

Premarital Sex among Never Married Young Adults in Contemporary China: comparisons between males and females

HE LEI

Department of Sociology

Texas A&M University

Introduction

Premarital sex is sexual behavior engaged in by persons who are never married. Biologically, it is not a problem for individuals who are sexually mature and become capable of reproduction. However, premarital sex has been morally unacceptable in almost every human society that regards marriage as the legitimate requirement for sexual behavior (Christensen 1960).

This began to change from last century, started with a so-called “sex liberation” in the Western world in 1960s and 1970s. It refers to increased acceptance of sexual behavior outside of traditional marriage relationships, including premarital sex among never married young adults (Bell and Coughy 1980).

Twenty years later, Rindfuss and Morgan (1983) suggest a quiet sexual revolution in Asia, which is commonly regarded as more conservative than the Western world. Although their finding emphasized on an increase in intercourse frequency in Asia, this revolution could also be seen in an increase in premarital sex (Zhou 1989).

For a long time, studies on premarital sex in China are very limited. Despite of limited data, researchers also deliberately avoid talking about this issue, due to pressure resulting from conservative culture and extremely rigid family moralities.

From 1990s, more and more people began to pay attention to this issue. It was firstly caused by increasing number of reports on adverse effects of engaging in premarital sex, such as induced abortion and STDs among never married young adults. Researchers also initiated into this topic by focusing on specific subgroups in China, such as never married college students and migrants. Previous studies provided evidence of substantial changes in attitudes and sexual behavior among these people (Zhang et al

1999, Zheng et al 1999); nevertheless they were still reported as having poorer sexual knowledge, less open attitudes, and more conservative sexual activity compared to young people in western countries (Tang et al. 1997; Higgins et al. 2002; Higgins and Sun 2007; Yu 2007; Yu 2010).

I am personally interested in this study primarily because I am a member of young adults in contemporary China. My personal experience resembles other members in the same cohort to some extent. I still remember how shy when we were trying to talk about sex with friends; how strongly our parents held position against premarital sex; and how ashamed when we heard someone in our age were involved in premarital sex. However, as I was growing older, talking about premarital sex was becoming less prohibited or restricted. Friends, parents, and even mentors in school and college have expressed their attitudes toward premarital sex and knowledge on contraceptive methods as sex education.

It seems that premarital sex is more acceptable in young generations, but still, various attitudes and behaviors exist. In this study, I would like to examine premarital sex among never married young adults in contemporary China, utilizing data from China Health and Family Life Survey, which provide a nationally representative subsample of never married young adults aged 20 to 34. Cross tabulation, chi-square test and logistic regression model are used to test the the difference between males and females, as well as effects of other influential factors on premarital sex for each gender group.

Literature Review

There are abundant studies discussing factors related to premarital sex. Most of them are done in the western culture, while a few studies particularly focus on premarital sex in Chinese society. Next, I will discuss the effects of various factors based on findings from previous studies.

Sex

As the most prominent sociologist in this area, Reiss (1956) is the first one who did a detailed analysis of the double standard in premarital sexual intercourse, which generally states that “premarital sexual intercourse is wrong for all women”, while it is “excusable for all men”. Although his analysis was based on the American social context in 1950s, some of his hypotheses perfectly match the facts of Chinese society. For example, according to him, as a result of the double standard, males expect virginity in their wives, but encourage eliminating virginity in their premarital female partners. In traditional Chinese society, insistence on female virginity strictly restrains women’s sexual behavior and enhances their expectation of marriage. In the opposite, in extreme cases, males are encouraged by their parents to have premarital sex with their partners, in order to reduce the “price of bride”, as well as to insure the marriage (Zhou 1989). Even for Chinese young adults living in a more open society, gender difference is observed in their premarital sexual behavior (Huang and Uba 1992, Tang et al 1997).

Age

According to previous studies, the effect of age on premarital sex is tangled. On the one hand, never married young adults with higher age are generally facing higher risk of premarital sex, simply due to the fact that they have been exposed to this risk in longer

period. On the other hand, younger generations usually have more liberal attitudes and behaviors (Zha and Geng 1992). As Harding and Jencks (2003) concluded, the effect of age consists of three parts: 1) cohort effect, which refers to replacement of more conservative birth cohorts born early by more liberal cohorts born later; 2) age effects, which refers to age-related changes; and 3) period effects, which means culture changes that alter the views of all cohorts simultaneously. Therefore, it is difficult to summarize a general relationship between age and premarital sex, since these three effects could work in opposite directions.

