

Needs and Preferences Regarding Sex Education Among Chinese College Students: A Preliminary Study

By Ying Li,
Randall R. Cottrell,
Donald I. Wagner
and Maosheng Ban

Ying Li is a graduate student, Department of Health Education and Behavior, University of Florida, Gainesville, FL, USA. Randall R. Cottrell and Donald I. Wagner are professors of health promotion and education, University of Cincinnati, Cincinnati, OH, USA. Maosheng Ban is assistant professor at the Population and Development Research Institute, Zhejiang University, Hangzhou, Zhejiang, China.

CONTEXT: College students are more likely than other student populations to be sexually active. To improve sex education in China among this group, educators must know college students' needs and their preferences for receiving information on sexuality.

METHODS: In 2002, students at a large Chinese university completed surveys about their history of school-based sex education and their other sources of information on sexuality. The survey also explored students' preferences for topics to be included in a college-level sex education course, comfort level with receiving information on these topics and views of effective teaching strategies.

RESULTS: Before college, 47% of respondents had received no school-based education on sexual behavior; however, all respondents had taken a class covering reproduction, typically beginning in middle school (78%). Reading material, radio, classroom lecture and parents were more popular sources of information among females than among males; friends, the Internet and personal sexual experience were more frequent sources for males than for females. Higher proportions of males than females favored including sex therapy and masturbation in a hypothetical course. In addition, males felt more comfortable than females discussing 11 of 20 subjects; the two genders indicated similar levels of comfort in talking about the other topics. Males and females differed on how best to convey information on sexuality, with females generally favoring private methods, such as reading.

CONCLUSIONS: More comprehensive school-based sex education is needed for Chinese youth. When developing and implementing such programs, health educators should consider differences between males' and females' preferred ways for receiving information on sexuality.

International Family Planning Perspectives, 2004, 30(3):128–133

Sex education in China dates back many centuries. In fact, the oldest existing books on sexuality were published in China, in around 200 B.C.¹ Some books explicitly described human sexual response and sexual techniques, some provided information on how to prevent sexual dysfunction and others offered information on how to adjust one's level of sexual activity to maintain longevity.² Gradually, however, sexual attitudes began to change in the 12th century during the Song Dynasty.³ The government began to closely control people's sexual lives and to restrict sexual expression; eventually, sexual conservatism became so pervasive that any communication about sexuality was considered taboo.⁴

This very conservative attitude toward sexuality began to change after the 1949 founding of the People's Republic of China. In the 1950s, the government began to recognize the importance of sex education, and it published sev-

eral books on sexuality targeted at the general public.⁵

Societal change, however, came slowly. Attitudes in the adult population remained conservative,⁶ but views and behaviors among youth began changing rapidly. After the government adopted the Reform and Open Policy of 1978, Western values and beliefs about sexuality flooded into China. With changes in social ideology and in the traditional extended family structure, reduced social control and an information boom, youth became increasingly interested in sexual expression and many became involved in high-risk sexual behaviors.⁷

In the late 1970s, in response to concerns related to the country's large population and high birthrate, the government established its one-child policy, under which married couples typically were limited to a single child.⁸ Because the policy implicitly required couples to use effective birth control methods, it provided further rationale for supporting comprehensive sex education. Three additional factors supported implementing sex education for Chinese youth: a lack of knowledge about sexuality among youth;⁹ a documented desire of youth to receive sex education;¹⁰ and concern that youth were receiving mixed messages about sex, some of which might encourage risky sexual behavior and sex crimes.¹¹

*Couples—especially those in rural areas—could be exempted under certain circumstances, for example if at least one member of the couple was a member of an ethnic minority group, if both were only children or if their first-born child was disabled (source: Shanghai Municipal Population and Family Planning Commission, Population and Family Planning Regulation in Guizhou Province, 2003, <http://www.popinfo.gov.cn/popinfo/pop_doczcwd.nsf/v_zcfg/03E817BE07664C4148256D86002ECC6C>, accessed Aug. 6, 2004).

Responding to a perceived need, in 1988, the Ministry of Education and the State Family Planning Commission required that sex education be incorporated in middle school curricula nationwide. In 1993, the Ministry of Education issued *Guideline to Health Education for University Students*, which included adolescent sex education as an essential component. In 2002, the government officially declared its commitment to sex education by integrating the requirement to provide sex education to middle school students with the Population and Family Planning Law of the People's Republic of China.

