

Contraceptive behavior in college-age males related to Fishbein model

Fishbein's Belief-Attitude-Intention-Behavior model states that behavior is predicated on intention, intention is predicated on attitudes, and attitudes are predicated on beliefs. Path analysis was used to test the model with respect to the contraceptive behaviors of 54 college males. In spite of the heterogeneity of the sample, the data supported the model, suggesting that nursing interventions may need to be directed toward beliefs rather than behaviors.

Bonnie Marie Ewald, MS, RN
Faculty Member
Department of Nursing
Glendale Community College
Glendale, Arizona

Carolyn Sara Roberts, PhD, RN
Associate Professor
College of Nursing
Arizona State University
Tempe, Arizona

TO DATE, research on the contraceptive behavior of young adults has focused on women. It is known that 50% of 15- to 19-year-old females and 70% of males 17 to 21 years old residing in US metropolitan areas have had premarital sexual intercourse.¹ Contraceptive behavior in this age group is erratic due in part to the unplanned nature of early sexual activity, which has led to an increase in adolescent pregnancies. While numerous variables have been associated with the contraceptive behavior of young women, largely through descriptive studies, they have not been consolidated within a theoretical framework.

In spite of the known incidence of sexual activity of young men and their contribution to the incidence of adolescent pregnancy, little is known about their contraceptive behavior. Again, correlative studies that have identified salient variables are not bound by a common theory. Fishbein's² Belief-Attitude-Intention Behavior (BAIB) model offered a framework within

which to study contraceptive behaviors among 18- to 20-year-old college males. In turn, the data allowed the testing of Fishbein's model.

LITERATURE REVIEW

Interest in the sexual activity of this age group has been stimulated by the increase in unwanted pregnancies and the rate of abortion among youth. Most studies of adolescent sexual activity and contraceptive practices have been descriptive surveys. Some have examined correlations among a variety of independent variables and sexual activity or contraceptive beliefs and practices. Several disciplines have undertaken studies of sexuality among adolescents. The literature abounds with articles addressing the female adolescent and the problems of pregnancy outcomes and contraceptive practices, indicating that antecedents of adolescent sexual expression are multidimensional.^{1,3,4}

The sexuality and contraceptive beliefs of adolescent males have not been studied as frequently as those of adolescent females. The direction of past research perhaps reflects a dominant attitude in the United States that responsibility for contraception belonged to the female sexual partner. In addition, past research often ignored the influence of the male partner in the contraceptive practices of a couple, whether it was use of condoms or a female-initiated method. Dembo and Lundell⁵ grouped the variables affecting adolescent sexual behavior into five categories:

1. the adolescent's level of information;
2. availability of contraceptives;

3. the adolescent's cognitive-emotional development;
4. his or her degree of acceptance of personal sexuality; and
5. the influence of significant others.

Given the broad and complex nature of adolescent sexual behavior, the various disciplines need to agree on a common approach, based on a theoretical model that unifies the independent variables studied thus far and indicates an interactive pattern among them. The instrument proposed is Fishbein's BAIB model.

Fishbein and Ajzen² developed the BAIB model, based on Dulany's⁶ theory of propositional control. The model shows (1) a specific behavior as a function of intention to perform this behavior, (2) intention as a function of an attitude toward a specific behavior and a person's perception of what significant others think about a behavior, and (3) attitude as a function of belief about the consequences of a behavior and personal evaluation of these consequences. The model is directed at the prediction and understanding of *particular* behaviors. The specified particular behavior is assessed with respect to the relationship of the particular behavior to a particular object and a particular situation within a particular time frame. That is, the model does not test general behaviors across a variety of situations.⁷

Fisher⁸ developed an instrument derived from Fishbein's model to assess specific contraceptive behavior among adolescents. The current study is a partial replication of Fisher's. It attempts to strengthen the internal validity of Fisher's design by collecting data on behavior concurrently with the data on beliefs, attitudes, and intentions.

This approach eliminates the pretest phenomenon, ie, the risk of concepts presented in the questionnaire influencing behavior and thereby risking bias in the data on behavior subsequently collected. Additionally, the present study controlled for age, which affects the sexual activity of males. The current study also differs from Fisher's study in that it does not include the subjective norms component of the Fishbein model (Fig 1).

HYPOTHESES

Based on the Fishbein model, three hypotheses were tested:

1. Beliefs about condom use among males between 18 and 20 years of age will be positively associated with their attitudes about condom use, as measured by Fisher's instrument.
2. Attitudes about condom use among males between 18 and 20 years of age

will be positively associated with their intention to use condoms in the coming month, as measured by Fisher's instrument.

