University of Nebraska - Lincoln
DigitalCommons@University of Nebraska - Lincoln

Faculty Publications from CYFS

Children, Youth, Families & Schools, Nebraska Center for Research on

1-1-2008

Timing of Initial Sexual Intercourse as a Mediating Factor Between White and Black Adolescent's Sexual Attitudes and Sense of Self

Paul Springer
University of Nebraska - Lincoln, pspringer3@unl.edu

Scott A. Ketring
Auburn University

Jeffrey R. Hibbert
Auburn University

Connie J. Salts
Auburn University

Follow this and additional works at: http://digitalcommons.unl.edu/cyfsfacpub

Part of the Pre-Elementary, Early Childhood, Kindergarten Teacher Education Commons

Springer, Paul; Ketring, Scott A.; Hibbert, Jeffrey R.; and Salts, Connie J., "Timing of Initial Sexual Intercourse as a Mediating Factor Between White and Black Adolescent's Sexual Attitudes and Sense of Self" (2008). *Faculty Publications from CYFS*. Paper 20.
http://digitalcommons.unl.edu/cyfsfacpub/20

This Article is brought to you for free and open access by the Children, Youth, Families & Schools, Nebraska Center for Research on at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Faculty Publications from CYFS by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

Article number: 0001990404

A&FH

Timing of Initial Sexual Intercourse as a Mediating Factor Between White and Black Adolescent's Sexual Attitudes and Sense of Self

Paul Springer, PhD, Scott A. Ketring, PhD, Jeffrey Hibbert, PhD, Connie J. Salts, PhD

Abstract

Based on the Normative Hypothesis, theorists have believed that differences in sexuality among black and white males would affect each group differently due to the disparate cultural norms. The current study evaluates the relationship between adolescent sexual attitudes and timing of first sexual intercourse as factors affecting problem behaviors, suicidal thoughts, and sense of security among black and white adolescents. The sample size comprised of 847 black and white adolescent males from rural Alabama. Results discovered that earlier sexual expression was dealt with differently for white and black adolescents, depending on timing of first intercourse. Most interestingly, it appears that the decision process for having sex is different for white and black adolescents. The model fits better for white adolescents.

Key Words: adolescent, sexuality, intercourse, male, black, white
Adolescent & Family Health, 2008, 4(2)

INTRODUCTION

Over the past 25 years adolescents have been engaging in first sexual intercourse at increasingly younger ages (Dickson, N., Paul, C., Herbison, P., & Silva, P., 1998; Rosenthal, D. A., Smith, A. M., & Visser, R., 1999; Carvajal, S.C., Parcel, G. S., Basen_Engquist, K., Banspach, S. W., Coyle, K. K., Kiirby, D., & Chan, W., 1999). One study found that almost 18% of white males and 49% of black males were sexually active before age 13 (Coker, A. L., Richter, D. L., Valois, R. F., Mckeown, R. E., Garrison, C. Z., & Vincent, M. L., 1994), while 60% of white and black males having intercourse by ages 18 and 16 respectively (Brooks-Gunn, J., & Furstenberg, F. F., 1989).

There is concern that sexual activities among immature younger children will have an effect on risky behavior and self-concept. One study suggests that the timing of an adolescent's first sexual intercourse is a key variable associated with negative behaviors among white males and females. It was found that earlier timing of first sexual intercourse was associated with a pattern of adjustments as measured by: problem behaviors such as shoplifting, truancy, and fighting; environmental systems such as the quality of family and peer relationship; and the personality system, such as self-esteem (Bingham, C.R., & Crocket, L. J., 1996).

Other studies have looked at the effects that early sexual, physical and emotional abuse may have on early initiation of sexual intercourse. Some studies have shown that sexual coercion, especially when it is the child's first sexual experience may lead to more risky sexual behavior for both males and females (Caceres, C.F., Marin, B.V., & Hudes, E.S., 2000;. Zweig, J.M., & Crockett, L.J., 1999). Another study has shown that physical abuse also increases the likelihood of adolescent sexual activity (Small, S. A., & Luster, T.,1994). In fact, early abuse in children's lives may actually precede early sexual behavior and lead to the child taking more risks in their adolescent years, such as initiating sex at a younger age.

Unfortunately, there is limited research on very early sexual intercourse and problem behaviors among males. Most of the data focuses on females and the negative psychological effects they may encounter when engaging in intercourse at very early ages (ages 11-12). Leitenberg and Saltzman (. Leitenberg, H., & Saltzman, H., 2000) discovered that girls who initiated sex early (ages 11-12) had more suicide attempts and more alcohol and drug abuse. Suicide attempts and drug abuse suggest that there is a link between early sexual behavior and psychological problems.

