

Sexual Experience and Drinking Among Women in a U.S. National Survey

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A 1981 national survey of 917 women provided rates of major sexual experiences and dysfunctions for the entire sample and across alcohol abstinence/consumption categories. Most women drinkers (heavier drinkers most often) reported that drinking lessens sexual inhibition and helps them feel close to others; only 8% reported becoming less particular in sexual partner choice, 22% more sexually assertive, but over half (60%) had been targets of other drinkers' sexual aggression. On a sexual dysfunction index combining lifetime lack of sexual interest, lifetime lack or low frequency of orgasm with a partner, and vaginismus, moderate drinkers scored significantly lower than lighter and heavier drinkers. The heaviest drinking women had the highest rates of lifetime sexual disinterest and lack of orgasm with a partner. "Temporary abstainers" (who drank in the past 12 months but not the last 30 days) also had elevated sexual dysfunction rates, particularly those with substantial drinking histories. Several nontraditional sexual behaviors were correlated with heavier drinking, which was also related to morally liberal sexual attitudes. The study's findings may show the effects of a generalized moral value framework in which one large portion of the nation's population, especially females, is subject to pervasive proscriptions of behavior, including their drinking and sexuality, while others vary in the freedom they find to drink and be sexual. More suppressed traditional sexuality occurs more frequently with lighter drinking and abstinence, as is also

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true of sexual dysfunction. At heavier drinking levels suppressed and dysfunctional sexuality and heavy drinking may be both cause and consequence in a vicious circle, sometimes escaped by temporary or lasting abstinence.

KEY WORDS: women; alcohol use; drinking; perceived effects of drinking; sexuality; sexual dysfunction; sexual morality; sexual suppression.

INTRODUCTION

Sociocultural Background on Sexuality and Drinking

Data on worldwide cultural variations, prehistoric to the present, are insufficient to generalize that human lore has *always* included notions about the multidimensional interactions of intoxicant use with female and male sexual response. Nevertheless, Western culture in both its Judeo-Christian and Greco-Roman sources has certainly never lacked suppositions about drinking and sexuality.

In the Hebrew scriptures, Noah cursed his son Ham, who had the misfortune to view his father's drunken nakedness (Gen. 9: 20-27). The two daughters of Abraham's nephew, Lot, conspired to bear their father's sons, taking turns using wine on consecutive nights so Lot was not aware when they lay down or arose from his bed (Gen. 19: 30-38). Jacob's father-in-law-to-be, Laban, hoodwinked Jacob with drink on his wedding night to husband the elder dull-eyed Leah first, only to work 7 years more to earn the first-promised sister Rachel (Gen. 29: 16-26).

Near the end of Solomon's erotica, the lover wishes to "cause you to drink of spiced wine," followed by the wish, "Oh, that his left hand were under my head, and that his right hand embraced me!" (Song of Sol. 8: 2-3; The Lockman Foundation, 1965). But in the collection of Proverbs it reads, "Who has woe?...sorrow?...strife?... Those who tarry long at the wine... Do not look at wine... Your eyes will behold strange things and loose women... You will say... When shall I awake? I will... seek more wine again and escape reality" (Prov. 23: 29-31, 33, 35; The Lockman Foundation, 1965).

Greek mythology contributes, among other things, the erotic tales of the Bacchantes, Dionysus' priestesses, in drunken orgy with Pan, and orgiastic murders of Pentheus, their husbands, and Apollo's priest, Orpheus (Avery, 1972). More historically, the Roman Bacchanalia of several centuries B.C. may have been women's relatively benign tribute to the wine god until males' intrusions brought sufficient orgiastic sexuality and violence to result in Senatorial sanction and mass executions in 186 B.C., later reverting to a more tame all-female celebration once more free of sex

and violence (Nilsson, 1975). Dionysius of Halicarnassus (1937, trans. by E. Cary) describes a period under Augustus Caesar when women's drinking was seen as such a certain stepping-stone to adultery that drinking as well as adultery were capital offenses for women. There is Shakespeare's oft-quoted verse in *Macbeth* (II, 3): Answering Macduff's question about the effects of drinking, a porter asserts, with reference to "lechery," that drink "provokes the desire, but it takes away the performance" (Evans, 1974, p. 1320). Sandmaier (1980) surveys ideas and experiences associating drinking and sexuality, especially as related to females in Western history. In addition to the above, she touches on Chaucer's "Wife of Bath," more recent Germanic and Britannic history (including the "gin epidemic" of the early 1700s), American colonial history (including tavern-keeping and patent medicine use by women), and the complex morality and politics of the temperance movement of the 19th and early 20th century.

However much recognition or imagination there may be of a direct connection between drinking and sexual experience, such a connection has been the subject of empirical research only in recent years. The following section summarizes findings of this research and notes methodological limitations of available studies.

Research on Sexuality and Drinking

The past decade has seen a marked increase in research and professional writing on relationships between alcohol consumption and human sexual behavior. This activity has included laboratory studies of the effects of alcohol consumption on physiological and self-reported sexual arousal (e.g., Lang *et al.*, 1980; Lansky and Wilson, 1981; McCarty, Diamond, and Kaye, 1982; Wilson and Lawson, 1976, 1978), clinical studies of self-reported sexual experience and sexual problems among alcoholics in treatment (e.g., Beckman, 1979; Murphy *et al.*, 1980; Whalley, 1978), and development of clinical protocols for the diagnosis and treatment of alcohol-related sexual dysfunction (e.g., Forrest, 1983; Gad-Luther and Dickman, 1979).

Much of the early work on alcohol and sexual behavior involved only male subjects (see Wilson, 1977, 1981), a bias that apparently exists in animal studies as well as in human studies (Greene and Hollander, 1980). However, more recent studies show increased interest in relationships between drinking and female sexuality. In general, the available laboratory studies of women suggest that alcohol consumption increases self-reported sexual arousal while decreasing physiological sexual arousal (Malatesta *et al.*, 1982; Wilson and Lawson, 1976, 1978). Clinical studies indicate that both problem drinking and alcoholic women report high levels of sexual dysfunction (e.g., Beckman, 1979; Covington, 1982; S. C. Wilsnack, 1982, 1984).

In addition to its relative neglect of women as subjects, research on drinking and human sexual behavior has been limited by its use of small and nonrepresentative samples. Laboratory studies of necessity use volunteer subjects, generally university-affiliated young adults with no history of sexual dysfunction or alcohol-related problems. Virtually no information is available about how well such studies' findings would generalize to sexually troubled individuals, problem drinkers or alcoholics, or persons not willing to volunteer for laboratory research on drinking and sexual behavior.

Clinical studies also have methodological limitations. Most lack nonalcoholic control groups, so it is not clear whether the high rates of sexual dysfunction reported are significantly different from rates of sexual dysfunction among nonalcoholic persons in the general population. In addition, most alcoholics have drunk excessively for years before appearing in treatment samples, and clinical studies have provided little information about the time order of sexual problems in relation to the onset of heavy drinking. Finally, clinical studies cannot determine whether heavier drinking individuals and problem drinkers and alcoholics *not* in treatment also have elevated rates of sexual dysfunction.

