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Religiosity and Sexual Activity Among Older Adolescents

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Abstract: *This study investigates religiosity, sexual activity, and sexual permissiveness among older adolescents. Eighty-two college students completed a survey that measured religiosity, sexual permissiveness, self-esteem, frequency of recent sexual encounters, and motivators for sexual activity or abstinence. Guilt, prayer, organized religious activity, and religious well-being predicted fewer sexual encounters. Orthodox beliefs, participation in organized religious activities, and highly-rated importance of faith predicted less permissive sexual attitudes. We conclude that guilt and religious activity can be good motivators for decreasing sexual encounters. We recommend that health practitioners encourage participation in religious activity among adolescents.*

Coital activity by adolescents outside of a monogamous committed relationship is a major health risk. Sexual activity by unmarried adolescents often leads to pregnancy, sexually transmitted diseases (STDs), abortion, low birth-weight infants, and the stunting of social, psychological, educational, and spiritual growth.^{1,2,3} From a public-health perspective, helping adolescents to avoid sexual activity outside the context of a monogamous relationship such as marriage should be, we think, a primary goal of professional health providers.^{4,5} Kay⁵ used a disease-prevention model to classify activities that decrease adolescent sexual activity. In this model, he classified adolescent sexual abstinence as primary prevention, encouraging sexually active adolescents to resume abstinence as secondary prevention, reducing the health risks associated with ongoing adolescent sexual activity as tertiary prevention.

Some health professionals approach premature sexual activity by adolescents exclusively through tertiary prevention measures.⁶ They believe that the role of health professionals is not to decrease adolescent sexual activity; rather, they see their mandate as protecting adolescents from pregnancy and STDs.^{7,8} For us, however, since contraceptives are not 100% effective in avoiding pregnancy and STDs and adolescents in this society are not developmentally ready for the responsibility of children, decreasing and avoiding adolescent sexual activity seems the healthiest alternative choice.

The results of prior research suggest that religiosity often produces decreased coital activity. Kinsey, Pomeroy, and Gebbard⁹ provided the earliest evidence of an inverse relationship between religious commitment and premarital coitus among adolescent and young

adult females. Bell and Chaskes¹⁰ and Kantner and Zelnik¹¹ also discovered that regular church attendance is inversely associated with premarital sexual activity among young unmarried American women. More recently, DuRant and Sanders¹² surveyed a national random sample of 1512 unmarried sexually active females and found an inverse relationship between coital frequency and religiosity. In these studies, however, religiosity was solely measured by frequency of church attendance. Furthermore, there was no determination of the religiosity among adolescents who were not sexually active and whether religiosity was a factor that helped them to remain that way.

King, Abernathy, Robinson, and Balswick,¹³ on the other hand, did not find a relationship between religiosity and sexual behavior among 295 white Protestant college students, but they did find an inverse relationship between religiosity and sexual permissiveness. They used a more extensive measure of religiosity than church attendance by utilizing the Putney-Middleton Scale of Religious Fundamentalism, which measures religious beliefs and attitudes. Rohrbaugh and Jessor¹⁴ concurrently developed another similarly broad scale to measure religiosity and found an inverse relationship between both sexual behavior and sexual permissiveness.

These inconsistencies among published research results were noted in a review of the literature by Chilman,¹⁵ who reported that religiosity was not a consistent predictor of pre-marital coital activity. Differences were attributed to the variable and often superficial means of measuring religiosity (e.g., church attendance), to differing conceptualizations of religiosity, and to differences in the sampling method, and the personal characteristics of the non-randomized populations studied.

Since Chilman's¹⁵ review, however, there have been rather consistent findings on the association of church attendance and other religious practices with sexual activity and sexual permissiveness. In 1987, Miller, Christensen and Olson¹⁶ reported that as church attendance increased among youth from Utah, New Mexico, and California (N= 2423) there was less sexual activity and sexual permissiveness. Forste and Heaton¹⁷ found that religious affiliation and church attendance were associated with a greater proportion of female adolescents who were not sexually active and Day¹⁸ found that church attendance dampened the likelihood of initiating sexual activity among racially and culturally diverse (Chicano, Latino, black, and white) teens. On the other hand, Seidman, Mosher, and Aral¹⁹ reported that lack of religious affiliation was associated with more frequent sexual partners among a nationally representative sample of 8450 American women aged 15 to 44.

Recent studies conducted in Australia, South Africa, and the United States confirm an

inverse relationship between religiosity and the frequency of sexual activity. Dunne and colleagues²⁰ surveyed 374 first-year college students and found that those for whom religion was important were less likely to have had intercourse. In this study, religiosity was measured with a one-item ranked scale that measured how important religion was in the lives of those surveyed. Nicholas and Durrheim²¹ used an eight-item religiosity scale to measure religiosity among 1,817 black first-year university students in South Africa. They also found that religious commitment diminished the propensity to engage in sexual intercourse. Finally, a national study conducted in the United States by Resnick, Bearman, and Blum et al.²² with a representative sample of 12,118 adolescents from grades 7 through 12 discovered that pledging virginity and ascribing importance to religion and prayer were associated with a later age of onset of sexual activity.