However, negative behaviors associated to early sexual intercourse among white adolescents should not necessarily be extrapolated to their black adolescent counterparts. According to the "Normative Hypothesis," there is no association between sexuality and psychological health when acting in accordance with culturally normative sexual behavior (Herold, E. S., & Goodwin, M. S., 1979, Jessor, S. L., & Jessor, R., 1975; Stratton, J., & Spitzer, S., 1967). It is only when the individual deviates from the cultural norm that the relationship between sexual activity and psychological health is created (Furstenberg, F. F., Morgan, S. P., Moore, K. A., Peterson, J. L., 1987; Stratton, J., & Spitzer, S., 1967).

The relationship between self-esteem and early sexuality seems dependant upon the adolescent's beliefs regarding appropriateness of the behavior (Miller, B. C., Christensen, R. B., & Olson, T. D., 1987). Self-esteem was negatively associated with early sexual intercourse for adolescent males who believed it was wrong (Herold, E. S., & Goodwin, M. S., 1979) but positively associated to early intercourse with those who believed it was acceptable (Miller, B. C.,

Christensen, R. B., & Olson, T. D., 1987). However, the relationship between self-esteem and sexual behavior differed depending on the subculture (Herold, E. S., & Goodwin, M. S., 1979; Perlman, D., 1967; Stratton, J., & Spitzer, S., 1967).

Findings support the hypothesis that the relationship between self-esteem and adolescent sexual attitudes and behaviors is dependant on cultural norms (Herold, E. S., & Goodwin, M. S., 1979; Jessor, S. L., & Jessor, R.; 1975; MacCorquodale, P., & DeLamater, J., 1979; Perlman, D., 1967). If Stratton and Spitzer's (Leitenberg, H., & Saltzman, H., 2000) theory is true then black males who typically hold more liberal views about sexuality would not experience the negative outcomes associated with sexual expression at early ages. This assumption was supported by Blume, Beuhring, Bearinger, Sieving, and Resnick (Blume, R. W., Beuhring, T., Shew, M. L., Bearinger, L. H., Sieving, R. E., & Resnick, M.D., 2000) in which they confirmed that black male adolescents, did not exhibit the same destructive behaviors as other teens of different ethnic origins who were engaging in sex or other risk behaviors.

Research evaluating the relationship between the Normative Hypothesis and sexual intercourse focuses on self-esteem (Jessor, S. L., & Jessor, R., 1975; Miller, B. C., Christensen, R. B., & Olson, T. D., 1987; Perlman, D., 1967; Stratton, J., & Spitzer, S., 1967). However, current research has begun to critically evaluate the use of self-esteem as a predictor of psychological health. This research suggests that self-esteem has no predictive value of positive behavior and that other factors may show stronger predictive qualities (Baumeister, R., Bushman, B., & Campbell, K., 2000; Emler, N., 2001; Crocker, J., (2002).

There is a real need to look at psychological factors other than self-esteem to understand the effects of early sexual behaviors. Such research could focus on sexual attitudes and age of sexual onset affecting multiple aspects of the individual among a more racially diverse sample, lending more credence to the Normative Hypothesis.

METHOD

Participants

The subjects for this study came from participants in the Teen Assessment Project (TAP) that encompassed five rural and urban counties in Alabama. TAP is a program developed by the Alabama Cooperative Extension System that assists in the purpose of educating and learning more about the experiences of adolescents. A total of twelve schools in five Alabama counties participated in the Teen survey, which were made up of various social, racial and ethnic backgrounds. Parents of these students were informed of this study in advance, and were given the option to exclude their children from participating. Only data for sexually active males were used in this study. Males who inconsistently answered or did not provide answers to the questions used in this study were not included. Similarly, cases with coding errors and missing data on key variables in this study were also not included. The beginning sample size of all males in this data set was 1,122. After accounting for missing data and coding errors, 49 cases were removed. In addition, 226 of this sample indicated that they had not had sex, and considered themselves a virgin, and were subsequently removed from the study. As a result, the final sample size was 847. The sample consisted of adolescent males ranging from 12-18 years of age with 76.1% of the adolescents being white and 23.9% black. The mean age of males was 15.62 years.

Procedure

The surveys were administered and returned on a pre-determined day and time at twelve schools that encompassed five rural and urban counties in Alabama. Teachers did not help or instruct students on answering any of the surveys.