The present paper presents data on drinking, sexual behavior, and sexual dysfunction from a large representative national sample of women. Such a sample overcomes some of the limitations of previous research and allows us to describe how selected sexual experiences vary with differing levels of current alcohol consumption among women in the general population. We organize the data in four major topic areas: (i) population parameter estimates for selected sexual behaviors and dysfunctions; (ii) subjectively reported effects of drinking on sexual feelings and sexual behaviors; (iii) selected sexual behaviors, by drinking levels; and (iv) selected sexual dysfunctions, by drinking levels.

METHODS

Sampling

The data presented here are from a 1981 national survey of drinking and problem drinking in women. The survey was designed to obtain interviews with approximately 500 moderate-to-heavy drinking women, 500 light-drinking or abstaining women, and (for purposes of comparison) 500 men representing all drinking levels. Women are classified as moderate-to-heavy drinkers if they reported in screening interviews that they had four or

more drinks per week. From previous national surveys (Cahalan, 1970; Clark and Midanik, 1982), it was expected that the 4 drinks/week criterion would identify approximately the 20% of women with the highest alcohol consumption. Interviews were planned for all women identified by screening as moderate-to-heavy drinkers, with 25% of women identified as light drinkers or abstainers, and with 20% of all men. Interviews were also planned for all women who reported a history of drinking related problems, regardless of current drinking level.

Sampling and interviewing were carried out by the National Opinion Research Center. From its Master National Probability Sampling Frame, NORC selected 4,032 households to be screened for potential respondents. The households were located in 101 primary sampling units in the 48 contiguous states. Ultimately, interviews were completed with 500 moderate-to-heavy drinking women, 39 female former problem drinkers, 378 light-drinking or abstaining women, and 396 men. Among individuals identified as eligible for interviews, the completion rate was 89% for moderate-to-heavy drinking women and former problem drinkers, 83% for light-drinking or abstaining women, and 66% for men.

Data Collection

Data collection involved three stages: enumeration of eligible adults (21 years or older) in each sampled household, screening of potential women respondents to identify their levels of alcohol consumption, and administration of the survey questionnaire to eligible respondents. Data were collected by 120 interviewers; all but 4 were women, and none had a history of alcohol-related problems or moral objections to use of alcohol. Most of the survey field work was completed between September and November 1981, with a smaller number of respondents interviewed in December. Interviews averaged between 90 and 120 min in length.

The interview questionnaire asked about current alcohol consumption, lifetime changes in drinking behavior, drinking contexts, problems resulting from drinking, symptoms of alcohol dependence, and attitudes and beliefs about drinking. Other sets of questions dealt with demographic characteristics, family history, self-concept, social roles, social support, stressful life experiences, symptoms of anxiety and depression, physical health, sexual experience, obstetric and gynecologic problems, use of drugs other than alcohol, and participation in antisocial behavior.

The questionnaire was administered in private. As discussed further below, for certain sets of questions (including sexual experience and antisocial behavior) respondents used a self-administered handout which they

completed and sealed in an envelope, without having to reveal their responses to the interviewer. Protection of privacy apparently satisfied respondents enough that only 4 of 1,317 respondents refused to complete the interview once it had begun.

Measures

Drinking Levels

For the purpose of this paper, we estimate women's levels of alcohol consumption in three ways. The first strategy, here termed "30-day quantity–frequency," is a modification of the standard quantity–frequency method used by Johnson *et al.* (1977), Clark and Midanik (1982), and others. This approach is based on questions about respondents' use of beer, wine, and liquor during the 30 days preceding the survey. Questions included how often respondents had drunk each beverage and how many drinks of that beverage they had on a typical day when they drank that beverage. Additional questions not included in some previous surveys asked respondents how many ounces of beer and liquor were usually contained in their drinks and whether they typically drank regular wine (12% ethanol) or fortified wine (18% ethanol). Following Clark and Midanik (1982), an average glass was assumed to contain 4 oz of wine, and the ethanol content of beer was assumed to be 4%. Unlike the 45% estimate used in earlier studies, we used an updated estimate that the average ethanol content in liquor has now declined to 41% (G. Marshall, Personal communication, 1982). Combining information about drinking frequency, drinking quantity, typical size of drinks, and ethanol content for the three beverages produced an estimate of respondents' average consumption of ounces of ethanol per day.

The remaining two drinking measures recognize that women on occasion may engage in episodes of unusually heavy drinking. Such episodes may have more serious consequences than would routine drinking behavior and may be represented inadequately in self-reports of typical 30-day drinking behavior. To estimate heavy drinking episodes over a 12-month period we used responses to a question asking how often during the past 12 months respondents had had at least 6 drinks in a single day. Eight response categories ranged from never to 5 times a week or more.

The third drinking measure is a composite of the first two. This "total consumption" index, adapted from Polich and Orvis (1979), modifies estimates of daily consumption to take into account the frequency of days when the respondent reportedly drank six or more drinks. Ethanol consumption on these days was conservatively estimated to be 3 oz. Since this index takes into account both a respondent's typical or modal drinking

behavior (as reported for the past 30 days) and less frequent episodes of heavier drinking (reported for the past 12 months), we use it as our primary estimate of daily ethanol intake over a 12-month period.

Following Johnson *et al.* (1977) and Clark and Midanik (1982), respondents reporting 1 oz or more of daily ethanol consumption (roughly two or more drinks of beer, wine, or liquor) on the 30-day quantity—frequency and total consumption measures were classified as heavier drinkers. Respondents reporting 0.22 to 0.99 oz of ethanol per day were labeled moderate drinkers. Respondents who had drunk at least once in the past 30 days but whose reported ethanol consumption was less than 0.22 oz per day were labeled lighter drinkers. Respondents who indicated they had never drunk alcoholic beverages, or that they had not done so for at least a year, were categorized as abstainers. A final category, not examined separately in previous surveys, consisted of women who had drunk alcoholic beverages in the preceding 12 months but not in the last 30 days. In earlier analyses (R. W. Wilsnack, Wilsnack, and Klassen, 1984; S. C. Wilsnack, Klassen, and Wilsnack, 1984), these “temporary abstainers” were consistently more likely to report drinking-related problems, symptoms of alcohol dependence, and various kinds of reproductive dysfunction, compared to other lighter drinkers. Hence, they are treated here as a separate drinking level group.

Table I shows the distribution of female respondents on the 30-day quantity—frequency, heavy episodic drinking, and total consumption indexes.