As a result of the national policy requiring adolescent sex education, most young people entering college in China today have already received some school-based sex education. Most, however, view that education as too conservative and as inadequate to meet their needs.¹² Chinese college students—including the 5%¹³ to 20%,¹⁴ or more,¹⁵ who are sexually experienced—need more and better instruction to help them make informed and responsible decisions. This may be especially important today, given their increased interest in sex and involvement in high-risk sexual behaviors during recent years.¹⁶ Thus, a discrepancy exists between the need for quality information on sexuality and the information provided in sex education courses.¹⁷

To improve sex education in China, educators need to know students' preferences regarding such education. Thus, this preliminary study was designed to ascertain the need of Chinese university students for a college-level sex education course and their interest in specific topics and teaching methods for such a course.

METHODS

Survey Instrument

We designed a questionnaire that began with three multiple-choice questions asking about respondents' gender, grade level and college major; two others asked respondents when they had first received school-based education on the reproductive system and when they had first received school-based education on sexual behavior and related topics. The questionnaire also asked students how frequently they had received information on sexuality from eight sources; respondents ranked the sources from one (least frequent) to eight (most frequent).

The survey also asked respondents to indicate whether they thought each of 19 topics should be included in a college-level sex education course (response options were include, exclude and undecided). Next, students were asked to indicate how comfortable they would feel discussing each of 20 subjects in a sex education course (score options ranged from one, very uncomfortable, to five, very comfortable). Finally, respondents were asked to rank the effectiveness of six teaching strategies; a rank of one meant least effective, and a score of six denoted most effective.

We developed the instrument in English and then translated it into Chinese. An expert panel—comprising two sex educators from the United States, two sex educa-

tors from China and one Chinese professor with expertise in English—reviewed the instrument for content validity. The four educators determined whether survey items captured the intended measures and whether the instructions were clear and easily understood. Next, the Chinese professor reviewed the translation for accuracy. To further verify the accuracy of the translation, two Chinese graduate students at the University of Cincinnati in the United States conducted a reverse translation. The panel's and graduate students' recommendations were incorporated into the final instrument. The University of Cincinnati Human Subjects Committee approved the study.

The instrument's reliability was examined in a pilot administration by using a test-retest procedure. Seventeen Chinese students at the University of Cincinnati completed the instrument on two occasions, one week apart. (Pilot participants were assured that all responses would be confidential.) Test-retest correlation coefficients were 0.72 for the overall instrument and 0.56–0.90 for its various sections.

TABLE 2. Percentage of students believing that selected topics should be included in a college-level sex education course, by gender

Topic	Total (N=392)	Female (N=190)	Male (N=202)
Sexual response	91	89	93
HIV/AIDS	90	88	92
Sexually transmitted infections	89	89	90
Male-female communication	86	82	90
Birth control	83	82	85
Sexuality over the life span	83	83	82
Female anatomy/physiology	83	85	81
Love and sexuality	82	76	88**
Culture/history/social norms and sexuality	81	83	80
Gender/gender roles	81	83	80
Male anatomy/physiology	79	79	80
Pregnancy/childbirth	78	74	82
Infertility	58	50	66**
Sexual coercion (harassment/ aggression/abuse)	56	58	54
Sexual expression (touching/ kissing/intercourse)	54	45	63***
Homosexuality/bisexuality/ transgenderism	53	53	52
Sexual enhancement/sex therapy	52	42	61***
Masturbation	51	44	58*
Deviant sexual behaviors	45	41	50

* $p < .05$. ** $p < .01$. *** $p < .001$. Note: Levels of significance determined by performing chi-square analyses to compare proportions between genders.

Setting and Study Design

The study was conducted on the four campuses of a university with nearly 30,000 undergraduate students located in eastern China. Sixty-one percent of students at the university are from the province in which the school is located. The undergraduate students are 19–24 years of age; 32% are female. All undergraduate students live in dormitories, with 6–8 occupants in a room. In 2002, when the survey was conducted, the university had no compulsory course in sex education, but it offered elective courses on related topics, such as sexual health, sexually transmitted infections (STIs) and sexual psychology.

To achieve a representative sample of the university's undergraduate population, 380 participants were needed.¹⁸ To ensure a sufficient sample, we chose 440 respondents from randomly selected dormitory rooms stratified by gender. Trained graduate students distributed the questionnaires in person between 10:00 P.M. and 11:00 P.M., when students were likely to be in their rooms. The graduate students informed potential respondents that participation was voluntary and could be stopped at any time if they felt uncomfortable answering the questions. They also instructed willing participants to complete the questionnaire independently. The graduate students returned to collect the questionnaire approximately 20 minutes later. To ensure anonymity, students placed their own questionnaire in an envelope containing others'.