Factors other than religiosity that have been positively associated with premarital coital activity by adolescents include: increased number of years being sexually active,^{12,23} increased perceived intimacy with a partner,²⁴ decreased self-esteem,^{16,25} decreased expectancy for success,⁴ and lesser feelings of sexual guilt.²⁶

While the effects of religiosity on adolescent sexual activity and attitudes of sexual permissiveness have been studied by many scientists over the past several decades, religiosity is not consistently associated with less sexual activity and less permissive sexual attitudes. Furthermore, most studies to date have only superficially measured religiosity. Additionally, no research has addressed what effect religiosity has on sexual activity and sexual permissiveness when the effect of other variables, such as the length of time of a relationship, intimacy, self-esteem, expectancy for success, and sexual guilt are analyzed concurrently.

In order to learn more about religiosity and sexual activity, we used a multidimensional measure of religiosity with the Springfield Religiosity Survey.²⁷ This tool is based on the four measures of religiosity proposed by Glock and Stark,²⁸ which include religious belief or orthodoxy, ritual, experience, and religious knowledge.

Lindemann's²⁴ model of sexual development for unmarried adolescents and Jessor's²⁹ model of coital frequency served as the conceptual bases for this study. Lindemann²⁴ points to a continuum of sexual development for unmarried adolescents from the "novice" phase, where frequency of sexual intercourse remains low or sporadic, to the "expert" phase where there is a high frequency of intercourse. A person does not become an expert, or have high frequency of coital behavior, until the congruence between sexual behavior and sexual values is resolved.

According to Jessor's model,²⁹ religiosity is an indicator of an adolescent's likelihood to

behave in a socially acceptable manner or what he called "conventional-behavior structure." Religiosity is an indicator of the amount of exposure to influences that do not support pre-marital sexual activity and serves as a mechanism to support individual self-control.¹⁴ The more an adolescent participates in religious activities, the more likely is exposure to values that encourage chastity and the more likely the development of sexual norms that coincide with abstinence. Furthermore, if an adolescent's moral values are not in congruence with sexual behavior, a higher level of guilt ensues and coital frequency remains low.¹²

Another important factor to consider when conceptualizing religiosity here is whether adolescent religiosity is intrinsic, i.e., deeply held and a primary motivator for action, or extrinsic, i.e., only a superficial social motivator for action. The more deeply held or integrated an adolescent's religious beliefs and practices, the more likely religiosity will influence that adolescent's sexual behavior and attitudes.

Since religiosity has been found to be a factor associated with less coital activity and attitudes of less sexual permissiveness in adolescents, and since religiosity has been previously studied only superficially, the purpose of this study was to determine the multifaceted associations of religiosity with sexual activity and sexual permissiveness among unmarried college-age adolescents. Our hypothesis was that there would be an inverse relationship between the multiple dimensions of religiosity and sexual activity and between the multiple dimensions of religiosity and attitudes of sexual permissiveness among unmarried adolescents. A secondary purpose was to determine what adolescents viewed as motivators to maintain or refrain from sexual activity.

Method

Subjects and setting.

The subjects for this study were 82 college students randomly selected by computer from an entire university undergraduate student body. The university was a Midwestern private, sectarian (Roman Catholic) institution with approximately 10,000 undergraduate students, 52% of whom were female. The subjects for the study were 52 females and 30 males with a mean age of 19.47 years (SD = 0.74; Range 17-21 years). The majority (75 or 91.5%) of these students were Caucasian, one was African-American, two Hispanic-American, and three Asian-American. Sixty-two of the subjects listed Catholic as their religious preference, nine Protestant, ten "other," and one expressed no preference. Sixty-four of the subjects (78%) were currently sexually active, defined as engaging in sexual intercourse with penetration. None of these

sexually active students reported current homosexual practices.

Instruments

The construct of Religiosity was measured by use of the Springfield Religiosity Survey (SRS), a 34-item tool developed by Koenig, Smiley, and Gonzales.²⁷ Seven dimensions are included in the tool: orthodoxy/ belief, ritual, religious experience, religious knowledge, spiritual well-being, communal religiosity, and intrinsic religiosity. To measure intrinsic religiosity, the SRS includes a ten-item Intrinsic Religiosity scale developed by Hoge,³⁰ which includes a three-item importance of Faith sub-scale. Other dimensions of the tool are reflected in a number of sub-scales including a four-item Orthodox Belief Index (OBI), a two-item Organized Religious Activity Index (ORI), which includes frequency of church attendance and religious group activity, one item that measured Religious Social Support (RSS), a three-item Non-Organized Religious Activity (NORA) sub-scale (e.g., praying, bible reading etc.), and a ten-item Religious Well-Being sub-scale (RWB), which includes a two-item Importance of Prayer scale (IP).

The validity of the SRS was established by having 158 religious leaders judge the items against their criteria of a "truly religious person."²⁷ In prior studies, a Cronbach's alpha of 0.61 was obtained for the organizational religious activity items and an alpha of 0.87 was obtained for the Hoge's Intrinsic Religiosity Scale. A six-week test-retest reliability of 91.7% was obtained for all items of the SRS.²⁷ Cronbach's alphas for the current sample were 0.84 for the Intrinsic Religiosity subscale, 0.95 for the Religious Well-Being subscale, and 0.71 for the remaining subscales for the SRS.