Sexual Behavior and Sexual Dysfunction

Despite the pioneering work of Alfred C. Kinsey's Institute for Sex Research (ISR), Masters and Johnson's Reproductive Biology Research Foundation, Ira L. Reiss, and others, techniques for the collection and analysis of data on sexual behavior and dysfunction in the general population remain rather rudimentary. It is perhaps generally known that Kinsey refused to put his interview questions and response categories into standardized form, insisting on the flexibility of variations and elaborations in question- and answer-wordings that best fit the respondent's milieu and experience. Nonetheless, in over a decade (1967–1980) of association with the ISR at Indiana University, and with Paul H. Gebhard, its former director, the first author (A.D.K.) was impressed with the verbatim consistency in Gebhard's repeated quoting of the many question wordings he and other ISR colleagues had learned to use under Kinsey's tutelage. In addition, certain general principles of Kinsey's data collection methods are now time-honored practice in sex research, for example, his “presumption of experience” approach in asking about various sexual behaviors (e.g., “At what

Table I. Sample Distributions on Drinking Indexes

A. 30-day Quantity-Frequency Index

	Total female sample	Abstained at least past 12 mos.	Abstained the past 30 days	Lighter drinker: <0.22 oz/day	Moderate drinker: 0.22-0.99 oz/day	Heavier drinker: 1* oz/day	Lacking adequate data
Weighted n	2,552	991	239	778	362	142	40
Unweighted n	917	217	73	247	261	108	11
Weighted %	100.1%	38.8	9.4	30.5	14.2	5.6	1.6

B. Heavy Episodic Drinking: Thinking about your use of alcoholic beverages in the last 12 months, how often did you have six or more drinks of wine, beer, or liquor in a single day?

	Total female sample	Abstained the past 12 mos.					3-4/ week	5* week	No answer	
		Never	1-3 times	4-7 times	8-11 times	1-3/ month				
Weighted n	2,552	1,027	196	104	40	41	68	29	25	32
Unweighted n	917	369	106	71	29	36	43	22	18	6
Weighted %	100.1	40.2	7.7	4.1	1.6	1.6	2.7	1.1	1.0	1.3

C. Total Consumption Index

	Unweighted		Weighted data	
	n	%	n	%
Abstainers				
Lifetime abstainers	145		714	28.0
Abstained past 12 months	72		277	10.9
Abstained past 30 days				
Earlier infrequent drinking	33		155	6.1
Earlier > infrequent drinking	40		85	3.3
Current drinkers	(612)		(1,264)	(49.5)
Lighter drinkers <0.22 oz/day	217		718	28.1
Moderate drinkers 0.22-0.99 oz/day	258		370	14.5
Heavier drinkers (summary)	(137)		(176)	(6.9)
1 - 1½ oz/day	57		69	2.7
1½ - 2 oz/day	37		45	1.8
2 - 3 oz/day	34		51	2.0
3+ oz/day	9		11	0.4
Lacking adequate data	15		57	2.2
Total female sample	917		2,552	100.0%

age did you first arouse yourself to a sexual climax?") (see, e.g., Cochran, Mosteller, and Tukey, 1954; Ernst and Loth, 1948; Hyman and Sheatsley, 1954; A. C. Kinsey, Pomeroy, and Martin, 1948; A. C. Kinsey *et al.*, 1953).

In developing self-administered questions about sexual experience, the present study attempted to incorporate approximations of "Kinseyesque" wording and phraseology wherever possible. This process included the use of some questions adapted from a 1970 national survey of sexuality and sexual morality conducted by the National Opinion Research Center for the ISR (Klassén, 1982; Levitt and Klassen, 1974). That survey questionnaire was developed with the personal attention of Gebhard, as well as extensive participation by Sheatsley, a critical evaluator of the Kinsey methodology (Hyman and Sheatsley, 1954). Sexual experiences included in the present study were premarital sexual relations, masturbation, homosexual feelings, attitudes regarding sexual morality, and perceived effects of drinking on sexual feelings and behavior.

Questions about sexual dysfunctions were based on Kaplan's (1974, 1979) classification. Some dysfunction questions, and a global rating of retrospective/subjective lifetime importance of sexuality, were adapted from the NIMH Diagnostic Interview Schedule (NIMH, 1979, 1981), with additional reference to Robins' (1980, 1981) adaptations of that instrument. Female respondents were asked about seven dysfunctions: primary and secondary lack of sexual interest or feelings; vaginismus; dyspareunia; primary and secondary lack of orgasm with a partner; and low frequency or unreliability of orgasm with a partner. (Male respondents answered parallel questions about male dysfunctions; male data are not reported here.) Additional questions asked both females and males about problems of balance and communication in sexual relationships, including discrepancies between partners in their desired frequency of intercourse or the length of time taken to reach orgasm.

Questions on sexual behavior and sexual dysfunction were formulated to be entirely self-administered, offering the respondent any information or advice desired from the interviewer standing by, yet safeguarding the respondent from revealing any answers to the interviewer unless she wished to do so. The sexuality questions were located toward the end of the 90-min interview to provide maximum development of interviewer—respondent rapport. The questions were printed in a separate handout booklet, accompanied by a specially prepared "privacy envelope" identified only by a respondent identification number. Upon completion of the self-administered booklet, the respondent placed the handout in the envelope, sealed it if she wished, and could even take it to a mail drop or Post Office, escorted by the interviewer, to assure total confidentiality.

Pretests of this privacy envelope method in the 1970 ISR national survey (Klassen and Levitt, 1970) compared the results of interviewer-administered and self-administered collection of data on sexual experience. Those results showed a tendency for interviewer-administered procedures to yield higher rates of denial of various sexual experiences, whereas the self-administered procedure yielded not only higher rates of missing (overlooked, or refused?) data but also higher rates of positive reports of experience. Consequently, the self-administered format had been judged preferable in 1970 and was so chosen now. The verbatim wordings of all sex-related questions, response categories, and related instructions from the 1981 survey are given in the Appendix.

Parameter Estimation Using Alternative Interpretations of Missing Data

Given the following analyses of how drinking levels and measures of sexual behavior and dysfunction covary, it is apparent that the overall rates of the sex-related variables chance being used with insufficient caution as a basis for parameter estimation of selected dimensions of human sexual experience. In fact, this might be an especially tempting risk given the present-day dearth of sexuality data based on probability sampling of the U.S. female population. Recognizing that the rates of "missing values," or nonresponse, may involve biases in responses to the sexual behavior and dysfunction items, it has seemed important to present the results in a way that readers have the opportunity to judge for themselves how to view these issues.

In order to provide the individual reader with a basis for deciding whether, and in what manner, our data might prudently be used in parameter estimation, three alternative assumptions have been formulated, and percentages have been calculated according to each assumption:

Assumption A: There is *total* nonresponse bias in the direction that those not responding have *all not* reported experience that they indeed actually *did* have. Thus, the nonresponse cases should be added to the positive response category to provide the best parameter estimates.

Assumption B: There is *no* response bias, in the sense that the distribution of the experience in question on the part of those *not* responding is identical to the distribution of that experience among those who *did* respond. Hence, excluding those not responding, and basing calculations only on those responding, will yield the best parameter estimates.

