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Adolescent Boys' Heterosexual Behavior

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Becoming sexually active is clearly an important event in adolescent boys' experience. In addition, adolescent boys' sexual and contraceptive behavior has clear ramifications for teen pregnancy and for sexually transmitted diseases. This chapter presents some of the work on adolescent males' heterosexual behavior conducted by The National Survey of Adolescent Males over the last 15 years. Specifically, we discuss findings based on two surveys of large, nationally representative samples of adolescent males aged 15–19, conducted in 1988 and in 1995. Our survey data make it possible to describe what adolescent boys are doing sexually, how their sexual behavior is or is not changing, and some of the basic dynamics underlying their sexual behavior. In particular, this chapter focuses on three research questions. First, we examine how rates of heterosexual intercourse and condom use have changed in recent decades among U.S. adolescent boys aged 15–19. This information is important for informing adolescent health policy and for increasing our understanding of the developmental experience of adolescent boys. There are several ongoing large-scale studies documenting levels and trends in adolescent girls' sexual and contraceptive behavior (Abma et al., 1997; Manlove et al., 2000). Prior to our work, however, no data on such trends were available for males. Our analyses of change in males' sexual behavior in recent decades first compares levels of heterosexual intercourse and condom use in our 1988 survey with an earlier national survey on this topic conducted in 1979. We then compare results from our 1988 cohort with our 1995 cohort.

The second research question we examine focuses on the validity of adolescent boys' self-reports about having heterosexual intercourse and

using condoms. Some scholars are not confident about the accuracy of boys' self-report data regarding their sexuality. Anecdotal data suggest that boys may exaggerate their level of sexual experience. At the same time, in reporting whether or not they use condoms, boys may want to present themselves as behaving in a socially desirable way. Since public policy is grounded in part on research based on self-reports, it is important that their validity be assessed. We use a variety of methods for this purpose, including comparisons with external data, prospective prediction of behavior in a follow-up of the 1988 cohort, and a methodological experiment embedded within the 1995 survey.

Our third and final research question focuses on how boys' heterosexual behavior and condom use are linked to masculinity. The linkage may seem obvious, and has been assumed by policy makers. For example, a former Secretary of the Department of Health and Human Services called for action to address "a generation whose manhood is measured by the caliber of the gun he carries or the number of children he has fathered" (Sullivan, 1991). A governor has urged the policy community to send the message that "contrary to what many of today's young people think, making babies is no act of manhood" (Wilder, 1991). But what is the scientific basis for positing a linkage between masculinity and adolescent males' sexual behavior? This chapter discusses our work on the role of "masculinity ideology" in adolescent boys' heterosexual experience and condom use, in the context of prior approaches to understanding how a boy's sexual behavior may be linked to issues of masculinity. For this purpose, we focus our empirical analyses on the 1988 survey data.

Methods

Sample

1988 Cohort

The 1988 National Survey of Adolescent Males (NSAM) selected a national probability sample of 1,880 boys between the ages of 15 and 19 years from the noninstitutionalized, never-married U.S. male population. This survey used a multistage stratified sample, and also over-sampled African American and Latino males so that their numbers would be large enough to base valid population estimates for these groups. However, by employing sample "weights,"[1] these data can be used to describe

the national population of U.S. males aged 15–19. The response rate among those eligible to be interviewed was 73.9% (Sonenstein, Pleck & Ku, 1989). Following the 1988 survey, further data were collected from this sample. In 1991, 1,676 men (now 18–22 years old) were re-interviewed. The follow-up rate from the 1988 survey was 89.1%, not including 11 men who died between 1988 and 1991.

1995 Cohort

In 1995, a new nationally representative sample of males aged 15 to 19 was drawn. A cohort of 1,729 males living in the conterminous United States, not including persons living in prisons or institutions, was interviewed (Sonenstein et al., 1998). Like the 1988 cohort, this new sample was developed using multistage stratified selection procedures, again with over-sampling of minority males and use of sample weights to describe the population. Among eligible males, the response rate was 75.0%.