Socioeconomic Status: Income, Education and Place of residence

In the light of the double standard, men and women are expected to demand quite different things in partnership (Elaine et al 1978). Men tend to take advantage of their socioeconomic status and to have sex with women from a lower social class, while women tend to have sex with men who have higher socioeconomic status than their own (Ehrmann 1959, Blau 1967). Another study in Taiwan, which shares the same Chinese culture, demonstrated that educational attainment and working experience did not affect premarital sex for young female adults (Chang 1996). In addition, young adults living in urban are more likely to have premarital sex (Zhou 1989).

Attitudes

Previous study reflected significant differences between males' and females' attitudes towards premarital sex when the couple is casually acquainted (Wilson and Medora 1990). However, some other studies found no gender difference in attitudes towards premarital sex of couples who are in love or engaged (Wilson and Medora 1990, Huang and Uba 1992).

However, behavior and attitude are not always consistent with each other. For females in societies with relatively permissive sexual norms, such as those in western countries, consistency is found in their attitudes and behavior. For example, a rapid change in attitudes in late 1960s in the US implied a decline in attitudes-behavior discrepancy (Christensen and Gregg 1970). Nevertheless, in a restrictive culture, discrepancy was found in women's attitudes and behavior, although they tended to confine to conservative attitudes (Maykovich 1976). A survey in 1989 and 1990 in China confirmed this argument. In spite of the increasing incidence of premarital sex for both young men and women, it is still widely believed that women should be virgins at the time of their marriage (Bullough and Ruan 1994). This was also confirmed in comparative studies between China and United Kingdom (Higgins et al 2002, Yu 2007). Compared to western countries, China was still characterized by conservative sexual norms (Rissel 2003, Finer 2007, and Yu 2010), which was more restrictive for females than for males.

Family Structure

Parents might be the most important guidelines for children's attitudes and behavior (Thornton and Camburn 1987). The impact of family on adolescents' involvement in premarital sex in western countries was verified in a great number of studies (Flewelling and Bauman 1990, Wu and Martinson 1993, Pick and Palos 1995, Miller et al 1997, Rossi 1997, Blum et al 2000, Santelli et al 2000, Wu 2001, Miller 2002, Pearson and Muller 2006). There were a large proportion of college students reported that their sexual standards were quite similar to those of their parents, and family was the key institution for the development of premarital sexual attitudes and behavior

(Rubin 1968). Higgins and Sun (2007) demonstrated that in China young adults with highly educated parents showed more liberal attitudes.

However, to my knowledge, there are few researches focusing on the direct impact of family structure. One reason could be that samples in nearly all prior studies were either college students or young migrants, who were typically living without their parents (Hong et al 1994, Fan et al 1995, Tang et al 1997, Zheng et al 2001).

Other Consideration

While this study focuses on young adults aged 20 to 34, their experience in adolescent years might continue to affect their adult's life. Considering the great difference between urban and rural areas in China, place of residence at age 14 is used to capture general experience at adolescent years. People lived in urban areas at age 14 are expected to have more liberal sexual behavior.

Hypotheses

As discussed above, this study hypothesizes that whether or not a young adult had premarital sex is related with his or her age, residence place at age 14, place of current residence, socioeconomic status, attitudes and family structure. At this point, specific hypotheses are generated based on previous studies without gender difference. However, as a preliminary examination, gender difference is generally assumed, and evidence for that is expected, based on analyses of separate models for males and females.

To be more specific, there are seven hypotheses as follows:

- 1) The risk of having premarital sex increases as age increases.
- 2) Living in urban areas increases the risk of having premarital sex compared to living in rural areas.

- 3) Living in urban areas at age 14 increases the risk of having premarital sex compared to living in rural areas.
- 4) Education is positively associated with the risk of having premarital sex.
- 5) Income is positively associated with the risk of having premarital sex.
- 6) Young adults with liberal attitudes towards premarital sex are more likely to have had premarital sex than young adults with conservative attitudes.
- 7) Living with parents decreases the risk of having premarital sex.

Data

The data used in this study is China Health and Family Life Survey (CHFLS). CHFLS is a national probability survey of sexual behavior. With the exclusion of Tibet, the survey collected data from China's adult population aged 20 to 64 years. The sample was drawn with a four-stage area-probability sampling process according to standard procedures for complex samples (Levy and Lemeshow 1999). Respondents were selected from 14 strata, 48 primary sampling units, and 60 neighborhoods, with probabilities proportional to their respective populations (Parish et al. 2007). Interviews were conducted between 1999 and 2000. 3,821 individuals' records were finally provided in this dataset.