Overall and for each gender, we calculated mean rankings of students' sources of information, mean scores for their comfort level with discussing various selected topics and mean rankings of perceived effectiveness of various teaching strategies. We performed Student's *t*-tests to compare means by gender. We calculated the proportions of each gender and of the overall student sample who favored including each subject, and then conducted chi-square analyses to determine whether the proportions of males and females favoring inclusion differed significantly. We decided to consider a topic essential for inclusion in a future course at the university if at least 50% of respondents thought it should be included.

RESULTS

Of 440 questionnaires distributed, 48 were filled out incompletely or incorrectly. The 392 usable questionnaires collected (from 190 females and 202 males) represented a response rate of 89%. The proportion of sophomores participating, 53%, exceeded their proportion in the student body; 30% of respondents were juniors, and 17% were first-, fourth- or fifth-year students. Twenty-eight percent of participants had an undergraduate major in science, 20% each in the arts and medicine, and 16% each in agriculture and engineering. All respondents spoke Chinese as their native language. Government policy requires that undergraduate students be unmarried; hence all respondents were single.

Previous Education and Sources of Information

Most participants (78%) had first received school-based education about the reproductive system in middle school (at 14–16 years of age), and all reported receiving it at some point in their precollege education. Nearly half (47%), however, had received no school-based education on sexual behavior and related topics; most (68%) of those who had had such instruction had received it in middle school or high school.

Overall, reading material was students' most frequently used source of information on sexuality; personal sexual experience was their least used source (Table 1, page 129). Females ranked radio, parents, classroom lecture and reading material significantly higher than males did. Males ranked the Internet, personal sexual experience and friends higher than females did. To make the *t*-tests more robust, we also performed a Mann–Whitney *U* test for each male-female comparison. The results (not shown) were consistent with those of the *t*-tests.

Potential Course Topics and Teaching Strategies

Approximately nine out of 10 students thought that sexual response, HIV/AIDS and STIs should be included in a college-level course on human sexuality (Table 2, page 129). In contrast, only about half thought that deviant sexual behaviors* and masturbation should be included; these subjects had the least support among participants. A significantly greater proportion of male respondents than of female respondents favored including the topics of love and sexuality, infertility, sexual expression, sexual enhancement and sex therapy, and masturbation.

Mean scores indicate that the participants would feel most comfortable discussing communication between genders; culture, history, social norms and sexuality; and gender and gender roles (Table 3). Participants felt least comfortable discussing deviant sexual behaviors; homosexuality, bisexuality and transgenderism; sexual coercion; and masturbation. Males felt more comfortable than females discussing slightly more than half the topics (11 of 20), including male anatomy and physiology, sexual enhancement and sex therapy, sexual expression and masturbation.

In the overall sample, the most preferred teaching strategy was showing videotapes, and the least preferred was role-playing (Table 4). Again, significant differences existed between females and males: Females more strongly preferred receiving sex education by case study, classroom lecture and reading; males more strongly preferred role-playing and watching videos.

DISCUSSION

Our study was conducted at a single university in eastern China, where students' attitudes, beliefs and behaviors may differ from those of students elsewhere; thus, these findings may have limited generalizability. Yet, several of our findings call for further study.

Before these students entered college, their school-

*Although the survey provided no precise definition for this term, it specified fetishism as an example of such behavior.

based sex education generally covered basic anatomy and physiology, but not important topics related to behavior and relationships that they favored including in a sex education curriculum. Perhaps it is because of similar educational deficiencies that Chinese youth in earlier research expressed dissatisfaction with their sex education, which they typically considered superficial and impractical.¹⁹

Previous research identified the most common sources of information on sexuality for Chinese youth as media such as books, magazines, newspapers, radio and television.²⁰ Likewise, in this study, reading material was the highest-ranked source of information on sexuality. Data on the types of reading material used were not collected in our survey but should be examined in future studies. It would be important to know whether the reading materials students use present reliable and accurate information.

This study also indicated that female students preferred private ways of receiving information, such as reading and listening to a radio, while males sought information through more interactive means, such as talking with friends and surfing the Internet. This finding might be explained by traditionally held gender roles, whereby Chinese females are supposed to be sexually passive and to suppress their sexual desires.²¹ This long-standing social norm might make females feel uncomfortable or even ashamed for publicly searching for information on sexuality or openly discussing such topics.