Endogenous Variables

Age at intercourse

Age at first intercourse was measured among participants using the question, "How old were you the first time you had intercourse?" Possible answers from the TAP survey included a space for each age group starting at "9 years old or younger," to "18 years old." Another possible answer included, "I have never had sex (intercourse)." For the purpose of this study, the "never having sex" group was excluded

Suicide

Suicide was used as a dependent variable in this study and consisted of one question. This question asked the participant to check the space that represents how often they have seriously thought about suicide. The specific questions states, "Have you ever seriously considered killing yourself?" The subjects responded on a four point Likert-type scale ranging from "Never," "Once or twice," "Several Times," "Many times," and "All of the time"

Sense of Security

The questionnaire contained 13 questions aimed at assessing what values were important in the adolescent's day-to-day life. The participants were asked to indicate the importance of each value on a six point Likert-type scale ranging from, (1) Not Important, to (6) Most Important. Examples of these questions were as follows: How important is, "Security: feeling safe in your life," "Family security: close relationships in your family," "Sense of belonging," and "Self-control." The Cronbach's alpha was .92 for all adolescents. Looking at the reliability of this scale by race, the

Cronbach alpha was .92 for white adolescents and .91 for black adolescent males.

Behavioral Problems

Behavioral problems were also tested as a dependent variable in this study and consisted of 17 questions, asking participants to indicate how often they are involved in specific activities on a 5 point Likert-type scale ranging from "Never", "Once," "Twice, "Three times" to "Four or more times." Examples of these questions were: How often have you, "Taken something from the store without paying?" "Broken into someone's house or business?" "Used any weapon to frighten or hurt someone to get money?" and "Suspended or expelled from school?" The Cronbach's alpha was .89 for all adolescents. The Cronbach alpha by race was .89 for white adolescents males and was .90 for black adolescent males.

Exogenous Variables

Reasons to Have Sex

The questionnaire contained 26 statements aimed at assessing what reasons would cause adolescents to choose to have sex. The participants were asked to circle the number that represents how important each value is to you. The subjects indicated their response on a six point Likert-type scale ranging from, (1) Strongly Disagree, to (6) Strongly Agree.

A Factor analysis was performed to find questions with factor loadings of .70 or higher. A total of 17 questions were used as a result of the Factor Matrix. Examples of these questions were as follows: "I want to have more sex experience," "I have sex to please my partner," "Sex makes me feel powerful," "Sex helps to relieve sexual tension," and "Sex is a way to show that I am an adult." The total Cronbach's alpha was .95 for all adolescents. The Cronbach alpha by race was .96 white adolescent males and was .94 for black adolescent males.

Reasons Not to Have Sex

The questionnaire contained twenty-two statements aimed at assessing what reasons would cause adolescents to choose to not have sex. The statements were placed on a six point Likert-type scale ranging from, (1) Strongly Disagree, to (6) Strongly Agree. Participants circled the number that represents the value which most applies.

A Factor analysis was performed to ascertain questions with factor loadings of .70 or higher. A total of 11 questions were used as a result of the Factor Matrix. Examples of these questions were as follows: "Having sex is not worth the risk," "I think it is morally wrong," "Having sex is against my religion," and "I have seen bad things happen to others who have sex." The total Cronbach's alpha was .94 for all adolescents. The Cronbach alpha by race was .94 for white adolescent males and .92 for black adolescent males.

SEM as Measure of Analysis Plan of Analysis

Structural equation models (SEM) are regression-based models with the same core assumptions as linear regression such as linearity in the parameters and normally distributed variables. The full potential of SEM lies in its ability to simultaneously test relationships of latent factors to observed variables (measurement models), as well as relationships among the different latent factors (structural models). As appealing as this complex structure can be, SEM can also be as simple as a path diagram simultaneously testing relationships among several factors. Strictly speaking, SEM encompasses more than path analysis; the terms structural equation modeling however have generally been loosely used to include path analysis (Schumacker, R.E. & Lomax, R.G., 1996).

For the present study, SEM had two important advantages. First, the factors reasons to have sex, reasons not to have sex, suicide ideation, sense of security, and problem behaviors could all be tested in a path diagram with age at first intercourse used as a mediating variable. The factors reasons to have sex, reasons not to have sex, suicide ideation, sense of security, and problem behaviors are all summative scales established with an exploratory factor analysis during early research for this study. SEM could have just as easily simultaneously tested these latent factors with their respective factor structures while testing the causal relationships among the factors in a path diagram. However, because Cronbach's alpha values were so high for these factors and for the sake of parsimony, only the factors themselves were included in the SEM for this study. Second, SEM can be used to test a Multi-Group Model. Multi-Group Models determine if differences exist in a model taken in its entirety across different groups, in this case white versus black male adolescents. Whereas race could have been entered as a separate variable with paths specified to all the other variables in the present study, a single parameter estimate for race would not have been sufficient in determining if the entire structure of the model was different for blacks versus whites.

Using AMOS 4.0 (Arbuckle, J. L., 1994-2001), a single chi-square is calculated that is used as a measure of absolute goodness of fit. The proposed model is considered to fit the data only if the chi-square is judged not to be statistically significant when compared to a critical value. In the case of Multi-Group Models, a chi-square is calculated for all the models while the parameter coefficients are allowed to freely vary. A second chi-square is then calculated while the parameter coefficients for the models across all the groups are constrained to equal each other. The difference between the two chi-squares is also distributed as a chi-

square to be tested for statistical significance. Theoretically, if the chi-square difference is judged statistically significant, the parameter coefficients are indeed different across the groups indicating that in the factor structures, causal paths, or both differ across the groups. In this case, a significant chi-square difference test would indicate that the models indeed differ for white male adolescents versus their black counterparts.