Sexual guilt was measured by use of the revised version of the Mosher True False Sex Guilt Inventory (SGI).^{31,32,33} The SGI is a sub-scale of the Mosher Forced Guilt Inventory (FGCI) which measures three components of guilt: hostility, sex guilt, and guilty conscience. Only the 50 item sex-guilt sub-scale was used for this study. The original version of the FGCI has a split half reliability of 0.90.²⁶ The FGCI is a widely used measure of guilt and meets most measurement criteria for psychometric stability.²⁶ Cronbach's alpha for this study's sample was 0.90.

In order to measure the variable of Sexual Permissiveness, a method of sub-scaling was copied from Wyatt and Dunn.³⁴ They theorized that low sexual guilt would correlate with more sexual permissiveness. Select items from the Mosher SGI were utilized that ranked attitudes about sexual activity before marriage. Each of these items included eight ranked statements subjects could select that best reflected their beliefs about sexual relations before marriage: (a) are practiced too much to be wrong, (b) in my opinion, should not be practiced, (c) help people

to adjust, (d) should not be recommended, (e) are O.K. if both partners are in agreement, (f) are dangerous, (g) are good in my opinion, and (h) ruin many a happy couple. Scores range from 0—48, with lower scores indicating more permissiveness. These scores demonstrated excellent internal consistency with a Cronbach's alpha of 0.87 from this study's sample.

Self-esteem was measured by use of the Coopersmith Self-Esteem Inventory (SEI).³⁵ The SEI is a 25-item scale designed to measure attitudes toward the self in social, academic, family, and personal areas of experience. Test-retest reliability coefficients for the SEI range from 0.80 to 0.85.^{36,37} Internal consistency has been reported to be 0.74 for males and 0.71 for females.³⁶ Evidence for construct, concurrent, and predictive validity has been demonstrated in a number of studies.^{35,38} The Spearman-Brown coefficient for this study's sample was reasonably good at 0.69.

Sexual activity was operational through self-report of the frequency of sexual activity during the previous three months. Sexual activity was further differentiated as frequency of hand-to-genital activity, genital-to-genital activity, and frequency of actual sexual intercourse (i.e., penetration). The total sexual activity was the sum of the frequency of each of those activities over a three-month period.

Level of Intimacy was measured by the Hatfield and Sprecher Passionate Love Scale.³⁹ This 15-item scale measures passionate love as indicated by cognitive, emotional, and behavioral indicants of "longing for union." Cronbach's alpha of this scale was reported as 0.91,³⁹ in this study, alpha was 0.88.

Time in Relationship was ascertained by asking the sexually active subjects to note approximately how long they knew their sexual partners.

The 30-item Generalized Expectancy for Success Scale⁴⁰ was utilized to measure Expectancy for Success. This tool, originally developed and refined using college-student samples, measures general expectancy of successful goal achievement in most situations. Fibel & Hale⁴⁰ reported excellent internal consistency for this scale with Cronbach's alphas of 0.90 for females and 0.91 for males, respectively. The Cronbach's alpha in this study was 0.91.

Each of the subjects was asked to respond in writing to two open-ended questions. Those who considered themselves not sexually active were asked what motivated them to abstain from sexual activity and what would motivate them to become sexually active. Subjects who considered themselves sexually active were asked what motivated them to continue to be sexually active and what would motivate them to abstain.

Procedure

The researchers obtained human-rights approval from the university Office of Research Support and a randomized list of 250 unmarried males and 250 unmarried females between the ages of 17-21 years from the university Admissions Department. Two research assistants randomly selected 116 students from this list, phoned them and scheduled appointments for them to complete a battery of paper and pencil tests. The battery of tests was administered in randomized fashion by the two research assistants in a private office at the College of Nursing. To insure subject anonymity, the procedure described by Soresen⁴¹ was utilized. When the subjects completed their questionnaires, they sealed them in an envelope, walked with a research assistant to the nearest mailbox, and deposited the envelope. In this manner, the interviewer never had access to the questionnaire and the respondents were blind to the investigators. Subject also were informed that the information they gave to researchers would be anonymous, and that they could stop filling out the questionnaires at any time. This process was continued until a convenience sample of 82 students completed the battery of questionnaires. Thirty-four students refused to participate in the research, the majority giving their reasons as being too busy or not interested.

Analysis

The Windows 6.1 personal computer version of the Statistical Package for the Social Sciences (SPSS) was used to analyze the data. To test to see if there was an inverse relationship between religiosity and sexual activity and permissiveness, Pearson Product Moment correlations were calculated. Stepwise regression analysis was used to determine the best religious predictors of sexual activity. The answers to the open-ended questions on abstaining or maintaining pre-marital sexual activity were analyzed by two of the researchers by categorizing common phrases, ideas or sentences. A graduate research assistant independently analyzed the same qualitative data to validate the categories.

Results

The descriptive results for all the major variables and the sub-scales of the religiosity measurement tool are shown in Table 1. Table 2 shows the results of the correlations between religious variables, sexual guilt, self-esteem, time in relationship, expectancy of success, and passionate love with total sexual encounters, intercourse (i.e., coital encounters), genital-to-genital and hand-to-genital encounters, and sexual permissiveness. The results supported our hypothesis that religiosity would have an inverse association with sexual activity. Organized religious activities (which includes church attendance) and sexual guilt seem to be the most

consistent variables that show an inverse relationship with sexual activity. Time in relationship is the most consistent variable positively associated with sexual activity. These results also support our hypothesis that there is an inverse relationship between religiosity and sexual permissiveness. All of the religious variables show a significant positive association with less sexual permissiveness (re: premarital sexual relations) except non-organized religious activity and religious social support.