Procedures and Measures

At each wave of data collection, in-person interviews were conducted at a confidential location and lasted about an hour. The interview protocol consisted of close-ended questions. For the most sensitive topics, a short, self-administered questionnaire was employed. The main focus of the interview was the males' experiences with and attitudes about sex and contraception, especially condom use. However, the interview also covered a broad range of other topics potentially related to sex and contraception, such as other risk behaviors, experiences in school, self-efficacy, and sociodemographics.

In addition, the interview also assessed masculinity ideology using the Male Role Attitudes Scale (MRAS). This eight-item measure includes seven items drawn from Thompson and Pleck's (1986) Male Role Norms Scale. MRAS items were selected to represent the three factorial dimensions of the Male Role Norms Scale: status, toughness, and anti-femininity. Eight items considered most relevant to an adolescent sample were selected, and wording was simplified to be more appropriate for this age group. Sample items included "A young man should be physically tough, even if he is not big" and "I don't think a husband should have to do housework." An additional item about the link between masculinity and sex, a topical area absent from the Male Role Norms Scale, was added

from Snell, Belk, and Hawkins (1986). An index was derived from the eight items with a coefficient alpha of .56.

Results

How Adolescent Boys' Heterosexual Behavior Has Changed

1979–1988

Data from the 1988 NSAM can be compared with a prior large-scale study conducted by Zelnik, Kantner, and Ford's (1981) National Survey of Young Men in 1979 (NSYM). The National Survey of Young Men interviewed a national representative sample of 847 males who were aged 17–21 and lived in metropolitan areas. Zelnik, Kantner, and Ford's sample differs from the NSAM with males in the Zelnik sample being older, living only in cities, and including married males. However, the two studies overlap with both including substantial numbers of 17–19-year-old and never-married males residing in metropolitan areas (609 in the earlier study, 742 in the NSAM). A comparison of the 1979 and 1988 samples shows that the proportion of males who have ever had heterosexual intercourse rose from 65.7% to 75.5% over this period. Within racial subgroups, heterosexual experience rose from 71.1% to 87.7% among Blacks, and from 64.5% to 73.0% among non-Blacks (Zelnik, Kantner, and Ford's survey distinguished only Blacks and non-Blacks).

Use of condoms alone or with other methods also rose from 21.1% in 1979 to 57.5% in 1988 (23.2% to 62.0% for Blacks; 20.5% to 56.5% for non-Blacks). Our analysis tabulated condom use as including both the use of condoms by themselves as well as in combination with other methods. Almost all prior research on sexual behavior had coded condom use with other methods *only* as use of the other method. Use of female contraceptive methods alone dropped somewhat, but use of ineffective or no contraceptive method dropped markedly (50.9% to 20.8%) (Sonenstein, Pleck & Ku, 1989). Thus, while the proportion of adolescent males who were heterosexually active increased somewhat between 1979 and 1988, their use of condoms rose markedly.

1988–1995

NSAM data were also analyzed to examine how adolescent boys' heterosexual behavior changed between 1988 and 1995. Comparison of the 1988

NSAM cohort with the 1995 cohort of 15–19-year-olds indicated that the proportion of these males who were heterosexually active declined from 60.4% in 1988 to 55.2% in 1995. However, this decrease occurred only among White males (56.8% to 49.5%). Among African American males, the rates held constant at 80.6% and 80.4%, and among Latino males, 59.7% and 60.9%. Analyses by age further confirmed that young men were delaying first intercourse in 1995 as compared to 1988. As one indication of this delay, the percentages of 19-year-olds who were sexually active in the two surveys were almost identical: 85.7% and 84.0%; whereas the percentages of 15-year-olds who were sexually active dropped from 32.6% in 1988 to 27.1% in 1995. Condom use at last intercourse also increased, from 56.9% in 1988 to 67.0% in 1995. This increase in condom use was most evident among the younger males (e.g., in 15-year-olds compared to 19-year-olds). Increased condom use was evident in all ethnic groups: from 54.4% to 66.8% in White males, 65.5% to 73.9% in African American males, and 53.0% to 58.2% in Latino males (Sonenstein et al., 1998).