Plan of Analysis

A Structural Equation Model was used looking at (1) "Reasons to Have Sex," (2) "Reasons Not to have Sex," (3) "Suicide ideation," (4) "Sense of Security," (5) Problem Behaviors, and then combining these five factors to see how they are related to the latent variable of self concept, in relations to others. The model will evaluate the unconstrained (within group differences) and constrained models (between group differences) of the two groups. Using AMOS 4 (23) the model produces a single chi-square for the unconstrained model for both the black and white groups, followed by a chi-square for the constrained model.

When using a Multi-Group Model (MGM) it is important to understand that in theory, statistically significant differences in MGM indicate that the model actually differs for the groups being tested (blacks and whites). These differences may consist of a different factor structure, different structural relationship or both. The proposed model assumes that "reasons to have and not have sex" act as a moderating variable influencing not only age at first intercourse but also a sense of self. Our objective is to determine if the hypothesized relationship is consistent with the data, and determine the strength of the association.

RESULTS

Structural Equation Model

Two models were examined by AMOS version (4.0) (Benter, P. M., & Bonnett, D. G., 1980) of the two exogenous variables (Reasons to have sex, Reasons not to have sex) and the four endogenous variables (Age at first intercourse, Suicide ideation, Sense of Security and Problem behaviors) of black and white adolescents. This is done to determine if factors such as sexual attitudes affect the timing of black and white adolescent's first sexual experience, and to determine if sexual attitudes combine with sexual onset to create psychological turmoil. All of the measured variables had strong loadings indicating construct validity. In other words, the scales were actually measuring what they say they are measuring.

The first model (all free) looked at black and white adolescents separately with age of first sexual intercourse acting as a mediating variable. The second model (constrained) looked at within group differences of black and white adolescents with age of first intercourse acting as a mediating variable. The model was evaluated in two ways. First, departure of the data from the hypothesized model was tested for significance by using a chi-square test. Second, goodness-of-fit between the data and model was estimated by using the Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI), the CMIN, and the Root Mean Square Error of Approximation (RMSEA). The Comparative Fit Index is a revision of the Normal Fit Index that takes into account sample size. This scale yields values ranging from 0 to 1.00, and values of .95 are the revised cutoff, and considered very good. The Tucker-Lewis Index is similar to the CFI, and is used to validate the results of the CFI. Values close to .95 are also indicative of a good fit. The CMIN, is also known as minimum discrepancy. Results containing a CMIN close to 5.0 are considered very good. Finally, the Root Mean Square Error of Approximation (RMSEA) is considered the most important and informative criteria in structure modeling. Values ranging from .08 to .10 are indicative of a good fit.

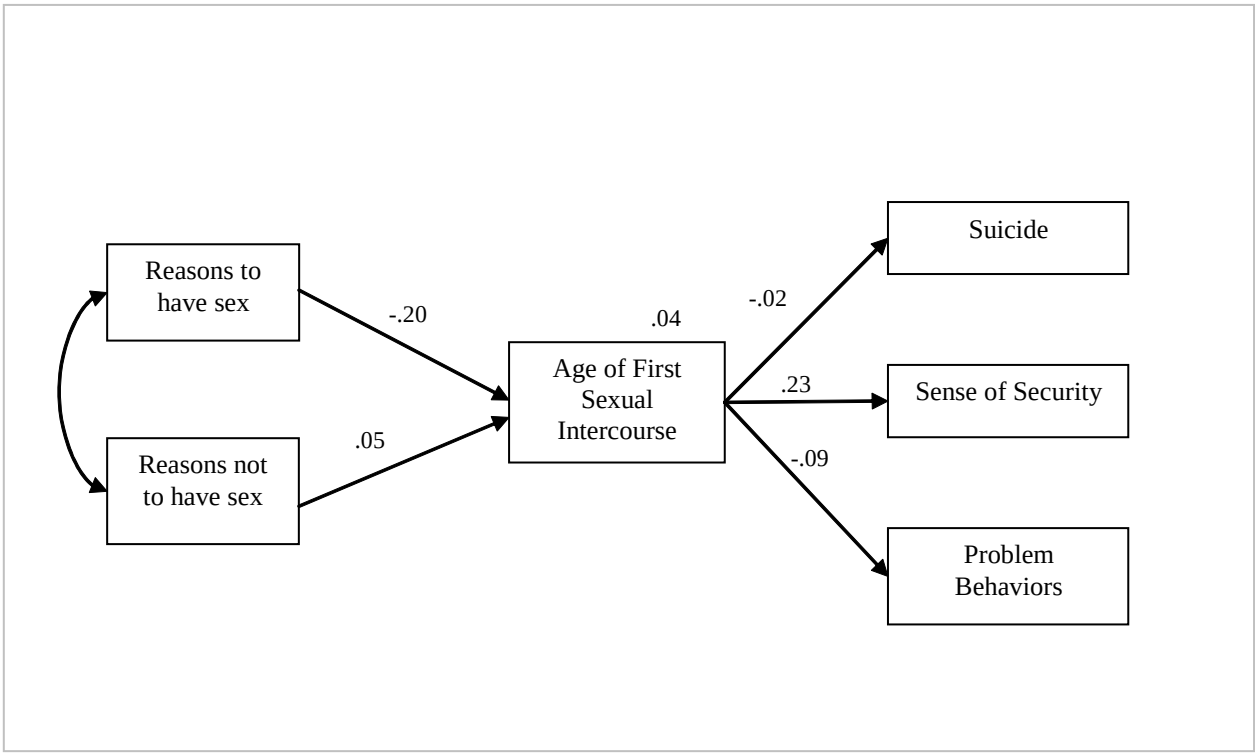
The sample summary for the unconstrained model or "all free" showed the following: The chi-square was 156.971 (df=18), the CFI was .988, the TLI was .973, the CMIN was 8.72 and the RMSEA was .096. Although the chi-square test was significant ($p<.05$), Bentler and Bonnett (24) advised against the sole use of the chi-square value in judging the overall fit of the model. This is to avoid chi-square inflation because of the sample size. Using the other measures of goodness of fit provides support for the chi-square test.