The final multiple-regression model with the variables of sexual guilt, importance of prayer, organized religious activity, and religious well-being regressed on the variable of total sexual encounters is shown in Table 3. This model explained approximately 30% (adjusted) of the frequency of sexual encounter. The final regression model of the religious variables that loaded significantly on sexual permissiveness, which included orthodox belief, religious activity, and importance of faith explained 31% (adjusted) of the subjects' attitudes towards premarital activity (See Table 4).

Table 5 displays the categorical frequency of responses to the four open-ended questions. The most frequent categorical responses to question number one (What motivates you to abstain from sexual activity?) were: not being in a committed relationship, fear of pregnancy and/or STDs, and values/beliefs. More females than males responded that fears of pregnancy and not being in love were likely to motivate them to abstain from sexual activity. Examples of response follow. Female:

"I abstain from sexual activity because I don't feel I've truly loved someone enough to have sex with them. I'm also very concerned about AIDs and pregnancy."

Male:

"Being a Catholic, my dedication to the Christian value of abstinence motivates me to abstain from sexual activity. The next time I do engage in such activity, I want to be with the person I will share the rest of my life with."

The categorical responses to question number four ("What would motivate you to become sexually active?") are somewhat a reverse of the answers to question one, except for fear of pregnancy and STDs, The major responses were: being in a loving relationship, finding the ideal mate for future and marriage, and a trusting partner. Examples of response: Female:

"Falling in love. Not to be taken lightly. I must be completely committed and plan on marriage."

Male:

"Realizing that I have found the woman who will be my life partner would probably motivate me. However, we need to be extremely in love, and convinced that sexual intimacy is what is best for our relationship."

Questions two and three were targeted at sexually active subjects. The most frequent categorical responses for what motivated a subject to be sexually active (i.e., question two) were: being in love, a committed relationship, sexual desire, and a need for intimacy. Males responded more frequently to sexual desire and females to being "in love" as what motivated them to be sexually active. Examples of response: Female:

"My feelings for the man I love. I want to express those feelings in a very intimate way and I believe making love fulfills the desire."

Male:

"I feel that sex is all right when two people like each other. I don't think it is okay when it is a scam. I think that sex is pleasurable and is a way to show affection."

The categorical responses to question number three ("What would motivate you to abstain?") mirrored the responses to question number one, i.e., not being in a committed relationship, fear of pregnancy and STDs, and value/ beliefs given as reasons. Examples of response; Female:

"Fear of disease, pregnancy, or lack of a loving, satisfying, secure relationship."

Male:

"Finding out that my partner is having sex or a romantic relationship with someone else, or if my partner does not want to have sex anymore, or if my partner has contracted an STD or become pregnant."

Auxiliary results

The data also provided some interesting results that are indirectly related to the purposes of this study, especially with the variable of sexual permissiveness as it relates to self-ratings of the importance of faith. Analysis showed that there was a significant difference ($F = 6.292, p \leq 0.001$) in attitudes about pre-marital sexual permissiveness depending on the importance of faith. The 22 subjects who ranked their faith as definitely not important (1) had a

mean sexual permissiveness (SP) score of 13.18 (SD = 7.51); the 30 subjects who ranked their faith as not important (2) had a mean sexual permissiveness of 18.07 (SD = 8.63); the 18 subjects who ranked their faith as an important influence (3) had a mean SP of 22.50 (SD = 8.58); and the 10 subjects who ranked their faith as a definitely important influence (4) had a mean SP of 26.40 (SD = 4.19).

Although there was no significant statistical difference in the frequency of intercourse among the four levels of importance of faith, there was a decrease as the level of importance increased. The mean frequency of intercourse at level one was 7.36 (SD = 12.13) and at level 4 it was 2.70 (SD = 5.31). The only gender differences of significance were that the females had significantly lower self-esteem scores than the males ($t = 2.73, p \leq 0.01$) and participated more frequently in non-organized religious activity ($t = 13.10, p < 0.001$).

Discussion

The results of the study support the findings of past studies both descriptively and by association. The number of sexually active students who participated in the current study was similar (70-80%) to those reported by Reinisch, Hill, Sanders and Ziemba-Davis⁴² at another Midwestern university. The finding that sexual activity is inversely related to the level of religiosity, religious attendance, and importance of faith among older adolescents is also consistent with past studies. For example, Mahoney⁴³ found an inverse relationship with frequency of coitus and religiosity with 290 female college students (-0.07) and with 1515 male college students (-0.18). DuRant and Sanders¹² reported a significant inverse relationship of religious attendance with coital frequency among 1512 adolescent subjects (-0.11). Dunne et al.²⁰ found, among 375 students surveyed, that those who perceived religion as important in their lives were less likely to participate in intercourse, while Nicholas et al.²¹ found that religious commitment diminished the likelihood to engage in sexual activity among 1,817 black first-year university students in South Africa.