The Validity of Adolescent Boys' Reports about Their Sexual Behavior

The dramatic increases in adolescent males' condom use between 1979 and 1995, and the postponement of first heterosexual intercourse shown among White male youth in 1995 compared to 1988, are noteworthy, *if* males' self-reports about intercourse and condom use are valid. Many other researchers have questioned the validity of adolescents' self-report data about sex. Validity is primarily a methodological issue, but because of its centrality to our research, and to all research with adolescent boys using self-report methods, it is worthwhile exploring it in some depth. In this section, we briefly present several different approaches to address these validity concerns.

Consistency with External Data

The increase in condom use evident in the NSYM and the NSAM data between 1979 and 1988 is corroborated by women's reports for the same period. Women's reports about whether a condom was used at last sexual intercourse were more than twice as high in the 1988 National Survey of Family Growth (NSFG) as in the 1982 NSFG (Mosher, 1990). In addition, changes between the 1988 and 1995 NSFG surveys parallel those observed

in the NSAM, namely, there was a marginally significant reduction in the sexual activity of 15- through 19-year-old females and significant increases in condom use at first intercourse (Abma et al., 1997). Further, national natality data showed that the rate of adolescent childbearing fell between 1991 and 1994 (Ventura et al., 1996), and gonorrhea rates declined from 1992 to 1995 (*Sexually Transmitted Disease Surveillance,* 1995, 1996).

Internal Consistency in the 1988 Survey

The NSAM interviews ask the sexual intercourse and condom use questions in two places in the interview: first, in an interviewer-administered survey (IAI), and then in the survey's "self-administered" questionnaire (SAQ), which participants were given to complete in private and on their own after the end of the interview. Upon completing the short SAQ booklet, participants were asked to place the booklet in an envelope that the researcher/interviewer immediately sealed to assure the participant of the confidentiality of his responses. In the 1988 survey, the consistency between responses about ever having sexual intercourse and about condom use between the IAI and the SAQ (kappa = .80) is quite high (Sonenstein, Pleck & Ku, 1989).

Prospective Prediction of Pregnancies, 1988 to 1991

We also examined the association between the sexual behavior that males reported in the 1988 survey with the pregnancies they reported in the 1991 follow-up survey. A composite measure of sexual risk-taking in 1988 was developed with 5 levels, ranging from "never had intercourse" to "had intercourse in the last 12 months with more than 5 partners, without condom use." With standard sociodemographic factors controlled, our 1988 risk-taking measure was a strong predictor of pregnancies between 1988 and 1991, as reported in the 1991 survey (Sonenstein, Pleck & Ku, 1993).

Social Desirability Analysis in the 1991 Follow-Up

Further, the 1991 NSAM included a "social desirability" scale (Paulhus, 1991). This scale assesses the tendency for respondents to give socially desirable answers via items concerning socially desirable behaviors which few people do (e.g., "I'm always willing to admit it when I make a mistake"), and socially undesirable behaviors that most people do (e.g.,

"There have been occasions when I took advantage of someone"). Our results showed that self-reported condom use is unrelated to this social desirability response set (Pleck, Sonenstein & Ku, 1993a), suggesting that reported condom use is not biased by social desirability influences.

Effect of Two Modes of Administration on Self-Reports in the 1995 Survey

Prior research suggests that the greater the level of privacy afforded by the data collection method, the more willing respondents are to report socially stigmatized behaviors. For example, reported rates of substance use are consistently higher with self-administered questionnaires (SAQ) than with interviewer-administered protocols. The more stigmatized the substance (e.g., heroin vs. alcohol), the greater the discrepancy in reported rates (Turner, Lessler & Devore, 1992). Variations in reported rates of a behavior according to the degree of confidentiality of the data collection method give a direct indication of the extent to which reports of that behavior are biased by social desirability effects.