All Free Model-Black Adolescents

Two significant findings were discovered when looking at black adolescents in relation to this model (See Figure 1). First, reasons to have sex for black adolescent males were negatively associated with the age at first intercourse ($t = -3.44$). The results reported a Coefficient of Determination (R^2), explaining 4.4% of the variance of age of first sexual intercourse. This score suggests that the higher the score on reasons to have sex, the lower the age at first sexual intercourse for black adolescent males. No significant relationship was found between reasons
not to have sex and the age at first intercourse with adolescent blacks.

Secondly, the model reported that the age at first intercourse was positively correlated to sense of security ($t = 3.81$). Again the results indicated a Coefficient of Determination (R^2), explaining 5.5% of the variance for Sense of security. This suggests that the longer blacks wait to have sex the greater their sense of security is in their lives, a finding inconsistent with the Normative Hypothesis. No significant relationships were found between age of first intercourse and suicide ideation or problem behaviors.

Figure 1 All Free Black



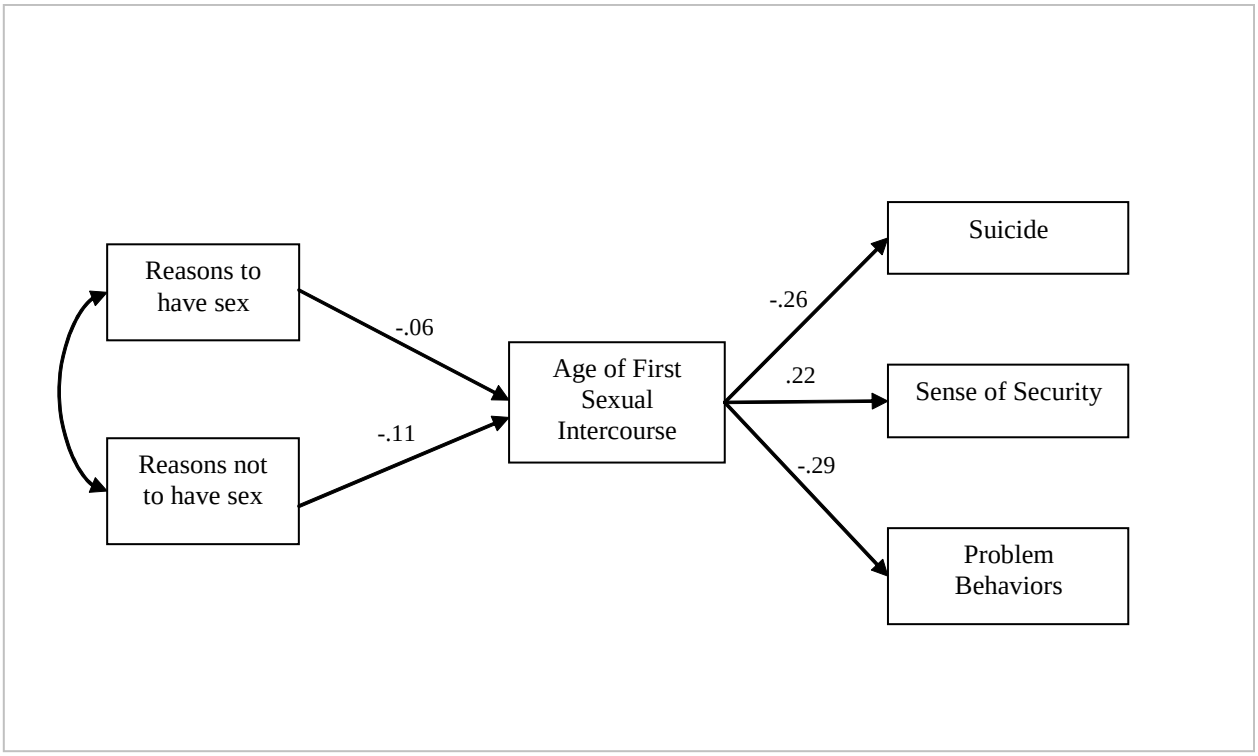
All Free Model-White Adolescents

Four significant findings were discovered when looking at whites within the model (See Figure 2). First, the model demonstrated that reasons not to have sex were positively associated with age at first intercourse (t = 2.41). In other words, the model indicated that the higher scores of reasons not to have sex among white adolescents males is directly related with white adolescent males waiting longer before having first intercourse, which would seem logical. However, the inverse was not true. There was no significant relationship between reasons to have sex and the age at first intercourse.

Second, age at first intercourse is negatively correlated with suicidal ideation (t = -6.366), yielding a Coefficient of Determination (R^2) explaining 6.8% of the variance. This finding indicated that the younger white males were at the age of their first sexual intercourse the more likely they were to experience suicidal ideation. Age at first intercourse was also positively correlated with sense of security (t = 5.239), explaining 4.9% of the variance. This suggests that the longer white males wait to have sex, the more sense of security they will possess.

Finally, age at first intercourse was negatively related to problem behaviors among white adolescent males (t = -6.972). The results reported a Coefficient of Determination (R^2) explaining 8.2% of the variance for problem behaviors. This finding indicates that the younger the age at which white males have sex, the more problem behaviors they will exhibit.

Figure 2 All Free White



Constrained Model-Black and White Participants