Assumption C: There is *total* nonresponse bias in the direction that all those *not* providing data did *not* have the experience in question. Thus, the

nonresponse cases should be added to the negative response category to provide the best parameter estimates.

The Appendix provides the alternative percentages calculated to estimate parameters for each sex-related item for each of these three assumptions.

Data Analysis

Calculation of the percentages, cross-tabulations, and measures of association reported here involved weighting cases to compensate for response rate variations and for the stratified oversampling of moderate-to-heavy drinking women. Weighting permits estimates of the distributions of sexual behaviors and attitudes, sexual dysfunctions, and their relationships to women's drinking in the general population. However, measures of statistical significance were calculated conservatively based on the actual numbers of respondents in the survey. In all the following analyses, cases of missing data are excluded (Assumption B, above). Additional details of the sampling frame and weighting procedures are given in R. W. Wilsnack *et al.* (1984).

RESULTS

Reported Effects of Drinking on Sexual Feelings and Behavior

Table II shows women's responses to four questions dealing with effects of drinking on feelings of sexual inhibition, sexual pleasure, and interpersonal closeness. We use drinking categories based on 30-day quantity-frequency rather than total consumption (including heavy drinking episodes) because the former index showed more clear-cut relationships to reported drinking effects. Women who had never drunk alcohol and women who had drunk only infrequently throughout their lifetimes (no more than a drink a month) were not asked questions about perceived effects of drinking, because questionnaire pretesting had revealed that such women felt they had insufficient experience with drinking to answer these questions meaningfully. Thus Table II includes only those women who reported drinking at more than this minimal level during the preceding 12 months.

Table II shows that a majority of women drinkers perceived that drinking reduces their sexual inhibitions and helps them feel closer to and more open with others, and nearly half reported that drinking makes sexual activity more pleasurable. In each case except feeling closer to others (where lighter and moderate drinkers did not differ), women's tendency to report

these positive effects increased with increasing levels of drinking (γ s ranged from 0.17 to 0.26).

More extreme subgroups of heavier drinkers (not shown in Table II) were even more likely to report some of these effects. For example, 80% of current drinkers who reported drinking six or more drinks three or more times a week (weighted $N = 40$) indicated that drinking sometimes or usually made them feel less sexually inhibited. The sexuality and intimacy questions asked respondents how regularly (usually, sometimes, or never) they experienced the effects in question "when you drink." Thus, the positive relationships between drinking levels and reported effects do not appear to be an artifact of the fact that heavier drinkers simply drink on more occasions and therefore experience drinking effects of all sorts more often. Rather the relationships may suggest that expectations that drinking will reduce sexual inhibitions, enhance sexual pleasure, and increase interpersonal closeness may be motives for heavier drinking among women.

Table II also shows the proportions of women in each drinking category who reported two behavioral effects of drinking: increased sexual

Table II. Perceived Effects of Drinking on Sexuality and Interpersonal Closeness Among Current Drinkers, By 30-Day Quantity-Frequency Level^a

Wordings of questions	Overall	Lighter drinkers	Moderate drinkers	Heavier drinkers
A. How true is it that when you drink (% sometimes or usually true)				
1. You feel less inhibited about sex?	60 (928)	56 (444)	63 (343)	68 (140)
2. Sexual activity is more pleasurable for you?	45 (919)	40 (439)	47 (341)	56 (138)
3. You feel closer to a person you share drinks with?	62 (933)	61 (447)	60 (345)	67 (140)
4. You find it easier to be open with other people?	69 (979)	64 (493)	73 (345)	81 (140)
B. Have any of the following ever happened to you? (% yes)				
1. You became sexually forward when you had been drinking?	22 (985)	20 (486)	21 (359)	28 (140)
2. You became less particular in your choice of sexual partners when you had been drinking?	8 (986)	4 (486)	11 (359)	12 (142)
3. Someone who was drinking became sexually aggressive toward you?	60 (984)	61 (486)	58 (357)	58 (142)
Total weighted n^b	998	486	359	142
Total unweighted n	551	178	259	108

^aPercentages are based on weighted n 's (given in parentheses).

^bCategory n 's do not sum to 998 due to 6 cases (weighted $n = 12$) for which Q-F data were missing or inadequate.

assertiveness and less particular choice of sexual partners. Only a minority of women acknowledged ever having engaged in either drinking-related behavior, with heavier drinkers somewhat more likely to report these behaviors ($\gamma = 0.10$ and 0.40). In contrast, more than half of the women in all drinking categories reported that someone who was drinking had become sexually aggressive toward them. Stereotypes linking women's drinking with sexual "promiscuity" (see Schuckit, 1972) are thus not supported by our data. Women who drink are considerably more likely to report being targets of sexual advances by others who are drinking than they are to report becoming sexually assertive or sexually indiscriminate themselves.

Drinking Levels and Sexual Behavior

Of the three drinking indexes (30-day quantity-frequency, episodic heavy drinking, and total consumption), 30-day quantity-frequency showed the most consistent relationships to a variety of sex-related behaviors. For the purpose of detecting broad relationships between current alcohol consumption and lifetime sexual behavior, knowledge of a woman's current tendency to engage in heavy drinking episodes appears to add little to what we can learn from 30-day average consumption patterns alone.

Table III summarizes relationships between 30-day quantity-frequency categories and five sexual behaviors and attitudes. Overall, women who have abstained from alcohol for at least the past 12 months appear to be the most sexually traditional, with the lowest rate of premarital intercourse, masturbation to orgasm, acknowledgment of possible homosexual enjoyment, and abortion. Of the three categories of drinkers, moderate and heavier drinkers were the most likely to report these experiences, with lighter drinkers intermediate between 12-month abstainers and moderate and heavier drinkers. Moderate and heavier drinkers combined exceeded lighter drinkers on rates of premarital intercourse ($p < 0.001$; $\gamma = 0.17$), masturbation to orgasm ($p < 0.001$; $\gamma = 0.29$), homosexual feelings ($p < 0.02$; $\gamma = 0.25$), and abortion ($p < 0.001$; $\gamma = 0.47$).