As in earlier research,²² females generally responded more conservatively than their male counterparts did; for example, females indicated feeling less comfortable than males discussing several sexuality-related topics. The gender differences noted in this study and others probably developed over several thousand years, in part because of the influence of Confucianism, and especially of Neo-Confucianism, which typically taught females to be reserved and sexually conservative.²³

The participants listed communication between genders, gender and gender roles, and culture, history, social norms and human sexuality as the topics they felt most comfortable discussing. Teaching these subjects might involve building skills and clarifying values. However, role-playing and peer education—perhaps the best classroom-based approaches for conveying these topics—were not thought to be the most effective potential teaching strategies. In fact, role-playing was considered the least effective of five instructional techniques. Participants' views of these methods may have resulted from their own experiences with traditional educational methods: Most Chinese students are unaccustomed to interactive learning methods; from kindergarten through college, lectures are the dominant method used. In addition, students' discomfort with role-playing and peer education might reflect discomfort interacting with peers of the opposite gender while learning about sex-related topics.

Recommendations and Conclusions

Our findings concerning the sex education needs and in-

terests of college students lead us to make three preliminary recommendations, whose merit remains to be confirmed through additional research.

First, given the lack of comprehensive precollege sex education reported by our participants and the recent increase in high-risk sexual behaviors among college students documented in other research,²⁴ the university in this study should develop a required sex education course for its undergraduate students. The course should be comprehensive and include all topics listed in Table 2. Teaching techniques should include a blend of interactive strategies, and both the curriculum and the instruction should be geared to helping females feel comfortable with sexuality-related topics while limiting potential intimidation and embarrassment.

Second, the government should reevaluate its mandated sex education curriculum. A thorough and comprehensive assessment should be done to determine what information students need and when that information should be presented. In addition, the relevance and effectiveness of existing sexuality programs, most of which exist at the city level, should be assessed. New curricula should include information on relationships and sexual behavior. If comprehensive sex education is provided to adolescents before they reach college, they may not have the same need for a college-level course as our respondents did.

Finally, practical guidelines and tools are required to facilitate successful sex education. Guidelines should ensure that students receive age-appropriate key messages, as supported by scientific evidence, delivered by proven best practices for conveying this information. The Bureau of Health and the Bureau of Education should work together to establish a consistent and comprehensive sex education curriculum for students. Teachers must be well trained in the delivery of sex education and should follow the required program. In addition, textbooks and other learning aids should be standardized.

Some progress has recently been made in this area. Early in 2002, a textbook on sex education was published and put into use at primary and secondary schools in northeastern Heilongjiang Province.²⁵ (Before this, sex education had been taught in combination with hygiene education by using one textbook.) In addition, a sex education video compact disc designed to help adolescents form healthy ideas about sexuality and to enhance their awareness of how to protect themselves was officially released for use in primary schools in May 2002.²⁶ Finally, early in 2003, the Shanghai Family Planning Research Institute launched an online sex education program to test the possibility of using the Internet as a tool for teaching local students about sexuality.²⁷ Although these are promising developments, much work still remains for the Chinese government in terms of promoting sex education, especially in the inner cities and rural areas.

Future research on sex education in China should extend findings from this preliminary study to include larger representative samples at other universities; such stud-

ies may show that college students elsewhere have needs similar to those of the students in our survey. In addition, future research should include college-age youth not attending college. This population may have an even greater need for sex education, and may have fewer personal and governmental resources to meet that need. Furthermore, research on attitudes and beliefs of teachers, parents and policymakers could help lead to insights on how to gain their support for comprehensive sex education.