This survey focuses on sexual behavior in contemporary Chinese society, but it also provides valuable information on demographic and socioeconomic characteristics of both married and unmarried people. In this study, I will focus on never married young adults aged 20-34 at the survey time. 464 records are available according to this criterion.

The investigators of this survey found that the data had too few individuals in their 20s, 50s and between 60 and 65 according to national census figures and annual population surveys conducted by the government. Therefore, adjusted weights for both sampling fractions and age distributions are provided in order to make this a national representative sample (Parish et al. 2007). Data were analyzed using STATA svy methods, and all results presented in this paper were adjusted for sample strata, primary sampling units, and population weights.

Operationalization

The dependent variable used to measure never married young adults' sexual behavior is "sexnow", recording whether respondents have experienced sexual activity in the past year. It is a dichotomous variable, which reflects respondent's recent premarital sexual behavior. It is constructed by using a program which takes all related questions in this survey into consideration.

According to literature review and hypotheses, this study contains eight major explanatory variables. The two demographic variables are sex and age. Sex is a dummy variable, 1 for male and 0 for female. Age is an interval variable.

Place of residence at 14 is used to capture the general adolescent's experience. It is a dummy variable, 1 for urban and 0 for rural. While this is a very rough measure, considering the great heterogeneity between rural and urban areas and homogeneity within rural or urban areas, this variable is effective to reflect their experience to some degree.

Next, three sets of variables are used to measure respondents socioeconomic status, including current place of residence, educational attainment and monthly income.

The first two are dummy variables, reflecting whether they lived in urban or not, 1 for yes and 0 for no. Three dummy variables, middle school, high school, and college or above are constructed to indicate educational attainment, where illiterate and primary school is used as the reference group. Monthly income is divided into three categories, less than 500 RMB, 500-999 RMB and 1000 RMB or higher, measured by two dummy variables and the category less than 500 RMB is used as reference.

Then, a dummy variable is used to reflect their attitudes towards premarital sex based on respondents' answers to questions concerning attitudes towards premarital sex. For this dummy variable, 1 refers to liberal attitudes, while 0 refers to conservative attitudes. One thing needs to be kept in mind is the premise in these questions that two people involved in premarital sex eventually get married. Therefore, "liberal attitudes" here might not be as liberal as in other studies.

Finally, I would like to look into the effect of family structure, measured by their residential pattern. While the negative effect of living with a single parent is widely acknowledged in western countries, the single-parent family is not popular in China, because neither premarital conception nor divorce happens frequently in China (Wang and Yang 1996; Walther 2006; Dong et al. 2002). Therefore, rather than comparing those living in two-parents families to those living in single-parent families, I will particularly focus on the influence of coresidence with any parents, by using a dummy variable which indicates whether the respondents coreside with parents at the survey time or not. The underlying consideration is that parents' conservative attitudes and strict control over premarital sex would effectively impose to young adults, no matter one or two parents are present in a family. In addition, there were a relatively large number of never married

young adults living in shared units, including dormitory, shared rental unit and work site. The large impact of friends' on young adults' own sexual behavior has already been demonstrated in the US (Schulz et al. 1977). So, another dummy variable is employed to distinguish respondents living in shared units from others. Never married young adults who were not living with their parents or in shared units with peers are categorized as reference group, among which most were living by themselves or with their partners.

Methods

This study looks at premarital sex and its influential factors among never married young adults. The key dependent variable that measures premarital sex is a dummy variable indicating whether or not the respondent had sex in the past year, as mentioned before.

First, descriptive statistics are used to compare differences between males and females in terms of their premarital sexual behavior.

Next, logistic models with all independent variables are constructed to show whether difference between male and females is statistically significant, after controlling for all the other independent variables.