Unlike these other descriptive studies,^{12,43} we found in our study a much stronger inverse relationship with various aspects of religiosity and frequency of coital activity. In particular, the relationship of organized religious activity, including church attendance ($r = -.303$), and the importance of prayer ($r = -.230$), demonstrate the strength of this relationship. This stronger inverse relationship might be due to the relative homogeneity of this sample (college students at a sectarian university) or because we used a more extensive (multiple) measure of religiosity. The magnitude of the results of the current study more closely parallels the results of

Rohrbaugh and Jessor,¹⁴ who also used an extensive measure of religiosity. Rohrbaugh and Jessor¹⁴ found a significant inverse correlation between religiosity and sexual activity ($r = -.25$) and between religiosity and sexual permissiveness ($r = -.38$).

The qualitative results reported in this study mirror the quantitative results in that those students who indicated they were not sexually active frequently cited values/beliefs and religion as motivators to be sexually inactive. The qualitative responses also are similar to those ascertained by Keller, Duerst, and Zimmerman⁴⁴ and Alexander and Hickner.⁴⁵ Keller et al.⁴⁴ found that the reasons 115 high school students gave for not participating in sexual intercourse included relationship issues (e.g., not knowing a partner well enough), moral issues, and fear of pregnancy and STDs. Alexander and Hickner⁴⁵ reported that the reasons that 218 of their patients aged 13 to 18 years gave for their being sexually active were active choice and loss of control and reasons for not being sexually active included fear of pregnancy, STDs, lack of readiness, and morality.

These results, which show a significant inverse relationship between sexual guilt and sexual activity, are similar to past study findings, as are the results that show religiosity as strongly related to sexual guilt and inversely related to sexual permissiveness. However, these findings suggest a stronger association between multiple aspects of religiosity and less sexual permissiveness, in particular adhering to orthodox beliefs, participating in organized religious activity, and avowing the importance of faith; whereas participating in non-organized religious activity did not significantly correlate with less sexual permissiveness. Also of interest is the fact that religiosity had more of an association with attitudes of sexual permissiveness (sex before marriage) than actual sexual behavior. This shows a dissonance between actual behavior and beliefs.

The results show a strong association of being sexually active with time in relationship, especially for total sexual behavior and sexual coitus. This association was reinforced by the qualitative responses from students who reported that a committed relationship was a strong motivator for continuing or initiating sexual activity. The association of "time in relationship" with increased sexual activity lends some support to Lindemann's²⁴ notion that there is a continuum from novice to expert in amount of sexual activity.

The results also support the conceptualization of religiosity and sexual behavior as articulated by Jessor and colleagues²⁹ and Rohrbaugh and Jessor.¹⁴ Religious activity shows an association with less sexual activity. Furthermore, since religiosity is strongly associated with sexual guilt, one could surmise that religiosity would reinforce a person's sense of guilt (and self

control), especially when religious values are not congruent with behavior. The time-in-relationship factor also seems to support Lindemann's notion that the more committed the relationship, the more likely sexual activity will occur.²⁴

From these results, the authors conclude that organized religious activity (in the form of church attendance and prayer services) followed by the importance given prayer seem to be the religious variables most associated with less sexual activity. Furthermore, sexual guilt is strongly associated with less sexual activity and positively with multiple religious measures, especially organized religious activity and the importance given to faith. Intrinsic religiosity, religious well-being, and orthodox belief have a strong association with less sexual permissiveness and sexual guilt. The findings also support the notion that there are multidimensional factors in the concept of religiosity, unlike the uni-dimensional conceptualization proposed by Rohrbaugh and Jessor.¹⁴ Furthermore, qualitative results reinforce the notion that while religious beliefs and values do motivate sexual abstinence, time in relationship and commitment to it seem to be strong motivators for sexual activity.

A question that arises is why some religious indicators, such as intrinsic religiosity and religious well-being, did not demonstrate significant association with less sexual activity. One reason may be that the current generation of college age students is not being catechized to believe that premarital sexual activity is wrong. Further studies could be developed to investigate what students believe is right and wrong about premarital sexual activity and what they believe their religious faith tells them. Of further interest would be measuring the level of moral development of college-age adolescents and associating it with their religiosity. Are adolescents who are influenced by religiosity at a lower level of moral development and how does their moral development relate to their religious integration? Finally, other factors that influence sexual activity could be investigated. Of particular interest to the authors are the influences of illicit and recreational drugs and alcohol.

From a primary and secondary disease-prevention standpoint, the clinical significance of this study is that encouraging adolescents to continue to participate in religious activity, especially of an organized nature, might help adolescents refrain from sexual activity. Furthermore, reinforcing their mainstream religious values and beliefs would clearly be a help. This could be accomplished, we suggest, by helping them realize that to be chaste is also to be healthy.