To assess if the two groups (black and white) are in fact different, all factor loadings were constrained equal to each other. The results of the constrained group provide a strong argument for our model that there are differences between the black and white groups. The chi-square for the constrained group is 180.211 (df = 23) with the probability level at .0000. The constrained group had a CMIN of 23.40, NFI = .002, RFI = -.003 and TLFI=-.003. Constraining the model did worsen the fit.

DISCUSSION

The purpose of this study was to test the strength of the Normative Hypothesis, which suggests that cultural norms do affect how black and white male adolescents view timing of sexual intercourse. The analyses support the hypothesized assumptions that sexual attitudes combined with sexual onset did create psychological turmoil in white adolescents, while having limited impact on black adolescents. This study identified differences in how both black and white adolescents deal with sexual attitudes, timing of intercourse and psychological turmoil.

All Free Model-Black Adolescents

Black adolescents did not exhibit problem behaviors the younger they had sex. This is consistent with Blume et al. (Blume, R. W., Beuhring, T., Shew, M. L., Bearinger, L. H., Sieving, R. E., & Resnick, M. D.. 2000) in which they confirmed that black teens did not exhibit the same destructive behaviors, as teens of other ethnic origins that were engaging in sex. The pattern of black adolescents engaging in sex at younger ages is also well documented (Furstenberg, F. F., Morgan, S. P., Moore, K. A., Peterson, J. L., 1987; Samuels, H. P., 1997). This finding supports the Normative Hypothesis that the timing of sexual intercourse is mediated by the sub-culture of which they are a part (Stratton, J., & Spitzer, S., 1967). For black adolescents, it seems more acceptable to engage in sex at younger ages. In fact our study found that 43.6% of black adolescent males engaged in sex by the age of twelve, as opposed to 11.5% of white adolescent males. Similarly by the age of 14, 70.1% of black males have experienced sex, while only 29% of white males have. These findings provide support for the model, that timing of sexual intercourse is mediated by one's sub-culture.

No significant relationships were found among age of first intercourse and suicide ideation, thus confirming the Normative Hypothesis. However, black adolescents who were older when initiating sex showed increases in sense of security. There are several possibilities for why not having sex may create more of a sense of security among black adolescent males. Waiting to have sex may create a sense of security because of the less risks involved, such as AIDS, STD's and pregnancies. Similarly, not having sex may make relationships less complicating, and more "free" and as a result more enjoyable for younger teens. Therefore, adolescent security may be an important factor that needs to be researched further.