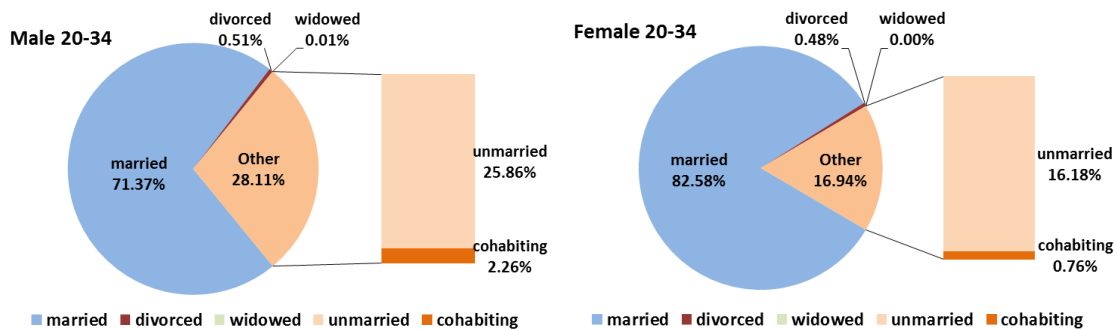
Finally, a series of logistic models are constructed for males and females separately. The first one includes age as its predictor, which is the only demographic variable in this study. Since there are separate models for males and females, sex doesn't have any variation within each model. The second model includes education, place of residence, place of residence before at age 14 and monthly income as its independent variables, all of which reflect respondents' socioeconomic status. Then, attitude towards premarital sex is examined in the third model. The fourth model has family structure as

its influential factor. Finally, a logistic model containing all independent variable is used to examine the effect of each independent variable, controlling for all the other independent variables.

Results

Finally, 463 never married young adults aged 20 to 34, represent a subpopulation over 74 million in China, are included in this study. After adjusting for sample strata, primary sampling units, and population weights, this subpopulation consists of 40.11% females and 59.89% males. According to their reported marital status, both the unmarried and cohabiting respondents are categorized as the never married. The never married males accounted for 28.11% of all males aged 20-34, and the never married females account for 16.94% of all females aged 20-34 in the population.

Figure 1. Marital status for males and females aged 20-34, China, 2000



Even though we are looking at adults rather than adolescents, a surprisingly small proportion of the female subpopulation responded that they had ever experienced sex. Compared to 15.17% of never married females aged 20 to 34 who had ever had premarital sex, it seems that never married young males (44.35%) had higher risk of premarital sex (Table 1). However, the experience of sex did not necessarily reflect their recent sexual behavior. Then we asked whether they had sex in the past year. Not

surprisingly, males had higher risk again. Since this variable measures their most recent sexual behavior, it will be used as dependent variables in following analysis, in order to reach more solid relationships between their premarital sex and influential factors.

Table 1. Sexual behavior between never married males and females aged 20-34, China 2000

	Have ever had sex		Had sex in past year	
	Female	Male	Female	Male
No	84.83%	55.65%	86.99%	62.73%
Yes	15.17%	44.35%	13.01%	37.27%
Chi square test	P=0.003		P=0.001	

For this subpopulation, females differed from males in various characteristics. Females have a younger age structure with a mean age of 21.70, compared to 23.07 for males. Half of never married female young adults were located in urban areas, while most never married males were lived in rural areas. However, for both males and females, the majority had experience of living in rural when they were 14. Compared to males, never married young females had higher educational attainment, which is inconsistent with general impression. Despite that, males had higher income than females. 17.61% males had a monthly income over 1,000, but only 6.11% females were in this category. More than half males (59.71%) and females (55.53%) had liberal attitudes towards premarital sex. Finally, living with parents was the dominant residential pattern of never married young adults, with 76.32% for males and 75.86% for females. 11.12% males and 17.31% females shared units with their peers, such as classmates or workmates. (Table 2)

The significant difference between males and females concerning their recent sexual behavior has already been shown. Before looking into separate models, a general model including all the other independent variables, as well as gender, is constructed to statistically justify why separate models for males and females are necessary. The results

reflect that even controlling for all the other independent variables, the difference between males and females of their recent sexual behavior is statistically significant. The odds of had sex in the past year for never married males aged 20 to 34 were more than 3 times higher than that for females (Table 3).