Determining the validity of adolescent males' self-report data about their sexual behavior was so important that we tested this specifically in our 1995 survey. We randomly assigned respondents in the 1995 new cohort of 15–19-year-olds to two conditions: one group reported sexual behaviors with the paper-and-pencil SAQ used in the 1988 survey and its 1991 follow-ups, while the other group used a new methodology, audio computer assisted self-interviewing (audio-CASI). In the latter condition, males were given a laptop with headphones, which displayed and read aloud the questions, and recorded their responses on the keyboard. Because the SAQ requires handing a form to the interviewer with one's responses (which can be easily read), while audio-CASI involves entering responses on computer keyboard (requiring technical skill to retrieve), we hypothesized that respondents would experience audio-CASI as a more private method.

As expected, a variety of stigmatized behaviors were reported significantly more often with audio-CASI than the SAQ. For example, 5.2% of audio-CASI respondents report ever taking street drugs with a needle compared to 1.5% of SAQ respondents. Other significant differences occurred for being drunk at last heterosexual intercourse (34.8% vs. 15.3%), using drugs at last heterosexual intercourse (15.8% vs. 9.7%), ever having sex with a prostitute (2.5% vs. 0.7%), and ever having sex with someone

who shoots drugs (2.8% vs. 0.2%).[2] Respondents also reported sharing needles with others, using crack/cocaine, and participating in violence-related behaviors such as threatening to hurt others and carrying guns, knives, and razors at significantly higher rates with audio-CASI (Turner et al., 1998). By contrast, differences were nonsignificant for behaviors not stigmatized among adolescents, such as drinking alcohol in the last year (65.9% vs. 69.2%). These differences give an indication that respondents indeed experienced audio-CASI as providing more privacy than the SAQ. Further, these comparisons suggest that, like the difference between in-person interviewing and the SAQ, a significant SAQ versus audio-CASI reporting difference for a particular behavior reflects how much social desirability bias influences their reporting of that behavior.

The percentages of sexually active males who reported using a condom the last time they had heterosexual intercourse were almost identical in the two conditions, 64.4% versus 64.0% (Turner et al., 1998). Reports of ever having heterosexual intercourse in the last five years were also relatively similar (and not significantly different) with the paper-and-pencil SAQ as when audio-CASI was used (49.6 vs. 47.8%). The small and nonsignificant difference in adolescent males' SAQ compared to audio-CASI reporting of sexual intercourse and condom use is thus another piece of evidence that these reports are not biased by social desirability influences. Considering this and the other data reviewed here, the available information suggests that the dramatic increases in adolescent males' condom use and the changes in sexual behavior between 1979 and 1995 observed in the NSAM are real.

Homosexual Behavior and Orientation

One reason that audio-CASI methodology was introduced in the 1995 survey was that the rates of male-male sexual contacts reported in 1988 seemed too low, with 2.1% reporting any type of contact (Ku, Sonenstein & Pleck, 1992). Prior surveys that asked adult males about their homosexual contacts during adolescence provided much higher prevalence estimates for this period than male adolescents reported in the NSAM. Because of its implications for the transmission of HIV and other STDs, it was particularly important to obtain better estimates of the frequency of same-gender sexual contacts.

In the 1995 cohort of 15–19-year-olds, 5.5% of males using audio-CASI reported having any (lifetime) male-male sex, compared to 1.5% of

those using the paper SAQ, a highly significant difference. This comparison is again consistent with our interpretation that respondents experience audio-CASI as more confidential than the SAQ, and audio-CASI increases reporting of stigmatized behaviors. The decrease in SAQ-reported male-male sex among 15–19-year-olds from 2.1% in 1988 to 1.5% in 1995 could be evidence of a small decrease in rates of adolescent homosexual contacts. However, since the SAQ versus audio-CASI comparison indicates that SAQ reports are depressed by social desirability bias, it is also possible that heightened stigmatization of homosexual behavior among adolescent males accounts for the decrease.