References

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1. Coker, A.L., Richter, D.L., Valois, R.F., McKeown, R.E., Garrison, C.Z., and Vincent, M.L., "Correlates and Consequences of Early Initiation of Sexual Intercourse," *Journal of School Health* 64 (1994), pp. 372-377.
2. Grant, L.M., and Demetriou, F., "Adolescent Sexuality." *Pediatric Clinics of North America* 35 (1988), pp. 1271-1289.
3. Resnick, M.D. and Blum, R.W., "The Association of Consensual Sexual Intercourse during Childhood with Adolescent Health Risk and Behaviors." *Pediatrics* 94 (1994), pp. 907-913.
4. Weed, S., and Olsen, J., "Policy and Program Considerations for Teenage Pregnancy Prevention: A Summary for Policymakers." *International Review* 13 (1989), pp. 267-293,
5. Kay, L.E., "Adolescent Sexual Intercourse: Strategies for Promoting Abstinence in Teens," *Postgraduate Medicine* 97(1995), pp.121-134.
6. Holt, J.L., and Johnson, S.D., "Developmental Tasks: A Key to Reducing Teenage Pregnancy." *Journal of Pediatric Nursing* 6 (1991), pp. 191-196.
7. Yoos, L., "Adolescent Cognitive and Contraceptive Behaviors." *Pediatric Nursing* 13 (1987), pp. 247-250.
8. Smith, M., "Pediatric Sexuality: Promoting Normal Sexual Development in Children." *Nurse Practitioner* 18 (1993), pp. 37-44.
9. Kinsey, A.C., Pomeroy, W.B., Martin, C.E., and Gebhard, P., *Sexual Behavior in the Human Female*. Philadelphia: W.B. Saunders, 1953.
10. Bell, R.R., and Chaskes, J., "Premarital Sexual Experiences Among Adolescents, 1958-1968." *Journal of Marriage and the Family* 32 (1970), pp. 80-81.
11. Kantner, J.F. and Zelnik, M., "Sexual Experience of Young Unmarried Women in the United States." *Family Planning Perspectives* 4 (1972), pp. 9-17.
12. DuRant, R.H, and Sanders, J.M., "Sexual Behavior and Contraceptive Risk Taking among Sexually Active Adolescent Females." *Journal of Adolescent Health Care* 10 (1989), pp. 1-9.
13. King, K.K., Abernathy, T.J., Robinson, I.E., and Balswick, J.O., "Religiosity and Sexual Attitudes and Behavior among College Students." *Adolescence* 11 (1976), pp. 535-539.
14. Rohrbaugh, J. and Jessor, R., "Religiosity in Youth: A Personal Control Against Deviant Behavior." *Journal of Personality* 43 (1975), pp. 136-155.
15. Chilman, G.S., "Social and Psychological Research Concerning Adolescent Child-Bearing." *Journal of Marriage and the Family* 42 (1980), pp. 793-805.

16. Miller, B.C., Christensen, R.B., and Olson, T.D., "Adolescent Self-Esteem in Relation to Sexual Attitudes and Behavior." *Youth & Society* 19 (1987), pp. 93-111.
17. Forste, R.T., and Heaton, T.B., "Initiation of Sexual Activity among Female Adolescents." *Youth & Society* 19 (1988), pp. 250-268.
18. Day, R.D., "The Transition to First Intercourse among Racially and Culturally Diverse Youth." *Journal of Marriage and the Family* 54 (1992), pp. 749-762.
19. Seidman, S.N., Mosher, W.D., and Aral, S.O., "Women with Multiple sexual Partners: United States, 1988." *American Journal of Public Health* 82 (1992), pp. 1388-1394.
20. Dunne, M.P., Edwards, R., Lucke, D.M., and Raphael, B., "Religiosity, Sexual Intercourse and Condom Use among University Students." *Australian Journal of Public Health* 18 (1994), pp. 339-341.
21. Nicholas, L. and Durrheim, K., "Religiosity, Aids, and Sexuality Knowledge, Attitudes, Beliefs, and Practices of Black South-African First-Year University Students." *Psychological Reports* 77 (1995), pp. 1328-1330.
22. Resnick, M.D., Bearman, P.S., Bluni, R.W., Bauman, D.E., Harris, K.M., Jones, J., Tabor, J., Beuhring, T., Sieving, R.E., Shew, M., Ireland, M., Bearinger, L.H., and Udry, J.R., "Protecting Adolescents from Harm: Findings from the National Longitudinal Study on Adolescent Health." *Journal of the American Medical Association* 278 (1997), pp. 823-832.
23. Thompson, L., and Spanier, G.B., "Influence of Parents, Peers, and Partners on the Contraceptive Use of College Men and Women." *Journal of Marriage and the Family* (1978), pp. 481-492.
24. Lindemann, C., *Birth Control and Unmarried Young Women*. New York: Springer, 1974.
25. Winter, L., "The Role of Sexual Self-Concept in the Use of Contraceptives." *Family Planning Perspectives* 20 (1988), pp. 123-127.
26. Propper, S., and Brown, R.A., "Moral Reasoning, Parental Sex Attitudes, and Sex Guilt in Female College Students." *Archives of Sexual Behavior* 15 (1986), pp. 331-340.
27. Koenig, H.G., Smiley, M., and Gonzales, J.A., *Religion, Health, and Ageing*. New York: Greenwood Press, 1988.
28. Glock, C.Y. and Stark, R., *Christian Belief and Anti-Semitism*. New York: Harper and Row, 1966.
29. Jessor, R., Costa, F., and Jessor, L., "Time of First Intercourse, A Prospective Study." *Journal of Personal Social Psychology* 44 (1983), pp. 608-626.