Table 2. Descriptive statistics for never married males and females aged 20-34, China 2000

Independent Variables	Mean/Percentage		Independent Variables	Mean/Percentage	
	Female	Male		Female	Male
Age	21.64	23.07	Monthly Income		
Place of residence at age 14			0-499	71.85%	52.44%
Rural	64.64%	77.06%	500-999	22.04%	29.96%
Urban	35.36%	22.94%	1000+	6.11%	17.61%
Place of current residence			Attitude towards premarital sex		
Rural	49.38%	59.52%	conservative	44.47%	40.29%
Urban	50.62%	40.48%	liberal	55.53%	59.71%
Education			Residential Pattern		
Primary School or lower	1.22%	11.09%	other	6.82%	12.56%
Middle School	55.06%	37.88%	shared units	17.31%	11.12%
High School	31.30%	42.86%	parent's home	75.86%	76.32%
College or above	12.41%	8.18%			

Table 3. Odds Ratios Estimates: had sex in the past year, never married adults aged 20-34, China 2000

Independent Variables	Odds Ratio	P Value	Independent Variables	Odds Ratio	P Value
Male	4.191	0.000	Age	1.112	0.020
Place of residence at age 14			Monthly Income		
Rural (reference group)			0-499 (reference group)		
Urban	3.609	0.005	500-999	2.724	0.022
Place of current residence			1000+	2.248	0.144
Rural (reference group)			Attitude towards premarital sex		
Urban	0.588	0.355	conservative (reference group)		
Education			liberal	1.207	0.727
Primary School or lower (reference group)			Residential Pattern		
Middle School	5.929	0.000	other (reference group)		
High School	9.788	0.000	parent's home	0.448	0.101
College or above	8.023	0.001	shared units	2.053	0.235

Based on the consistent theoretical and empirical findings, it is meaningful and necessary to conduct the analysis separately for males and females. Next, a set of logistic models are employed to examine the relationships between premarital sex and influential factors for never married females and males aged 20 to 34 separately.

After controlling all the other variables, living in urban area, graduation from middle school, and liberal attitudes all significantly increased the risk of having premarital sex for never married females, while living with parents significantly decreases the risk. For example, the odds of having premarital sex for those living in urban areas were 15 times higher than odds for those living in rural areas, controlling for all the other independent variables. Although young women with education of middle school had much higher odds of having premarital sex, young women received education in high school or above did not show any significant difference from those who only received education in primary school or lower. Liberal attitude greatly increased the odds of having premarital sex that the odds for females with liberal attitude towards premarital sex were 2 times higher than the odds for those who insisted in conservative attitude. Living with parents worked as a “protective” factor, which decreased the odds of having premarital sex by 75% compared to other residential patterns. (Table 4)

Interestingly, a different set of factors, other than those discussed above, had significant effects on sexual behavior for never married males. Living in urban areas at age 14 significantly increased the risk of having premarital sex. Both education and income were positively related with the odds of having premarital sex, while place of current residence, attitudes and residential pattern, which had significant effects on females, did not make any significant difference for males’ premarital sex. (Table 4)

Table 4. Odds Ratios Estimates: had sex in the past year, never married females and males aged 20-34, China 2000

Independent Variables	Female	Male	Independent Variables	Female	Male
Age	1.10	1.09	Monthly Income		
Place of residence at age 14			0-499 (ref. group)		
Rural (ref. group)			500-999	1.65	4.19**
Urban	1.47	6.11**	1000+	2.92	2.69
Place of current residence			Attitude towards premarital sex		
Rural (ref. group)			conservative (ref. group)		
Urban	16.35**	0.27	liberal	3.16**	1.00
Education			Residential Pattern		
Primary School or lower (ref. group)			other (ref. group)		
Middle School	9.95**	5.53**	parent's home	0.25**	0.55
High School	3.16	11.78**	shared units	0.47	3.40
College or above	2.22	16.97**			

** P<0.05

Discussion and Implication

This study is a preliminary examination of general pattern of premarital sex among Chinese never married young adults ages 20 to 34, utilizing a nationally preventative sample. The results reflected a larger proportion of young never married adults who have had sex comparing to previous findings. However, compared with young adults in the US, sexual behavior among never married young adults in China still could be characterized as conservative. While less than 40% never married males and 15% never married females ages 20 to 34 reported premarital sex in China, in the US, by age 35, 94% women and men reported that they had premarital sex. Although difference between males and females in terms of adolescent sexual behavior is identified in the US, as age increases, almost all people have ever sex had done so premarital at some point (Finer 2007).

