of .06 suggested that the model could be improved. A path between discussion with parents to contraceptive effectiveness was added as indicated by the modification indices. The chi-square for the revised model was 6.76, $df = 9$, $p = .66$, which was a significant improvement over the original model as indicated by the difference in the chi-square statistics, $\chi^2(1) = 3.91$, $p < .05$. The goodness-of-fit index was very strong (.98 adjusted to .96), and the root mean square residual was small (.04).

The four significant paths are displayed in Figure 3. For nonvirgin males, parental approval and friends' approval of sexual behavior had a positive effect on premarital sexual attitudes ($\beta = .20$, $z = 1.78$; $\beta = .24$, $z = 2.24$,

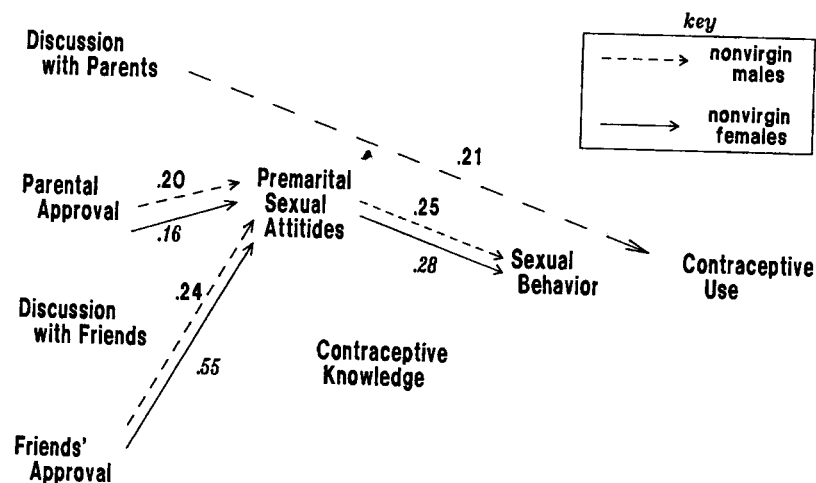


Figure 3. Final solutions for the models of male and female nonvirgins.

respectively), which in turn influenced sexual behavior ($\beta = .25$, $z = 2.37$). Contraceptive effectiveness was influenced positively by discussion with parents ($\beta = .21$, $z = 1.95$).

The total coefficient of determination of the model for nonvirgin males was of low magnitude (.21). The squared multiple correlations for the individual equations were $R^2 = .14$ for premarital sexual attitudes; $R^2 = .04$ for contraceptive knowledge; $R^2 = .06$ for sexual behavior; and $R^2 = .06$ for contraceptive effectiveness. For females nonvirgins ($n = 94$), results indicated that the model was a very good fit: $\chi^2(10) = 6.09$, $p = .81$; goodness-of-fit index = .98 (adjusted to .96); root mean square residual = .04.

The three significant paths are shown in Figure 3. Results indicated that parental and friends' approval of sexual behavior had a positive effect on premarital sexual attitudes ($\beta = .16$, $z = 1.74$; $\beta = .55$, $z = 5.99$, respectively). In turn, premarital sexual attitudes influenced sexual behavior ($\beta = .28$, $z = 2.66$). None of the variables in the model had a significant influence on contraceptive effectiveness or on contraceptive knowledge.

The total coefficient of determination was of moderate magnitude (.42). At the level of individual structural equations, the obtained results for nonvirgin females were as follows: for premarital sexual attitudes, $R^2 = .39$; for contraceptive knowledge, $R^2 = .05$; for sexual behavior, $R^2 = .09$; and for contraceptive effectiveness, $R^2 = .01$.

DISCUSSION

The purpose of the present study was to test a model of the relationships among a set of variables empirically shown to influence the sexual behaviors of adolescents. The results of the present study showed that the model was more "successful" in explaining the sexual attitudes and behaviors of virgins than of nonvirgins. For virgins, all four of the social network variables were related to premarital sexual attitudes for females and thus had an indirect effect on sexual behavior. For virgin males, the approval of the social network had an indirect effect on sexual behavior through its influence on sexual attitudes about premarital sex; discussion with parents had a direct effect on sexual behavior. In contrast, for both male and female nonvirgins, only social network approval had an indirect effect on sexual behavior via premarital sexual attitudes. A comparison of the coefficients of determination suggests that important influences on the sexual behavior of nonvirgins are missing from the model. These might include characteristics of the dyadic heterosexual relationship, age differences, or educational aspirations.