Finally, a relationship was found between positive reasons why one should have sex and timing of first sexual intercourse among black adolescents. This finding is interesting for two reasons. First, black adolescents seem to be persuaded to have sex because of the positive reasons associated with the sexual experience. However, it seemed that if the positive reasons to have sex were significant, then it would be a logical assumption that the reasons for not having sex would be statistically significant in a negative direction. Our assumption was that the two scales were on a continuum. It appears that this was a faulty assumption. We decided to return to the data and run correlations between reasons to have sex and reasons to not have sex. We found that for black adolescents these scales were not statistically related.

Because the negative reasons were not statistically correlated with deciding to have sex we must assume that this factor does not enter into the decision process for black adolescents. This would explain why black adolescents do not act out behaviorally or have increased suicide ideation. The finding fits our model's hypothesis that social norms influence how one thinks about sex. Hence, for blacks, who exhibit more liberal sexual attitudes than whites, it would be expected that they focus on more positive reasons to have sex. Consequently, more black adolescents engage in sex at a younger age as a result of the acceptance of sexuality.

All Free Model-White Adolescents

Among white adolescents, the opposite was found concerning a relationship with positive reasons why one should have sex. It was confirmed that white adolescents place emphasis on reasons not to have sex, in determining when they would engage in their first intercourse. In fact, the positive reasons to have sex did not enter into the decisions process for the white adolescents. This finding seemed confusing. It seemed that if reasons to not have sex were significantly related to timing of sexual intercourse, then it would be a logical assumption that the positive reasons for having sex would contribute to timing of sexual intercourse. Again we assumed that the two scales were on a continuum. For white adolescents this assumption holds moderately true. The correlations between reasons to have sex and reasons to not have sex for white adolescents were negatively correlated at the level of -.284.

Although, the two scales are negatively correlated the determining factor concerning sexual behavior is the strength of the reasons not to have sex. It would seem that when the reasons to not have sex are higher the adolescent is more likely to abstain from sex longer. Individuals, who are sexually active, contrary to their cultural norms, seem to recognize that they are deviating from what is acceptable for their group. Although these individuals have had sex, they will still fall back to what they know is acceptable for the group. Ultimately, by going against cultural beliefs white adolescents seem to be psychologically harmed.

This is evident by the findings associated with self loathing. When going against the strong beliefs to not have sex, the white adolescents act out behaviorally and have increased suicide ideation. These findings are supported by previous research relating to sex and problem behaviors (9, 18), and sexuality and suicidal behaviors (Leitenberg, H., & Saltzman, H., 2000). Suicide may be associated with the timing of white adolescent sex. This racial difference provides additional support for the Normative Hypothesis, indicating that social norms among white teens internalize sexual activity at younger ages in a negative framework. Support was also found for white male adolescents feeling increased security when waiting to have sex. Obviously this correlation is significant to our study and coincides with past research on self-esteem (Herold, E. S., & Goodwin, M. S., 1979; Miller, B. C., Christensen, R. B., & Olson, T. D., 1987). The combination of all three variables demonstrates the overall negative impact of early sexual intercourse on white adolescent males. It would appear that the same statistical model does not fit black and white adolescents.

Constrained Black and White Participants

Constraining the model, allows us to test whether the statistical model fits both groups. Our reasoning was to ascertain if the two groups were in fact different, and if constraining the model would worsen or improve the fit. The findings showed that the goodness of fit was worsened, as the chi-squared was worsened. By constraining the two groups, we are blurring the findings of the two groups. These findings demonstrated strong support that the black and white adolescent groups are in fact different statistically. This clarifies that the emotional process of having sex is different for whites and black adolescent males. Also, it is important to note that more of the variance in the model was explained for the white adolescent males. This suggests that a different model would need to be developed to better explain the impact of sexually active behavior on black adolescents.

Limitations

Self Report

Because this study was based entirely on self-report, the findings include only what respondents are willing to share. There also exists the possibility that the questions used in the study were influenced by social desirability. A social desirability bias could potentially confound our results, particularly since adolescents may feel a desire to answer a question that they feel may be socially desirable.

Measurements

None of the measures used in this study came from previously tested assessments. As a result, the validity of the findings may be held in question. However, all measures demonstrated strong internal consistency.

Conclusions

In general the results suggest differences in why black and white adolescents choose to have sex. It appears that each groups sexual attitudes not only affect timing of first intercourse but how these groups view themselves and what behavioral problems they would exhibit. Black males tend to look at the positive reasons why they should have sex, which led them to have sex at a younger age than their white counterparts. Despite having sex at younger ages, this did not increase the likelihood of them exhibiting problem behaviors or suicide ideation. For white males, the opposite was found. White males tend to look at the reasons why they should not have sex, which led them to have sex at a later age. Those adolescents who had sex at younger ages were found to have higher suicidal ideation and greater problem behaviors than their white peers who had sex at a later age. This model demonstrates support for the Normative Hypothesis (13) that those who deviate from the social sexual norms will evaluate themselves negatively.