3. Intention to use condoms in the coming month among males between 18 and 20 years of age will be positively associated with use of condoms in the past month, as measured by Fisher's instrument. Alpha was set at $p < .05$ for rejection of the null hypotheses.

METHODOLOGY

Subjects

The subjects of this study were 54 sexually active, never-married males between the ages of 18 and 20 years, who were attending a community college or a university in a major southwestern metropolis. The sample was drawn from health, physical education, and basic sociology classes.

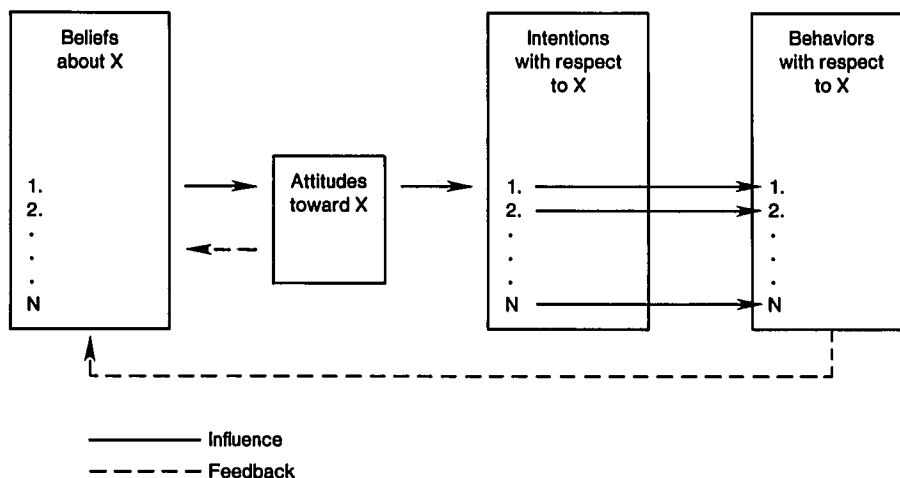


Fig 1. Fishbein's Belief-Attitude-Intention-Behavior model. Reprinted with permission from Fishbein M, Ajzen I: *Belief, Attitude, Intention and Behavior: An Introduction in Theory and Research*. New York, Random House, 1984.

- 66 The proportion of the sample from each of these sources was evenly distributed.

Instrument

The instrument was a 51-item questionnaire. Of the 51 questions, 40 were in addition to Fisher's and 11 were this author's, questions on demographic variables known to be relevant, respondents were asked about their current sexual activity and contraceptive behaviors followed by the belief, attitude, and intention items developed by Fisher.⁸

Fisher⁸ reported that reliability of the parameters of the Fishbein model was evaluated by repetition of the item in the questionnaire that measured these parameters. Correlation coefficients for these pairs of items ranged from .52 to .86, $p < .001$. Absolute differences were examined for the pair with the lower correlation coefficient of .52 and few inconsistencies were found between the two responses to this item. While Fisher does not report on the validity of the instrument, a review of the items by experts (M. Bruner, MS, RN; C. Roberts, RN, PhD; M. Roosa, PhD; unpublished data, February-March 1983) in adolescent sexuality suggested content validity.

Data collection

An announcement was made during class requesting volunteers who met the gender and age criteria. Once the volunteers had been assembled, a statement was read explaining (1) the purpose of the study, (2) the use of the data, (3) the procedure, (4) that participation was voluntary, (5) that 15 minutes were required for completing the questionnaire, (6) that anonymity

was assured, and (7) that questions would be answered. Class time was used to complete the questionnaire. The data were collected between May and October 1983.

FINDINGS

The hypotheses were tested using a four-variable, path analysis model. Path analysis shows the cumulative effect each variable in the model has on the dependent variable of behavior. Standardized beta coefficients corrected the unique effects of the scaling of the items, enabling comparison to other studies using the same instrument.

The first hypothesis postulated that beliefs about condom use would be positively associated with attitudes about condom use. The path coefficient $B_1 = .34$ ($p < .05$) indicates a significant, positive association between the two variables. Therefore, the data rejected the null of the first research hypothesis and supported the first link in the Fishbein conceptual model, which states that beliefs are a determinant of attitudes.

The second hypothesis postulated that attitudes about condom use would be positively associated with intention to use condoms. The path coefficient between attitudes and intention, $B_2 = .56$ ($p < .05$), shows a significant positive association between attitudes and intention. Thus the data rejected the null of the research hypothesis and supported the attitude and intention relationship in the Fishbein model. The path analysis indicated the cumulative effect of beliefs and attitudes on intention. For this study sample, the cumulative effect of positive beliefs and favorable attitudes toward condom use was

significantly related to the subjects' intention to use condoms.