Rates of nontraditional sexual behaviors among temporary abstainers (women who had drunk within the past 12 months but not the past 30 days) were more similar to those of moderate and heavier drinkers than to those of abstainers. In fact, temporary abstainers were more likely than all other respondents to acknowledge the possibility of sexual feelings toward other women ($p < 0.02$; $\gamma = 0.42$) and were more likely than any other group except heavier drinkers to report experience with masturbation. It is possible that the temporary abstainer group includes women who previously drank at relatively heavy levels (and thus resemble moderate and heavier drinkers

Table III. Sexual Behavior and Sexual Morality, By 30-Day Q-F Level^a

Questions	Overall	Abstainers	Temporary Abstainers	Lighter Drinkers	Moderate Drinkers	Heavier Drinkers
A. Sexual relations before marriage (% yes)	42 (2,316)	27 (871)	45 (226)	49 (736)	60 (348)	53 (135)
B. Ever came to a sexual climax by yourself? (masturbation) (% yes)	39 (2,080)	31 (759)	52 (207)	37 (672)	49 (316)	56 (126)
C. If no question of right or wrong, might sex with another woman be enjoyable for you (% yes)	9 (2,101)	6 (746)	17 (214)	8 (689)	13 (327)	10 (125)
D. Ever had an abortion (non-spontaneous)? (% yes) ^b	6 (2,022)	4 (835)	8 (203)	5 (590)	13 (276)	13 (118)
E. How do you feel about an unmarried man and unmarried woman who love each other having sexual relations? (% not wrong at all)	35 (2,471)	18 (974)	35 (239)	42 (766)	52 (354)	74 (138)
Total weighted <i>n</i> ^c	2,552	991	239	778	362	142
Total unweighted <i>n</i>	917	217	73	247	261	108

^aPercentages are based on weighted *n*'s (given in parentheses).

^bEver-Pregnant women only.

^cCategory *n*'s do not sum to the sample total of 2,552 due to 11 cases (weighted *n* = 40) for which Q-F data were missing or inadequate.

in past sexual experience) but who have recently become abstinent, perhaps in response to drinking-related problems or symptoms.

As a partial check on this interpretation, we identified those temporary abstainers who had drunk only infrequently during the past 12 months (no more than one drink a month) and who indicated there had never been a time in their life when they were drinking enough that they felt they should cut down or stop drinking altogether. These women apparently had abstained during the past 30 days simply as part of a long-term pattern of minimal, infrequent drinking. We compared these "infrequent drinking temporary abstainers" with all other temporary abstainers on the four sexual behavior variables. As expected, the "temporary abstainer-other" group—including former heavier drinkers who had recently stopped drinking—was higher than the infrequent drinking temporary abstainers on premarital intercourse (51% vs. 42%), masturbation (54% vs. 50%), homosexual feelings (25% vs. 14%), and abortion (9% vs. 7%), although these differences are statistically nonsignificant, given the small *ns*.

There are several possible interpretations of the association between moderate and heavier drinking and higher rates of nontraditional sexual behavior. First, drinking may serve as a sexual disinhibitor, permitting women to engage more freely in behaviors that are often subject to psychological and/or social inhibition (see Wilson, 1977, 1981; S. C. Wilsnack, 1984). This interpretation is consistent with our findings that a majority of women indicated that they felt less sexually inhibited after drinking and that this disinhibiting effect was reported most frequently by heavier drinking women.

A second interpretation is that both drinking and sexual activity are regulated by a generalized moral value system. At the conservative extreme, both drinking and nontraditional forms of sexual expression tend to be disapproved; at the liberal extreme both types of behavior tend to be tolerated, approved, or encouraged. Supporting this interpretation is the strong monotonic relationship between drinking levels and responses to a question about the morality of sexual relations between an unmarried man and woman who love each other. As shown in the bottom row of Table III, less than one-fifth of 12-month and lifetime abstainers but nearly three-quarters of heavier drinkers felt that such relations were "not wrong at all" ($\gamma = 0.49$).

A third interpretation might combine elements of the first two: If there is this kind of general moral value system with the effect of suppressing both women's sexuality and their drinking, and if women see drinking as a disinhibitor, then the drinking of many women may be a more or less intentional effort to counteract the sexual suppression characteristic of their experience. National data from a 1970 Institute for Sex Research survey reveal how nationally pervasive the suppression of female sexuality is, in

sharp contrast to male sexuality. In that survey there was a strong monotonicity between a scale ranging from liberal to conservative in attitudinal sexual morality and a scale of sexual suppression, among both females and males in the adult population (Klassen, 1982). Furthermore, controlling for levels of sexual suppression, females on each of the seven levels averaged a morality score more liberal than males on the same level of suppression, in spite of the fact that overall the female population was much more conservative than the male. Hence, women party to the information or folklore that drinking has a sexual disinhibiting effect might seek to free themselves from a suppressive moral fabric that denies them both drinking freedom *and* sexual freedom, with the risk of guilt feelings "the morning after."

Relationships between drinking and sexual experience may be more complex than these interpretations imply. For example, despite the overall positive relationship between drinking and more liberal sexual attitudes and behaviors, subgroups of heavier drinking women may exist who are characterized by conservative or conflicted sexual attitudes and behaviors. Comparisons among more differentiated subcategories within the heavier drinker category identified such a group: Women whose total estimated consumption, including episodes of heavy drinking, was 1½ oz or more of ethanol per day (weighted $n = 107$) differed from less extreme heavier drinkers (weighted $n = 69$) in several respects. The heaviest drinking women were less likely to have had premarital intercourse (53% vs. 60% for remaining heavier drinkers; $\gamma = 0.16$), to have masturbated to orgasm (50% vs. 61%; $\gamma = 0.21$), or to have had an abortion (8% vs. 23%, $p < 0.05$; $\gamma = 0.53$). On a question not included in Table III, only 53% of this highest group (as compared with 67% of the remaining heavier drinkers) indicated that during their lifetime sex had been "very" or "quite important" ($\gamma = 0.27$). Although most differences failed to reach statistical significance, given the small n s, this subgroup analysis suggests that different mechanisms may mediate the relationships between drinking and sexuality for different women. Some women may engage in both drinking and sexual activity as a result of a liberal value system or as part of a generally nonconventional life-style. However, other women—perhaps those with more severe inhibitions or conflicts about their sexuality—may choose drink as a form of self-medication for their sexual difficulties.

Drinking and Sexual Dysfunction

Based on the high rates of sexual problems reported in clinical studies of alcoholic women, we hypothesized that the heavier drinking women in our national survey sample would acknowledge more sexual dysfunction than

Table IV. Sexual Dysfunction and Relationship Imbalance, By Total Consumption Level^a

Wordings of questions	Overall	Temporary abstainers			Heavier drinkers			Temporary abstainers	
		Abstainers	Lighter drinkers	Moderate drinkers	Heavier drinkers	Infreq. drinking	> Infreq. drinking		
A. Never any sexual interest or enjoyment, orgasm less than half the time, or vaginismus (% one or more)	35 (2,206)	34 (809)	37 (667)	28 (345)	38 (167)	30 (139)	56 ^c (79)		
1. I have never had any interest or enjoyment in sexual relations (% true)	5 (2,174)	8 (788)	3 (662)	1 (344)	5 (163)	1 (139)	15 ^c (78)		
2. I have never come to a sexual climax (had an orgasm) with a partner (% true)	6 (2,162)	5 (776)	6 (667)	5 (337)	7 (166)	0 (139)	15 ^c (78)		
3. When having sex with a partner, about how regularly have you come to a sexual climax? (% less than half the time or never)	25 (2,099)	26 (746)	25 (647)	20 (336)	28 (158)	18 (139)	43 ^c (73)		
4. Sexual relations have sometimes been so painful I could not have intercourse (% true)	17 (2,208)	16 (814)	19 (671)	13 (339)	14 (166)	18 (139)	28 ^c (78)		
B. During your current or most recent sexual relationship:									
1. My partner wants sex more often than I do (% true)	53 (2,045)	55 (727)	56 (620)	39 (334)	44 (159)	68 (139)	73 ^c (66)		
2. My partner comes to a climax to soon (% true)	26 (1,977)	24 (692)	23 (204)	27 (330)	26 (158)	45 (139)	26 (65)		
3. My partner takes too long to come to a climax (% true)	8 (1,969)	5 (696)	8 (588)	12 (331)	10 (155)	12 (135)	18 ^c (64)		
Total weighted <i>n</i> ^b	2,491	962	705	363	174	146	85		
Total unweighted <i>n</i>	897	209	212	254	135	32	40		

^aPercentages are based on weighted *n*'s (given in parentheses). Women who reported they had never had a sexual partner are excluded.