REFERENCES

- Ruan F, *Sex in China: Studies in Sexology in Chinese Culture*, New York: Plenum Press, 1991.
- Ge X, The analysis and contemplation of current sexuality education in China, *Heilongjiang Social Sciences*, 2001, 2:52–54 (in Chinese); and Ruan F, 1991, op. cit. (see reference 1).
- Van Gulik RH, *Sexual Life in Ancient China: A Preliminary Survey of Chinese Sex and Society from ca. 1500 B.C. till 1644 A.D.*, Leiden, The Netherlands: Brill, 1961; and Ruan F, 1991, op. cit. (see reference 1).
- Ruan F, 1991, op. cit. (see reference 1).
- Liu D, ed., *Sexuality Behavior in Modern China—A Report of the Nationwide “Sex Civilization” Questionnaires on 20,000 Subjects in China*, Shanghai, China: Shanghai Shan Lian Shu Dian, 1992 (in Chinese); and Ruan F, 1991, op. cit. (see reference 1).
- Liu D, 1992, op. cit. (see reference 5).
- Pan S, A sex revolution in current China, *Journal of Psychology & Human Sexuality*, 1993, 6(2):1–14; and Lou CH et al., Effects of a community-based sex education and reproductive health service program on contraceptive use of unmarried youths in Shanghai, *Journal of Adolescent Health*, 2004, 34(5):433–440.
- Chen J, China and the continuous development, *People’s Daily*, 2001, <<http://www.creim.org.cn/news/news/20010203.htm>>, accessed July 13, 2003 (in Chinese).
- Ma X, Tan G and Yan H, Discussion of the issues related to sex education among college students, *Chinese Journal of School Health*, 2001, 22(1):49 (in Chinese).
- Liu D et al., Investigation of STD/AIDS attitudes and knowledge in 1,000 college students, *Chinese Journal of STD & AIDS Prevention and Control*, 1999, 5(5):215–217 (in Chinese); and Ren X, The suggestion and urgency of sexuality education among adolescents, *Chinese Public Health*, 2000, 16(10):952–953 (in Chinese).
- Zhen L et al., Research and investigation on contemporary college students, *Journal of Tianjin Normal University*, 2000, 4:36–41 (in Chinese).
- Zhang S, Sexuality psychology and education of college students, *Higher Agricultural Education*, 2000, 10:32–35 (in Chinese).
- Fan MS et al., Western influences on Chinese sexuality: insights from a comparison of the sexual behavior of Shanghai and Hong Kong freshmen at universities, *Journal of Sex Education and Sex Therapy*, 1995, 21(3):158–166.
- Huang X and Zhen Y, *Psychological Characteristics and Education Among Contemporary Chinese College Students*, Shanghai, China: Shanghai Press, 1998 (in Chinese).
- Xia S, Investigation and research on sexual attitudes and behaviors among college students, *Chinese Journal of School Health Education*, 1999, 15(5):39–41 (in Chinese).
- Pan S and Yang L, *Sexuality of Chinese College Students: A Ten-Year Longitudinal Nationwide Randomized Study*, Beijing: Social Science Documentation Publishing House, 2004 (in Chinese).
- Ren X, 2000, op. cit. (see reference 10).
- Krejcie RV and Morgan DW, Determining sample size for research activities, *Educational and Psychological Measurement*, 1970, 30(4):607–610.
- Liu S, Exploration on adolescent sex education, *Contemporary Youth Research*, 2001, 1:37–42 (in Chinese).
- Chang C et al., Application of peer education in AIDS/STD/safer-sex education in college students majoring in engineering and science, *Chinese Journal of School Health Education*, 1999, 15(11):16–19 (in Chinese); and Xu K et al., The discussion on sexual health among college students, *Chinese Journal of School Health*, 2000, 21(2):112–113 (in Chinese).
- Liu D, *The Sex Culture of Ancient China*, Yinchuan, China: Ningxia People’s Press, 1993 (in Chinese).
- Liu D, 1992, op. cit. (see reference 5); and Zhou L and Ye S, The psychological analysis of premarital pregnancy, paper presented at the 1998 Symposium on the Population of Youth and the Middle Aged—The Problem and Solution of Chinese Population at the Turn of the Century, Guangzhou, China, 1998 (in Chinese).
- Higgins LT et al., Attitudes to marriage and sexual behaviors: a survey of gender and culture differences in China and United Kingdom, *Sex Roles*, 2002, 46(3–4):75–89.
- Pan S and Yang L, 2004, op. cit. (see reference 16).
- Xinhua News Agency, China targets adolescent health with sex education, July 14, 2003, <<http://www.china.org.cn/english/culture/69833.htm>>, accessed July 16, 2003.
- Xinhua News Agency, First sex education VCD for youngsters released, May 31, 2002, <<http://www.china.org.cn/english/LE/33619.htm>>, accessed July 16, 2003.
- Eastday.com, Online sex education under test in Shanghai, June 18, 2003, <<http://www.china.org.cn/english/culture/67305.htm>>, accessed July 16, 2003.

RESUMEN

Contexto: Los estudiantes universitarios son más proclives que otros estudiantes a ser sexualmente activos. Para mejorar la educación sexual de este sector de la población en China, los educadores deben conocer cuáles son las necesidades y preferencias de dichos estudiantes en cuanto a la información sobre la sexualidad.

Métodos: En 2002, los estudiantes de una universidad china grande respondieron a una encuesta sobre el historial de la educación sexual impartida en los centros de estudio y otras fuentes de información sobre la sexualidad. La encuesta también solicitó información sobre las preferencias de los estudiantes con respecto a los temas que desearían si la educación sexual fuera incluida en el currículo a nivel universitario, su nivel de comodidad al recibir esta información, y sus puntos de vista acerca de estrategias eficaces para este tipo de enseñanza.

Resultados: Antes de ingresar a la universidad, el 47% de los encuestados no habían recibido educación sexual en la escuela; no obstante, todos los encuestados habían tomado cursos que incluyeron el tema de la reproducción, por lo general (78%) a principios de la enseñanza media. Las fuentes como el material im-