In addition, this study demonstrates an interesting finding that influential factors worked differently for females and males. Socioeconomic status, especially education

and income, had significant impact on males but did not affect females' involvement in premarital sex. Generally, males with higher education attainment and income were more likely to have premarital sex. This is consistent with previous findings that males tend to take advantage of their higher socioeconomic position to have sexual experience, since females prefer to have sex with males who have higher socioeconomic status than themselves. Moreover, living in urban area at 14 also increased males' risk of premarital sex, which implied the continuing effect of previous experience on current behavior to some extent. Attitude towards premarital sex was a good predictor for females but not for males. According to that, males' behaviors were not necessarily consistent with their attitudes in term of premarital sex. No matter what their attitudes were, never married young males were more likely to have premarital sex. Finally, living with parents "protected" females from premarital sex. It seems that parents were eager to protect their daughters' virginity, while they did not care their sons. This also partly confirmed that the double standard of premarital sex for males and females still existed in contemporary China.

Concerning the potential results from premarital sex, these findings have more practical implications. One important aspect is the prevalence of STDs and AIDS among never married young adults. HIV/AIDS and other STDs are rapidly increasing in China and the huge population implies that AIDS epidemic threaten might become worse than that in other parts of the world (Brown and Xenos 1994, Gil 1994, Grusky et al 2002). This might be even more complicated due to the incomparably large size of floating population in China (Zhang et al 1999). According to the analysis, 6 percent of never married males and 2 percent of never married females who had premarital sex in the past

year also reported sexually transmitted diseases. Although they were not large percentages, concerning the large population, there could be a great number of never married young adults having STDs. One cause might be commercial sex, especially for males. Nearly 30 percent of never married males who had premarital sex in the past year reported that they had experienced commercial sex, and around 5 percent never married but sexually active males and females were sex workers.

Another criticism focuses on the failure of sex education for adolescents and young adults in China. Before 1980s, sex was a taboo subject in China accompanied by the absence of sex education and the lack of scientific study of sex. Although, this situation began to change from early 1980s, at that time, premarital sex was still highly stressed (Zha and Geng 1992). However, increases in premarital sex, premarital birth, and induced abortion among never married young adults reflect a large number of unmet needs for methods of contraception and sex education from late 1980s (Wu et al 1992, Xu et al 2004, Ma et al 2006). Lack of sex education and unprotected sexual behavior could lead to even worse results for young migrants, who are at a disadvantage in terms of social support (Zheng et al 2001, Wang et al 2007). Recent studies emphasized that sex education have positive influences on contraceptive practice among never married young adults (Lou et al 2004). Since we look at young adults rather than adolescents in this study, it is unlikely or necessary to limit premarital sex among this group of people. Therefore, in contemporary China, sex education is essentially important for never married young adults to avoid unwanted results, such as STDs, induced abortion or wanted birth.

Finally, this study suggests that examination of sexual behavior among never married young adults should not be neglected. Never married women have been regularly excluded in official national surveys of fertility in China, not to mention never married men (Li and Newcomer 1996). Based on the results in this study, it is necessary and very urgent for national surveys of sexual behavior, reproductive health or fertility to take this group of individuals in their samples.

Reference:

- Barkan, S. E. (2006). Religiosity and Premarital Sex in Adulthood. *Journal for the Scientific Study of Religion*, 45(2), 407-417.
- Bell, R. R., & Coughy, K. (1980). Premarital Sexual Experience among College Females, 1958, 1968, and 1978. *Family Relations*, 29(3), 353-357.
- Blau, P. M. (1967). *Exchange and Power in Social Life*. New York: Wiley.
- Blum, R. W., Trisha Beuhring, Shew, M. L., Bearinger, L. H., Sieving, R. E., & Resnick, M. D. (2000). The effects of race/ethnicity, income, and family structure on adolescent risk behaviors. *American Journal of Public Health*, 90(12), 1879-1884.
- Brown, T., & Xenos, P. (1994). AIDS in Asia: the gathering storm. *Asia Pacific Issues*(16).
- Bullough, V. L., & Ruan, F. F. (1994). Marriage, Divorce, and Sexual Relations in Contemporary China. *Comparative Family Studies* 25(3), 383-393.
- Chang, J.-S. (1996). What do education and work mean? Education, nonfamilial work/living experiences and premarital sex for women in Taiwan. *Journal of Comparative Family Studies*, 27(1), 13.
- Christensen, H. T. (1960). Cultural relativism and premarital sex norms. *American Sociological Review*, 25(1), 31-39.
- Ehrmann, W. (1959). *Premarital Dating Behavior*. New York: Holt.
- Fan, M. S., Hong, J. H., Ng, M. L., Lee, L. K. C., Lui, P. K., & Choy, Y. H. (1995). Western influence on Chinese sexuality: insights from a comparison of the sexual behavior and attitudes of Shanghai and Hong Kong Freshman at Universities. *Journal of Sex Education and Therapy*, 21(3), 158-166.
- Finer, L. B. (2007). Trends in premarital sex in the United States, 1954—2003. *Public Health Reports*, 122, 73-78.
- Flewelling, R. L., & Bauman, K. E. (1990). Family structure as a predictor of initial substance use and sexual intercourse in early adolescence. *Journal of Marriage and Family*, 52(1), 171-181.
- Gil, V. E. (1994). Sinic conundrum: A history of HIV/AIDS in the People's Republic of China. *The Journal of Sex Research*, 31(3), 211-217.
- Grusky, O., Hongjie Liu, & Johnston, a. M. (2002). HIV/AIDS in China: 1990–2001. *AIDS and Behavior*, 6(4), 381-393.
- Harding, D. J., & Jencks, C. (2003). Changing attitudes toward premarital sex: cohort, period, and aging effects. *The Public Opinion Quarterly*, 67(2), 211-226.
- Hatfield, E., Walster, G. W., & Traupmann, J. (1978). Equity and premarital sex. *Journal of Personality and Social Psychology*, 36(1), 323-334.