^bCategory *n*'s do not sum to 2,491 due to 15 cases (weighted *n* = 57) for which consumption data were missing or inadequate.

^c*p* < 0.05 for "temporary abstainers-other" vs. all other women.

lighter or moderate drinkers. Table IV, comparing rates of reported dysfunction across categories of total daily consumption, shows that this hypothesis received little support. For three types of female sexual dysfunction (lifetime lack of sexual interest, lifetime lack of orgasm with a partner, and low frequency of orgasm with a partner), heavier and lighter drinkers' rates were not significantly different, whereas moderate drinkers in each instance had the lowest dysfunction rates of the five consumption categories. Moderate and heavier drinkers were somewhat less likely than lighter drinkers to report the fourth female sexual dysfunction, vaginismus, and to report that their partner wanted sex more often than they did. On an index combining lack of sexual interest, lack or low frequency of orgasm with a partner, and vaginismus, moderate drinkers were significantly lower than lighter and heavier drinkers combined ($p = 0.02$; $\gamma = 0.21$). This curvilinear relationship may suggest a facilitative effect of *moderate* alcohol consumption on women's sexual functioning. Alternatively, it may suggest that inhibition affects both drinking and sexual functioning at lower levels of consumption, and that increased drinking is a cause and/or a consequence of sexual dysfunction at higher consumption levels.

Most alcoholic women in clinical studies consume considerably more alcohol than the average heavier drinker in our sample. Thus it is possible that sexual dysfunction is associated with drinking at more extreme levels than the 1 oz daily ethanol consumption used to define our heavier drinking category. To check this possibility, we examined rates of sexual dysfunction for subgroups of heavier drinkers defined on the basis of both total consumption level and frequency of heavy drinking episodes. Inspection of rates within these subgroups revealed noconsistent monotonic relationships between rates of sexual dysfunction and increasing total consumption or frequency of heavy drinking episodes. However, the small groups of women at the highest levels on these drinking indexes did show some distinctive patterns. For example, women who reported daily consumption of 2 oz of ethanol or more (weighted $n = 62$) acknowledged lifetime lack of sexual interest more often (10%) than did remaining women (5%, $p < 0.10$; $\gamma = 0.34$). And women who reported drinking six or more drinks per day at least 3 days a week (weighted $n = 54$) showed elevated rates of lack of sexual interest (15 vs. 5% of other women, $p < 0.01$; $\gamma = 0.55$) and primary anorgasmia with a partner (12 vs. 5% of other women, $p < 0.05$; $\gamma = 0.43$) and non-significant elevations for infrequent orgasm (35% vs. 25%, $p < 0.10$; $\gamma = 0.23$) and vaginismus (23% vs. 17%; $\gamma = 0.20$). The numbers of women in these subgroups are small, making percentage estimates less reliable. However, the consistency of the subgroup patterns may suggest that the threshold above which alcohol consumption is strongly linked to sexual dysfunction is relatively high, characterizing many alcoholics but only a small proportion of women in the general population.

A second reason why relationships between current drinking and sexual dysfunction may be weaker among women in the general population than in clinical samples of alcoholics is that some women may stop or reduce their drinking in response to sexual difficulties that they perceive as caused or worsened by drinking. If so, relationships between current drinking behavior and lifetime history of sexual dysfunction would be attenuated. This interpretation receives some support from the consistency with which those 30-day abstainers who previously drank more than infrequently reported high rates of sexual dysfunction. As shown in the right-hand column of Table IV, these "temporary abstainers-other" exceeded all other groups on lack of sexual interest, primary anorgasmia with a partner, low frequency of orgasm, vaginismus, partner wanting sex more often than respondent, and partner taking too long to climax (all p 's < 0.05 for "temporary abstainers-other" vs. all remaining women; $\gamma = 0.33$ to 0.54). It is possible that this group includes both women who formerly drank in response to sexual difficulties and women whose drinking *created* sexual problems. Such women may have become abstinent, at least temporarily, when drinking failed to improve their sexual functioning, or when they recognized that drinking was creating sexual problems, or when they experienced other alcohol-related problems.

DISCUSSION

Perceived Effects of Drinking

Our findings regarding perceived effects of drinking on women's sexual feelings were generally consistent with expectation. A majority of women drinkers reported that drinking decreases their sexual inhibitions and helps them feel closer to others. The fact that heavier drinkers were the most likely to report these effects suggests that expectations of sexual disinhibition and pleasure may be motives for drinking among some women.

Despite their enhanced sexual feelings, drinking apparently does not produce dramatic changes in sexual behavior for most women drinkers. Less than 10% of women drinkers reported becoming less particular in their choice of sexual partners after drinking, and less than 25% reported increased sexual assertiveness. On the other hand, more than half of drinking women indicated they had experienced sexual aggression from someone who had been drinking. Despite recent changes in sex roles, women still appear more likely to be targets than initiators of drinking-related sexual assertiveness, at least according to their self-reports. Nonetheless, it may still be important in future research to study those women who do experience greater freedom of sexual expression when drinking. Increased sex-

ual assertiveness after drinking was somewhat more common among heavier drinkers than lighter and moderate drinkers, and may be an important reinforcer of drinking behavior for some women.

Drinking and Sexual Behavior

The finding that drinking was associated with nontraditional sexual behavior was also not surprising. We suggested earlier that this association may reflect a disinhibiting effect of alcohol on sexual behavior, the effects of a generalized moral value system, or both. However, the tendency of the subgroup of heaviest drinking women to report less nontraditional sexual behavior than other heavy drinking women raises an important caveat. The relationship between drinking and sexual behavior may be curvilinear, and women at the highest drinking levels may drink not as part of a "liberated" value system or life-style but rather as a response to inhibitions or conflicts surrounding sexuality, attempting to medicate sexual distress with increased alcohol consumption.