30. Hoge, D.R., "A Validated Intrinsic Religious Motivation Scale." *Journal for the Scientific Study of Religion* 11 (1972), pp. 369-376.
31. Mosher, D.L., "The Development and Multi-Trait Multi-Method Matrix Analysis of Three Measures of Three Aspects of Guilt." *Journal of Consulting Psychology* 30 (1966), pp. 25-29.
32. Mosher, D.L., "Measurement of Guilt in Females by Self-Report Inventories." *Journal of Consulting and Clinical Psychology* 32 (1968), pp. 690-695.
33. Kaempfer, S.H. and Fisher, S.G., "Measuring Sexuality: Physiologic, Psychologic, and Relationship Dimensions," *Instruments for Clinical Nursing Research*, ed. by Frank-Stromborg M. Norwalk, CT: Appleton and Lange, 1988.
34. Wyatt, G.E. and Dunn, K.M., "Examining Predictors of Sex Guilt in Multiethnic Samples of Women." *Archives of Sexual Behavior* 20 (1991), pp. 471-485.
35. Coopersmith, S., *Self-Esteem Inventories*. Palo Alto, CA: Consulting Psychology Press, 1986.
36. Bedeilan, A.G., Geagud, R.J., and Zmud, H., "Test-Retest Reliability and Internal Consistency of the Short Form of Coopersmith's Self-Esteem Inventory." *Psychological Reports* 41 (1977), pp. 1041-1042.
37. Frerichs, M., "Relationship of Self-Esteem and Internal-External Control to Selected Characteristics of Associate Degree Nursing Students." *Nursing Research* 22 (1973), pp. 350-352.
38. Kokenes, B., "A Factor Analytic Study of the Coopersmith Self-Esteem Inventory." *Adolescence* 13 (1978), pp. 149-155.
39. Hatfield, F., and Sprecher, S., "Measuring Passionate Love in Intimate Relations." *Journal of Adolescence* 9 (1986), pp. 383-410.
40. Fibel, B., and Hale, D., "The Generalized Expectancy for Success Scale—A New Measure." *Journal of Consulting and Clinical Psychology* 46 (1978), pp. 924-931.
41. Soresen, R.C., *Adolescent Sexuality in Contemporary America*. New York: World Publishing, 1973.
42. Reinisch, J.M., Hill, C.A., Sanders, S.A., and Ziemba-Davis, M. (1995). "High-Risk Sexual Behavior at a Midwestern University: A Confirmatory Survey." *Family Planning Perspectives* 27 (1995), pp. 79-82.
43. Mahoney, E.R., "Religiosity and Sexual Behavior Among Heterosexual College Students." *The Journal of Sex Research* 16 (1980), pp. 97-113.

44. Keller, M.L., Duerst, B.L., and Zimmerman, J., "Adolescents' Sexual Decision-Making." *Image: Journal of Nursing Scholarship* 28 (1996), pp. 125-130.

45. Alexander, E., and Hickner, J., "First Coitus for Adolescents: Understanding Why and When." *Journal of the American Board of Family Practice* 10 (1997), pp. 96-103.

Notes

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Appendix

Table 1

Descriptive Data on Major Variables (N = 82)

Variable	Mean	SD	Range
Orthodox Belief Index (OBI)	14.04	2.68	7-18
Non-Organized Religious Activity (NORA)	7.82	2.24	3-12
Organized Religious Activity (ORA)	5.65	1.74	2-10
Importance of Prayer (IP)	8.32	3.03	0-12
Importance of Faith (IF)	2.27	1.07	1-5
Intrinsic Religiosity (IR)	29.85	10.36	12-69
Religious Well-Being (RWB)	29.61	9.57	0-48
Religious Social Support (RSS)	3.4	1.56	0-5
Sexual Guilt (SG)	105.02	39.27	32-205
Sexual Permissiveness (SP)	18.93	10.07	1-47
Self Esteem (SE)	69.76	22.97	8-100
Time in Relationship (TIR)	3.37	1.86	0-6
Hand to Genital (HG)	5.80	9.58	0-50
Genital to Genital (GG)	3.12	7.69	0-48
Frequency of Intercourse (I)	4.78	8.47	0-36
Total Sexual Encounter (TSE)	13.44	20.54	0-126
Expectation of Success (ES)	119.29	13.83	75-147
Passionate Love (PL) "Intimacy"	106.78	18.84	7-135

Table 2

Correlations of Total Sexual Encounters (TSE), Intercourse (I) Genital to Genital (GG) and Hand to Genital (HG) Encounters, and Sexual Permissiveness with Religious Variables (N = 82)

Religious Variable	TSE	I	r GG	HG	SP¹
Orthodox Belief Index (OBI)	-.067	-.099	-.038	-.068	.412***
Non-Organized Religious Activity (NORA)	-.202	-.109	-.207	-.327**	0.45
Organized Religious Activity (ORA)	-.303**	-.293**	-.215*	-.251*	.426***
Church Attendance (CA)	-.310**	-.267*	-.241*	-.269**	.394***
Importance of Prayer	-.252*	-.109	-.138*	-.273**	.335**
Importance of Faith (IF)	-.201	-.244*	-.052	-.179	.436***
Intrinsic Religiosity (IR)	-.116	-.035	-.219*	-.115	.438***
Religious Well-Being (RWB)	-.040	-.085	-.127	-.079	.428***
Religious Social Support (RSS)	-.022	-.020	-.129	-.015	.141
Sexual Guilt (SGI)	-.383***	-.273**	-.385***	-.314**	
Self Esteem (SE)	.165	.160	.001	.094	-.013
Time in Relationship (TIR)	.357***	.195	.331**	.290***	-.156
Expectancy of Success	-.107	.099	.208	.210	-.139
Passionate Love (Intimacy)	.000	.025	.168	.107	.141

*p ≤ 0.05 **p ≤ 0.01 ***p ≤ 0.001

¹Note: High sexual permissiveness scores reflect less permissiveness.