The third hypothesis postulated that intention to use condoms in the coming month would be positively associated with condom use in the past month. The path coefficient between intentions and behavior, $B_3 = .56$ ($p < .05$) indicated a significant positive association between intention and behavior in the past month. The data rejected the null of the research hypothesis and supported the intention and behavior relationship in the Fishbein model. The cumulative effect of beliefs, attitudes, and intention upon behavior is shown in the path between intentions and behavior. This analysis showed that, for this sample, positive beliefs and attitudes, coupled with

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intention to use condoms, were positively associated with condom use (Fig 2).

CONCLUSION

For this sample of 18- to 20-year-old college males, beliefs about condom use were positively associated with attitudes about condom use ($B_1 = .34$, $p < .001$). Attitudes about condom use were posi-

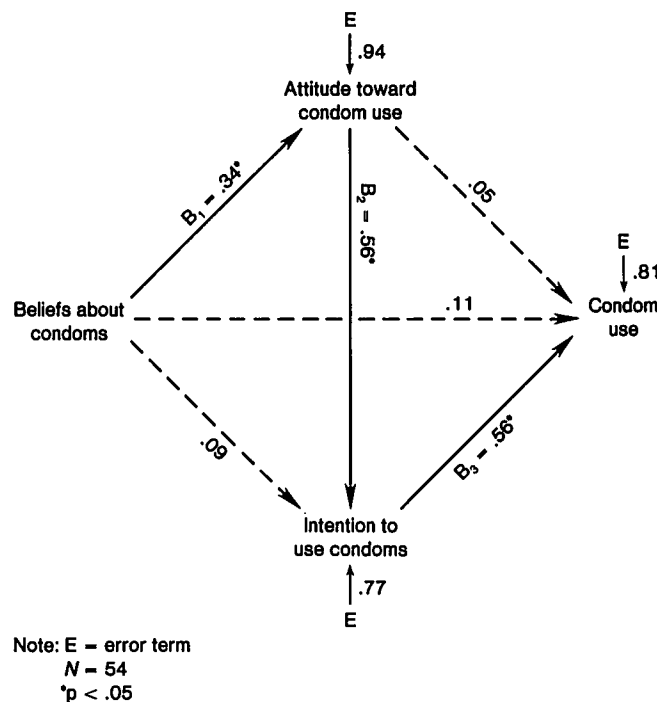


Fig 2. Model of standardized path coefficients.

tively associated with intention to use condoms in the coming month ($B_2 = .56, p < .05$). Intention to use condoms in the coming month was found to be positively associated with use of condoms in the past month ($B_3 = .56, p < .05$). The assumption was made that recent past behavior, present behavior, and immediate future behavior are highly correlated. If this assumption is true, the intention-behavior link in the Fishbein model was supported. Since the study eliminated pretest effects by collecting the data about behavior at the same time the other data were gathered, the Fishbein's conceptual model was upheld as it was applied to condom use among the 18- to 20-year-old college males in this sample.

DISCUSSION AND RECOMMENDATION

While the sample consisted of 18- to 20-year-old university or college males, it was heterogeneous with respect to onset and frequency of sexual intercourse, socioeconomic status, ethnicity, religion, and relative independence from the family of origin. Despite the heterogeneity of the sample, the Fishbein model was supported, suggesting the utility of the model for examining behavior. For the study sample one would expect a change in beliefs about condoms to change attitudes, intention,

and behavior in the same direction.⁹ More studies of sexually active, young adult males and their role in contraception are indicated. Specifically, younger males beginning sexual activity should be studied to determine whether the BAIB model holds for those with less well-developed cognitive abilities and less emotional maturity.

For the science of nursing, which is concerned with behavior patterns relative to health, the Fishbein model suggests a way of organizing data about phenomena of interest to it. Should the model explain contraceptive behaviors across other samples, it follows that the logical point of intervention is with beliefs.

Currently, nursing interventions designed to modify behavior patterns have focused on behavior. The results reported, irrespective of the specific behavior toward which behavioral interventions are directed, have been mixed. It may be that, where success is reported, beliefs about the behavior were serendipitously modified.

The sequelae to adolescent pregnancies, with respect to the health of the infant, the adolescents, the family, and society, are known to be far reaching. Since nursing has long been concerned with the prevention of these unwanted pregnancies, the efficacy of nursing interventions needs to be reexamined. Based on the findings of this and previous studies, the Fishbein model suggests a focus and direction for both research and practice.

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