Drinking and Sexual Dysfunction

In contrast to the high rates of sexual dysfunction reported in clinical studies of alcoholic women, relationships here between sexual dysfunction and drinking were relatively weak across most of the range of alcohol consumption. Moderate drinking was associated with lower rates of several types of sexual dysfunction than either lighter or heavier drinking. Possible interpretations are that (i) moderate alcohol consumption facilitates women's sexual functioning, and (ii) inhibition both suppresses drinking and contributes to sexual difficulties at lower levels of consumption, whereas at higher levels of consumption increased drinking is a cause and/or consequence of sexual dysfunction.

Small subgroups of women at the highest levels of the heavy episodic drinking and total consumption indexes showed elevated rates of several sexual dysfunctions. However, the absolute levels of dysfunction reported by even the heaviest drinkers were well below rates reported in many clinical studies (see S. C. Wilsnack, 1982, 1984). Differences in definitions of dysfunction and in methods of measurement may explain some of the discrepancy. However, it is also possible that the threshold above which drinking is strongly associated with sexual dysfunction is relatively high, exceeded by only a small percentage of women in the general population.

Temporary Abstainers: Two Meaningful Subgroups

An unexpected finding of the present study was the consistently high rates of sexual problems reported by women who had drunk alcohol in the past 12 months but not the past 30 days. Within this group of temporary abstainers, women who had drunk previously at more than minimal levels (unlike infrequent-drinking temporary abstainers) were unusually likely to report a variety of sexual dysfunctions.

We have suggested that, for this subgroup, temporary abstinence may be in part a response to sexual problems that the women perceived as either caused or worsened by drinking. The number of women motivated to abstain by sexual or other potentially alcohol-related problems may be sizable: Other data from the 1981 survey indicate that of female respondents who reported drinking more than one drink a month, 20% had wondered at some time whether they might be developing a drinking problem. Longitudinal data would be valuable for describing the precipitants, course, and consequences of temporary abstinence in women.

Analysis of Time-Ordered Relationships

We have cautioned throughout this paper that the summary data on lifetime sexual experience reported here do not permit inferences about time ordering or causality. Thus, although certain sexual dysfunctions were most common among women at the highest drinking levels, it is not clear to what extent these problems preceded and possibly contributed to heavy drinking and to what extent they followed or resulted from excessive drinking. Indeed, it seems plausible that for some women a reciprocal relationship exists between drinking and sexual problems, in which such problems are both consequences of excessive drinking and sources of distress that can lead to further drinking.

There are at least two strategies by which research may attempt to reach firmer conclusions about temporal/causal relationships between women's sexual experience and their drinking behavior. First, given data gathered retrospectively on the ages at which certain sex-related events have taken place, coupled with data on ages at which significant changes in drinking patterns occurred, it might become possible to reach conclusions about whether sexual problems were more often antecedents of heavy drinking, or whether heavy drinking was more often an antecedent of sexual dysfunction, or became even heavier after such dysfunction (see R. W. Wilsnack, Klassen, and Wilsnack, 1986). Second, a longitudinal study, with multiple waves of data collected over years of women's lifetimes,

would permit even stronger inferences about time-ordered relationships between sexual experience and women's drinking. Such data collection and analysis efforts are on the agenda among the future efforts of this study.

Implications for Professionals Committed to Women's Needs

Our evidence that drinking and women's sexual functioning covary in the general, nonclinical population should lead those professionals committed to women's sexual and reproductive health to be more alert to detect alcohol abuse as a possible antecedent, concomitant, or consequence of the sex-related and reproductive problems they are treating (see also S. C. Wilsnack *et al.* 1984). Conversely, those in the field of alcohol abuse treatment must be attentive to the possibilities of interactions between sexual dysfunctions and problem drinking. Given the evidence that sexually dysfunctional women are at increased risk for heavy drinking, alcohol education targeted to this group might help to reduce the onset of self-medicative problem drinking. In addition, current programs designed to educate women about the fetal alcohol syndrome (e.g., Ferrence, 1984; Little, Streissguth, and Guzinski, 1980; NIAAA, 1981) need broadening to address not only FAS risks but also women's health considerations in the areas of sexual and reproductive functioning.

Suppression of Female Sexuality and Drinking

There is a rather impressive suggestion of intentionality of drinking motivations in many of the findings of this study, for example, with regard to the use of alcohol to facilitate greater sexual satisfaction or to reduce inhibition or other sexual problems, or with regard to temporary abstinence as a response to problems that may have resulted from self-medication by ethanol. The "comprehensive moral fabric" interpretation of these findings—linking restrained traditional sexuality with strong sanctions against drinking, and sexual freedom with freedom to drink—suggests that future research should focus more frankly and explicitly on ways in which women are oppressed across a wide range of life domains, with reference to both drinking and sexuality. This must include various features of women's personal lives: sexual and nonsexual intimacy with spouses, partners, and significant others; inequity of household and parenting responsibilities; and behavior in other social contexts. While other research demonstrates conclusively the pervasive extent of sexual suppression of women in this socie-

ty, we have yet to see the entire mosaic and how all its facets affect and interact with each other.

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APPENDIX

Female Sample Distributions of Sexuality-Related Data, Under Three Alternative Assumptions About Cases with Missing Data^a

Wordings of questions and responses	Alternative assumptions		
	A ^b	B	C ^b
<i>Part I. General Lifetime Sexual Experience</i>			
A. During your lifetime has sex been			
– very important to you?		16%	
– quite important?		27	
– somewhat important?		36	
– not too important?		14	
– or could you have gotten along just as well without sex?		8	
		101%	
Weighted <i>n</i> , all cases responding		2,344 (847) ^c	
Weighted cases with missing data		208 (70)	
Total weighted female sample		2,552	
B. What was your age when you first had sexual relations with a partner, when <i>either</i> you or your partner was old enough to come to a sexual climax?			
Ever had a partner (age given)	96.4%	96.0%	87.3%
Never had sex with a partner	3.6	4.0	12.7
Weighted <i>n</i> , all cases responding		2,321 (843)	
Weighted cases with data missing		231 (74)	
Total weighted female sample	2,552	2,552	2,552
C. (Asked of those giving age for first having a sexual partner):			
Was this when you were first married?			
Yes	55.6%	60.5%	63.7%
No, first sex before marriage	44.4	39.5	36.3
Weighted <i>n</i> , all cases responding		2,261 (828)	
Weighted cases with data missing		198 (62)	
Weighted <i>n</i> , women having had partners ^d	2,459	2,459	2,459

D. What was your age the first time you came to a sexual climax by yourself (or has this never happened)?

Ever masturbated to climax (age given)	49.1%	38.6%	32.0%
Never masturbated to climax ^e	50.9	61.4	68.0
Weighted <i>n</i> , all cases responding		2,117 (780)	
Weighted cases with data missing		435 (137)	
Total weighted female sample	2,552	2,552	2,552

E. If there was no question of right or wrong, would you say that sex with a woman might be enjoyable for you?

Yes	23.7%	6.0%	4.9%
No	76.3	94.0	95.1
Weighted <i>n</i> , all cases responding		2,072 (765)	
Weighted cases with data missing		480 (152)	
Total weighted female sample	2,552	2,552	2,552

Part II. Major sexual dysfunctions

Sexual dysfunction index (scores 0-3) indexing one score each for "never any sexual interest or enjoyment," "orgasm less than half the time (or never)," and vaginismus.