The type of contact most frequently acknowledged with audio-CASI in 1995 was the act of being masturbated by another male (3.5%). Receptive oral sex was reported by 2.3% and receptive anal sex by 0.8% (Turner et al., 1998). In the 1988 data collected with a paper SAQ, the majority (52.6%) of those reporting homosexual contacts never used a condom (Ku, Sonenstein & Pleck, 1992). The 1988 data also revealed discrepancies between males' reports of male-male sexual contacts and self-reported sexual orientation. Orientation was assessed by the male's self-classification as 100 percent heterosexual, mostly heterosexual, bisexual, mostly homosexual, 100 percent homosexual, and not sure. Whereas 2.1% reported that they ever had some homosexual contact, 13.1% reported that they were other than 100 percent heterosexual. Further, a small number (0.3%) of those reporting themselves as 100 percent heterosexual acknowledged some male-male contact (Ku, Sonenstein & Pleck, 1992). Replication of these analyses with the 1995 data (not yet undertaken), using audio-CASI reports of male-male contacts and of sexual orientation, will likely contribute to our knowledge of the complex link between same-gender sexual contact and the construction of sexual orientation in recent cohorts of adolescent males.

Adolescent Boys' Masculinity Ideology

Perhaps NSAM's most important contribution to understanding adolescent boys' heterosexual behavior concerns a conceptual link that seems obvious: adolescent boys' heterosexual behavior has something to do with issues of "masculinity." This connection may seem self-evident, but in terms of empirical research, it was not well established prior to NSAM.

One strategy used in prior research involves simply comparing rates of sexual behavior for adolescent boys and girls. The ways in which boys' be-

havior differs from girls' were attributed to masculinity or the male gender role. However, this strategy is flawed as aggregate gender differences can result from biological as well as socialization differences between males and females. A second strategy employed in prior research employs the construct of "gender orientation" as an individual-differences variable. Gender orientation refers to the personality dimension assessed by measures such as the Bem Sex Role Inventory (BSRI, 1974) and Spence and Helmreich's Personal Attributes Questionnaire (PAQ, 1978) (for a comprehensive review, see Lenney, 1991). These scales ask respondents to rate themselves (e.g., strong-weak) on a variety of adjective dimensions that have been previously determined to be more characteristic of males or females based on U.S. populations. In the few studies investigating the link between these measures' masculinity subscale (M) and adolescent males' sexual behavior, however, *few* significant associations have been found. That is, variations in how "masculine" a male thinks he is are not linked to his pattern of sexual behavior. A few studies take the gender orientation approach further by distinguishing socially positive aspects of masculinity (e.g., rating oneself as strong) versus socially negative ones (e.g., aggressive). Although prior research provides considerable evidence that perceiving oneself as possessing socially negative masculine traits is associated with adolescent males' substance use, negative masculinity appears to be independent of adolescent males' sexual behavior (for a review, see Pleck, Sonenstein & Ku, 1993b).

Our research developed a third approach: linking adolescent males' sexual behavior with their gender ideology, that is, their attitudes and beliefs about gender (Pleck, Sonenstein & Ku, 1993b, 1993c, 1994a, 1994b). According to this approach, the way that gender as a social construct influences behavior is not by shaping personality traits, but by establishing normative beliefs about how males and females should act. The hypothesis deriving from this approach is that a male's sexual behavior is influenced by the extent to which he believes that males as a group *should* act "masculine," not by the extent to which he believes that he, as an individual, is "masculine."

Within the gender ideology approach, a further distinction needs to be made between gender-comparative beliefs and gender-specific beliefs. Almost all available scales for gender attitudes (which are often labeled attitudes toward women) use items that are gender-*comparative.* For instance, the first item in Spence, Helmreich, and Stapp's (1973) Attitudes toward Women Scale, which is the measure used most frequently to assess gender attitudes, is "Swearing and obscenity are more repulsive in the speech of a

woman than of a man." Agreeing or disagreeing to this kind of item has been uncritically interpreted as reflecting an attitude only about how women should act. To assess masculinity ideology more precisely, the NSAM developed the Male Role Attitude Scale (MRAS) using gender-*specific* items. This attitude scale includes statements like "A guy will lose respect if he talks about his problems" and "A young man should be physically tough even if he is not big."