Implications for Future Research

The findings suggest that it would be helpful to move away from the traditional measures of self-esteem affecting onset of first intercourse toward other variables that have not been looked at in understanding sexual onset and psychological problems. The hope is to find variables that may prove to have more predictive qualities, thus helping researchers understand what variables are associated to positive and negative outcomes for black and white adolescent males.

In addition future research needs to focus on developing models that are more culturally competent. Based on this study the normative theory has been shown to be effective in explaining sexual behaviors among the white population. However, it is unclear the explanatory power for black males in this study, as it was much weaker than for the white males. This may be due to the theory not taking into account cultural aspects that influence sexual behaviors among the black population. Therefore, the development of theoretical frameworks that are inclusive of multiple races would be an important area of future research.

References

Arbuckle, J. L. (1994-2001). *Amos 4*. Chigago: SmallWater Corp.

Baumeister, R., Bushman, B., & Campbell, K. (2000). Self-esteem, narcissism, and aggression: Does violence result from low self-esteem or from threatened egotism? *American Psychological Society, 9,* 26-29.

Benter, P. M., & Bonnett, D. G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin, 88,* 588-606.

Bingham, C.R., & Crocket, L. J. (1996). Longitudinal adjustment patterns of boys and girls experiencing early, middle and late sexual intercourse. *Developmental Psychology, 32,* 647-658.

Blume, R. W., Beuhring, T., Shew, M. L., Bearinger, L. H., Sieving, R. E., & Resnick, M. D. (2000). The effects of race/ethnicity, income, and family structure on adolescent risk behaviors. *American Journal of Public Health, 90,* 1879-1884.

Brooks-Gunn, J., & Furstenberg, F. F. (1989). Adolescent sexual behavior. *American Psychologist, 44,* 249-257.

Caceres, C.F., Marin, B.V., & Hudes, E.S. (2000). Sexual coercion among youth and young adults in Lima, Peru. *Journal of Adolescent Health, 27,* 361-367.

Carvajal, S.C., Parcel, G. S., Basen_Engquist, K., Banspach, S. W., Coyle, K. K., Kiirby, D., & Chan, W. (1999). Psychosocial predictors of delay of first sexual intercourse by adolescents. *Health Psychology, 18,* 443-452.

Coker, A. L., Richter, D. L., Valois, R. F., Mckeown, R. E., Garrison, C. Z., & Vincent, M. L. (1994). Correlates and consequences of early initiation of sexual intercourse. *Journal of School Health, 64,* 372-378.

Crocker, J. (2002). The costs of seeking self-esteem. *Journal of Social Issues, 58,* 597-616

Dickson, N., Paul, C., Herbison, P., & Silva, P. (1998). First sexual intercourse: Age coercion, and later regrets reported by a birth cohort. *British Medical Journal, 316,* 29-34.

Emler, N. (2001). *Self-esteem. The costs and causes of low self-worth.* York, England: York Publishing Services Ltd.

Furstenberg, F. F., Morgan, S. P., Moore, K. A., Peterson, J. L. (1987). Race differences in the timing of adolescent intercourse. *American Sociological Review, 52,* 511-518.

Herold, E. S., & Goodwin, M. S. (1979). Self-esteem and sexual permissiveness. *Journal of Clinical Psychology, 35,* 908-912.

Jessor, S. L., & Jessor, R. (1975). Transition from virginity to nonvirginity: A social psychological study over time. *Developmental Psychology, 11,* 473-484.

Leitenberg, H., & Saltzman, H., (2000). A statewide survey of age at first intercourse for adolescent females and age of their male partners: Relation to other risk behavior and statutory rape implications. *Archives of Sexual Behavior, 29,* 203-216.

MacCorquodale, P., & DeLamater, J. (1979). Self image and premarital sexuality. *Journal of Marriage and the Family,41,* 327-339.

Miller, B. C., Christensen, R. B., & Olson, T. D. (1987). Adolescent self-esteem in relation to sexual attitudes and behavior. *Youth and Society, 19,* 93-111

Paul Springer, Ph.D., Assistant Professor, Department of Child, Youth and Family Studies; Marriage and Family Therapy Program, University of Nebraska-Lincoln; Scott A. Ketring, Ph.D. Associate Professor, Marriage and Family Therapy Program, Department of Human Development and Family Studies, Auburn University; Jeffrey R. Hibbert, Ph.D. Research Analyst, Auburn University; Connie J. Salts, Ph.D. Professor, Department of Human Development and Family Studies, Auburn University.

Correspondence concerning this article should be addressed to Paul Springer Ph.D., Assistant Professor, Child, Youth and Family Studies, Marriage and Family Therapy Program, University of Nebraska-Lincoln, Lincoln NE 68588-0236. (Email: pspringer3@unl.edu).