One or more	40.9%	34.7%	31.4%
None of these	59.1	65.3	68.6
Weighted <i>n</i> , all cases responding		2,255 (823)	
Weighted cases with data missing		236 (74)	
Weighted <i>n</i> , women having had partners	2,491	2,491	2,491

A. I have never had any interest or enjoyment in sexual relations.

True	15.1%	5.1%	4.5%
False	84.9	94.9	95.5
Weighted <i>n</i> , all classes responding		2,225 (815)	
Weighted cases with data missing		262 (80)	
Weighted <i>n</i> , women having had partners	2,487	2,487	2,487

B. I have never come to a sexual climax in sexual activity with a partner.

True ^e	15.3%	5.4%	4.8%
False	84.7	94.6	95.2
Weighted <i>n</i> , all cases responding		2,212 (806)	
Weighted cases with data missing		259 (81)	
Weighted <i>N</i> , women having had partners	2,471	2,471	2,471

C. When having sex with a partner, about how regularly have you come to a sexual climax?

Never (Item B above)	5.6%
Very seldom	6.4
Sometimes (about 25%)	13.2
About half the time	18.2
Most of the time (about 75%)	32.2
Just about all the time	24.5
	100.1%
Weighted <i>n</i> , all cases responding	2,141 (786)
Weighted cases with data missing	347 (110)
Weighted <i>n</i> , women having had partners	2,488

D. Sexual relations have sometimes been so painful I could not have intercourse (vaginismus).

True	24.0%	16.5%	15.0%
False	76.0	83.5	85.0
Weighted <i>n</i> , all cases responding		2258 (822)	
Weighted cases with data missing		223 (72)	
Weighted <i>n</i> , women having had partners	2,481	2,481	2,481

Part III. "Secondary" sexual dysfunctions

A. Sexual relations have sometimes been physically painful for me (dyspareunia).

True	42.2%	35.8%	32.2%
False	57.8	64.2	67.8
Weighted <i>n</i> , all cases responding		2,237 (816)	
Weighted cases with data missing		250 (79)	
Weighted <i>n</i> , women having had partners	2,487	2,487	2,487

B. After sexual relations were first enjoyable for me, there have been at least 2 months or more when I had no interest or enjoyment at all in sex (not counting times of pregnancy or childbirth).

True	33.8%	25.5%	22.7%
False	66.2	74.5	77.3
Weighted <i>n</i> , all cases responding		2,110 (789)	
Weighted cases with data missing		263 (83)	
Women ever having interest or enjoyment	2,373	2,373	2,373
Women never having interest or enjoyment		113	
Weighted <i>n</i> , women having had partners		2,486	

C. After first being able to come to a sexual climax with a partner, there were at least two months or more when I was unable to have a climax during sex with a partner.

True	21.5%	18.3%	17.5%
False	78.5	81.7	82.5
Weighted <i>n</i> , all cases responding		2,009 (736)	
Missing data cases among women orgasmic with partners		84 (21)	
Weighted <i>n</i> , women orgasmic with partners	2,093	2,093	2,093

D. (Asked of women who never had orgasms with partners):

Has never having a sexual climax in activity with a partner been			
– a serious frustration to you?		12.2%	
– somewhat disappointing to you		47.0	
– or, has it not mattered much to you?		40.9	
		100.1%	
Weighted <i>n</i> , all cases responding		115 (66)	
Weighted cases with data missing		4(1)	
Weighted <i>n</i> , women never orgasmic with partners		119	

Part IV. Sexual relationships imbalance

Here are some problems many people have in their sexual relationships. For each one, please circle the answer code that fits you best, during your *current* or *most recent* sexual relationship.

A. My partner wants sex more often than I do.			
True	61.1%	53.9%	45.6%
False	38.9	46.1	54.4
Weighted <i>n</i> , all cases responding		2,095 (775)	
Weighted cases with data missing		385 (118)	
Weighted <i>n</i> , women having had partners	2,480	2,480	2,480
B. My partner comes to a climax too soon.			
True	40.2%	26.8%	21.9%
False	59.8	73.2	78.1
Weighted <i>n</i> , all cases responding		2,019 (752)	
Weighted cases with data missing		454 (140)	
Weighted <i>n</i> , women having had partners	2,473	2,473	2,473
C. My partner takes too long to come to a climax.			
True	25.5%	8.5%	6.9%
False	74.5	91.5	93.1
Weighted <i>n</i> , all cases responding		2,019 (750)	
Weighted cases with data missing		461 (142)	
Weighted <i>n</i> , women having had partners	2,480	2,480	2,480
D. My partner does not want sex as often as I do.			
True	30.6%	15.5%	12.7%
False	69.4	84.5	87.3
Weighted <i>n</i> , all cases responding		2,038 (757)	
Weighted cases with data missing		443(136)	
Weighted <i>n</i> , women having had partners	2,481	2,481	2,481
E. I take too long to come to a climax.			
True	35.2%	31.9%	26.9%
False	64.8	68.1	73.1
Weighted <i>n</i> , all cases responding		1,992 (740)	
Weighted cases with data missing		101 (143)	
Weighted <i>n</i> , women orgasmic with partners	2,093	2,093	2,093

^aSee "Parameter Estimation Using Alternative Interpretations of Missing Data" for discussion of alternative assumptions.

^bFor those questions in which *more* than a dichotomy of response categories was used, no effort is made to apply Assumptions A or C to the reassignment of missing data cases.

^cUnweighted *ns* are provided in parentheses for those readers wishing to calculate confidence intervals for specific parameter estimates.

^dWeighted *ns* for all women who had partners vary slightly (between 2,480 and 2,488) except in three items (I.C., II.B., IV.B.). These variations in data base are quite small, given the sensitive content and self-administered format of the sexual experience questions, removed from the "quality control" of the interviewer.

^ePrimary anorgasmia (i.e., lifetime lack of orgasm) estimates are approximated by combining "masturbation-to-climax" and "climax-with-partner" items, complicated by partly interrelated and partly independent missing data. Excluding from the total sample 71 women (weighted *n* = 220) who lacked data on both items, and using the assumption of unbiased missing data, 92.7% of respondents had had at least one

orgasm experience from either or both sources; 4.5% yielded clearly anorgasmia data; another 2.8% reported lack of orgasm *either* via masturbation *or* with a partner, but lacked data on the alternative orgasm source. Combining these latter two groups yields an estimate of 7.3% of women diagnosable as having "primary anorgasmia." Our data show that the 92.7% of women who are orgasmic include 31.0% reporting orgasm with both masturbation and partner, 2.9% only by masturbation, and 58.8% only with a partner.

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