In the 1988 NSAM, whether a male held a more traditional or a less traditional masculinity ideology, as assessed by the MRAS, was significantly linked with numerous aspects of his relationships and his sexual and contraceptive behavior. Males with a more traditional ideology said they had a less intimate relationship with their current or most recent female partner. They more often endorsed the belief that relationships between women and men are inherently adversarial. They also had more heterosexual partners in the last year (Pleck, Sonenstein & Ku, 1993c; see also Pleck & O'Donnell, 2001).

Prior research about the factors influencing adolescent males' condom use has focused especially on their attitudes about condom use and their beliefs about male responsibility to prevent pregnancy. Not surprisingly, these factors usually do predict condom use (see review in Pleck, Sonenstein & Ku, 1991). This prior research, however, left unanswered the question of why some males have more favorable attitudes about condoms and male responsibility, while others have less favorable beliefs. Filling this gap, NSAM analyses established that males with more traditional MRAS scores had more negative attitudes about condoms and male responsibility to prevent pregnancy. In addition, these traditional males were less likely to believe that their partner would like them to use a condom, and were more likely to believe that causing a pregnancy would validate their masculinity. These findings supported a conceptual model that claimed that traditional masculinity ideology influences condom-related attitudes, which in turn influence condom use (Pleck, Sonenstein & Ku, 1993c).

These significant multivariate relationships were replicated within the African American, Latino, and White NSAM subsamples. In addition, these associations with the MRAS persisted even with sociodemographic variables controlled, thus ruling out the possibility that masculinity ideology and sexual behavior were linked only because both are a function of background characteristics like education and family socioeconomic status. Overall, NSAM documents in a more convincing manner than previ-

ous studies how boys' "masculinity" is linked to their heterosexual behavior and their use of condoms. These analyses not only establish that masculinity ideology is a significant influence on adolescent males' condom use, but also give insight into the process by which this influence manifests itself.

Discussion

Data from the National Survey of Adolescent Males provide a variety of insights into adolescent boys' heterosexual behavior and condom use. It provides important "social indicator" data about how adolescent males' heterosexual and contraceptive behavior have changed over the last 25 years. Our methodological work suggests that one can study adolescent boys' sexual experience via self-reports, with some confidence in the data's validity. Our findings about their increasing condom use and their delaying of first intercourse in recent years counters negative stereotypes about adolescent males as sexually irresponsible. Finally, NSAM helps us understand how adolescent male heterosexual behavior derives from cultural norms of masculinity by revealing how traditional masculinity ideology is linked to heightened risk of unintended pregnancy and sexually transmitted diseases, and to limitations in the quality of adolescent boys' heterosexual relationships.

Future research should investigate whether the increases in condom use and delay of first intercourse observed here in adolescent males through 1995 have continued. Partly as a result of our work, the National Survey of Family Growth has included males in its 2002 data collection (for the first time), and these data will be available soon. There is also a need for more studies on how masculinity influences adolescent males' sexual behavior. We are currently in the process of analyzing relationships between masculinity ideology and sexual behavior in our 1995 data. These relationships should also be examined in samples of younger adolescent males (Pleck & O'Donnell, 2001). The concept of masculinity ideology itself also needs development. For example, Chu, Porche, and Tolman (2001) observe that by focusing on beliefs about the importance of men's adhering to culturally defined standards for male behavior in general, rather than within the contexts of specific relationships, the concept of masculine ideology is somewhat decontextualized. Yet they also find that masculinity ideology, when it is assessed within specific relationships, is negatively

associated with well-being measures, which is consistent with gender role strain theory (Pleck, 1995). Thus, our understanding of the lives of boys can be enriched by this and other developments in our understanding of the dynamics and influence of masculinity ideology in their lives.

NOTES

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1. For example, if Latino males are over-sampled by a factor of 2, each Latino counts as .5 of a person in descriptive statistics, e.g., calculating the proportion of all males who have ever had sexual intercourse.

2. In a given sample, the closer the percentages are to 0 or 100, the smaller the difference needed to be statistically significant. Conversely, a relatively large difference is less likely to be significant the closer the percentages involved are to 50.

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