Table 3
Multiple Regression Analysis of Frequency of Sexual Encounters with Religious Variables

Variable	Coefficient	SE	BETA	T	p
Sexual Guilt	-0.190	.056	-.363	3.41	.001
Importance of Prayer	-3.675	1.156	-.542	3.28	.002
Organized Religious Activity	-3.362	1.388	-.285	2.42	.018
Religious Well-being	1.580	0.371	.737	4.36	.000
Constant	36.138	7.424		4.86	.000

Multiple R = 0.576; R Square = 0.332; Adjusted R Square = 0.297
 F = 9.568; p < 0.0000

Table 4**Multiple Regression Analysis of Sexual Permissiveness with Religious Variables**

Variable	Coefficient	SE	BETA	T	p
Orthodox Belief	1.509	.444	.401	3.40	.001
Organized Religious Activity	1.539	.679	.266	2.27	.026
Importance of Faith	2.821	1.082	.298	2.61	0.11
Constant	-9.981	5.36		-1.86	.066

Multiple R = .583; R Square = 0.340; Adjusted R Square = 0.306
F = 11.593; p < 0.0000

Table 5
Categorical Answers to Open-Ended Questions on Sexual Activity and Abstinence

Question 1: If you are not sexually active, what motivates you to abstain?		
	Males (n = 18)	Females (n =27)
Motivation from Relationships:		
Don't want/currently have a "committed" relationship	5	3
Not currently in love	3	11
Haven't found the "right" partner	1	3
Don't have a partner	3	2
Prefer friendships with opposite sex	1	0
Motivation from Risk-Assessment:		
Fear of AIDs/HIV	2	2
Fear of Pregnancy	2	11
Fear of STDs	0	4
Fear of sexual intercourse	0	1
Motivation from Morals & Beliefs:		
Morally wrong	2	0
Religious beliefs	2	2
"Personal" beliefs	1	0
Belief should wait until marriage	2	5
Motivation from Personal Choices:		
Would interfere with career goals	2	0
"Too busy"	1	0
TOTAL RESPONSES:	27	44

Table 5 Continued

Question 2: If you are sexually active, what motivates you to continue?		
	Males (n = 17)	Females (n = 30)
Motivation from Affection within Relationship:		
“In Love” with partner	7	14
“Serious Relationship”	1	1
“Care for” partner	2	5
“Feelings for” partner	0	2
“Attracted to” partner	0	2
Motivation from need for Intimacy:		
Develops closer bond with partner	3	5
Sharing with partner	1	5
Motivation from Commitment/Future Intentions:		
Engaged/Intend to Marry	1	3
Intend to “Be with” in Future	1	1
Motivation from Personal Satisfaction:		
Physical pleasure	12	8
Emotional pleasure	6	3
Spiritual fulfillment	0	1
Relieves stress	1	1
Motivation from Fears:		
Afraid may lose partner if says “no”	0	1
Doing it to feel loved/wanted	0	3
Other reasons:		
Intoxicated	0	1
Not Thinking	0	1
TOTAL RESPONSES	35	57

Table 5 Continued

Question 3: If you are sexually active, what would motivate you to abstain?		
	Males (n = 18)	Females (n = 30)
Motivation from Status of Relationships:		
Doesn't want/is tired	6	1
"Bad"/"Not satisfying" relationship	3	2
Relationship not "secure"	0	6
No love/caring in relationship	3	6
Not serious/committed relationship	0	7
Partner "cheating"	1	3
Menstruating	0	1
Motivation from Risk-Assessment:		
Fear of AIDs/HIV	3	3
Fear of Pregnancy	4	10
Fear of STDs	7	9
If became "hazardous to health"	0	1
If parents found out	0	1
Motivation from Morals & Beliefs:		
Personal beliefs	1	1
Religious beliefs	2	0
Guilt	1	0
Entering religious life	1	0
Motivation from Personal Choices:		
"Bored with it"	1	0
"Doing it too often"	1	1
"Wish hadn't had sex to begin with"	0	1
"Don't know"/"Nothing"	0	4
TOTOAL RESPONSES:	34	57

Table 5 Continued

Question 4: If you are not sexually active, what would motivate you to become sexually active?		
	Males (n = 16)	Females (n = 26)
Motivation from Affection within Relationship:		
If fell "in love"	7	14
Found "right person"	4	0
Motivation from Future Intentions:		
Marriage	1	5
"Good Chance" of marriage/engagement	0	5
Found "life partner"	1	1
If "serious"/"committed" relationship	2	4
Motivation from Personal Satisfaction:		
Could handle emotionally	0	1
Consenting partner	4	1
Desire	2	0
Motivation from Perceived Risk-Reduction:		
Trusted partner	0	2
Partner used "precautions"	1	2
AIDs "immunization"	0	1
If could "support a child"	0	1
Other Reasons:		
"Peer pressure"	0	1
"Nothing"	1	1
TOTAL RESPONSES	23	39