Similarly, gender differences in the explanatory power of the models emerged. For males, regardless of virginity status, the paths of influence remained consistent with parents seemingly more influential than friends in determining sexual attitudes and behaviors. On the other hand, the transition to sexual intercourse seems to produce a greater change in the social environment of females. Discussion with parents and friends were indirect influences on sexual behavior for virgins, with friends exerting more influence. However, these paths were not significant influences on the sexual behavior of nonvirgin females.

Perhaps the gender differences are best illustrated by the differential influences of discussion with parents for males and for females. Discussion with parents was a positive direct influence on sexual behavior for virgin males and on contraceptive use for nonvirgin males, suggesting that parents are accepting of sexuality in their adolescent sons. However, for females, discussion with parents was a *negative* indirect influence for virgin females on sexual behavior and did not influence either sexual behavior or contraceptive use among nonvirgin females. Thus the message conveyed to daughters may be "Don't—and if you do, we don't want to know about it." These results suggest that the double standard of sexual behavior is still operative in the socialization of sexuality.

Thus new models which incorporate additional variables as predictors of sexual behavior might include different variables for males and females. For males, what may be more important is finding a sexual partner, the partner determining the limits of sexual involvement and contraceptive use (Chilman,

1980). For females, the characteristics of the sexual partner may be important, too. For example, the primary predictor of the use of contraception at first intercourse may be the availability of a condom in the male's wallet. Moreover, consistent with the notion that sexual behaviors are learned, other important variables for females might be friends' models for sexual behavior (Jessor & Jessor, 1977) and gender roles (Miller & Simon, 1980).

Results from the research on the relationship between contraceptive knowledge and contraceptive use has been equivocal (Cvetkovich & Grote, 1983; Reichelt & Werley, 1981). The findings of the present study suggest that contraceptive knowledge is not a significant influence on effectiveness of contraceptive use at first intercourse. Contraceptive knowledge may be a significant predictor of contraceptive use for several intercourse experiences over time. In addition, the present study was not successful in explaining contraceptive knowledge, suggesting that other variables may be operating to influence contraceptive knowledge. For populations similar in receiving mandatory health education, a better predictor of contraceptive knowledge may be health education grades.

Although revised models should include new variables, other changes appear unwarranted. For example, the LISREL analyses do not suggest including the reciprocal paths from behavior to attitudes for virgins or nonvirgins. However, a different approach to the measurement of the social network variables may be productive. This study was based on adolescents' perceptions of their social network. While the phenomenological approach dominates the literature, the accuracy of these perceptions might be questioned. A goodness-of-fit model which assesses the match between the adolescent's perceptions and the actual attitudes of the social network may be a more useful approach. This technique can also be used to test the desirability of permissive attitudes, sexual activity, and contraceptive use in order to elucidate the possible effect of social desirability.

As with all causal models, especially those with data which do not have a temporal order, the need for replication with independent samples cannot be overstressed. For this research, several factors contribute to the need for independent confirmation. For example, while the sample is probably representative of the students at the high schools tested, the schools were not randomly selected, which may be one cause of the nonnormal distribution of three variables (Hayduk, 1987). In addition, the sample size of the male virgin group meets the criteria of 10 times the number of variables, but it is not known if this criteria is adequate for LISREL analyses (Tanaka, 1987). The paths added to the models on the basis of the modification indices and those with z values less than 2.0 should be interpreted cautiously before replication.

In summary, the contribution of the present study lies in the use of the socialization approach to develop and test a causal ordering of the influences on adolescent sexuality and in its use of measures showing adequate psychometric vigor. The model was a good fit to the data, although the LISREL analyses suggested that the models differed between males and females and between virgins and nonvirgins. Furthermore, the model had moderate explanatory power. Thus socialization approaches appear to be fruitful areas for future research; such research should include additional influences in the multivariate causal models.

NOTES

1. There is controversy about the inclusion of a path that is not specified a priori because it may represent sample-specific variance. The added paths were included only after carefully considering whether they were consistent with previous findings and logically defensible. However, caution should be used in interpreting these paths previous to their replication with independent samples.

2. This z value represents a probability level of .05 and is consistent with the work of Crano and Mendoza (1987). However, others advocate a value greater than 2.0 (Jöreskog & Sörbom, 1986).

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