- Higgins, L. T., & Sun, C. (2007). Gender, social background and sexual attitudes among Chinese students. *Culture, Health & Sexuality*, 9(1), 31-42.
- Higgins, L. T., Zheng, M., Liu, Y., & Sun, C. H. (2002). Attitudes to marriage and sexual behaviors: a survey of gender and culture differences in China and United Kingdom. *Sex Role*, 46(3/4), 75-89.
- Hong, J. H., Fan, M. S., Ng, M. L., Lee, L. K. C., Lui, P. K., & Choy, Y. H. (1994). Sexual attitudes and behavior of Chinese university students in Shanghai. *Journal of Sex Education and Therapy*, 20(4), 277-286.
- Huang, K., & Uba, L. (1992). Premarital sexual behavior among Chinese college students in the United States. *Archives of Sexual Behavior*, 21(3), 227-240.
- Li, R. M., & Newcomer, S. F. (1996). The exclusion of never-married women from Chinese fertility surveys. *Studies in Family Planning*, 27(3), 148-154.
- Lou, C.-H., Wang, B., Shen, Y., & Gao, E.-S. (2004). Effects of a community-based sex education and reproductive health service program on contraceptive use of unmarried youths in Shanghai. *Journal of Adolescent Health*, 34, 433-440.
- Ma, Q., Ono-Kihara, M., Cong, L., Xu, G., Zamani, S., Ravari, S. M., et al. (2006). Sexual behavior and awareness of Chinese university students in transition with implied risk of sexually transmitted diseases and HIV infection: A cross-sectional study. *BMC Public Health*, 6(232), 1-11.
- Maykovich, M. K. (1976). Attitudes versus behavior in extramarital sexual relations. *Journal of Marriage and Family*, 38(4), 693-699.
- Miller, B. C. (2002). Family influences on adolescent sexual and contraceptive behavior. *The Journal of Sex Research*, 39(1), 22-26.
- Miller, B. C., Norton, M. C., Curtis, T., Hill, E. J., Schvaneveldt, P., & Young, M. H. (1997). The timing of sexual intercourse among adolescents. *Youth and Society*, 29(1), 54-83.
- Parish, W. L., Laumann, E. O., & Mojola, S. A. (2007). Sexual behavior in China: Trends and comparisons. *Population and Development Review*, 33(4), 729-756.
- Pearson, J., & Muller, C. (2006). Parental involvement, family structure, and adolescent sexual decision making. *Sociological Perspectives*, 49(1), 67-90.
- Pick, S., & Palos, P. A. (1995). Impact of the family on the sex lives of adolescents. *Adolescence*, 30(119), 667-675.
- Reiss, I. L. (1956). The double standard in premarital sexual intercourse: A neglected concept. *Social Forces*, 34(3), 224-230.
- Reiss, I. L. (1967). *The social context of premarital sexual permissiveness*: New York: Holt, Rinehart and Winston.

- Rindfuss, R. R., & Morgan, P. (1983). Marriage, sex, and the first birth interval: the quiet revolution in Asia. *Population and Development Review*, 9(2), 259-278.
- Rissel, C. E., Richters, J., Grulich, A. E., Visser, R. O. d., & Smith, A. M. A. (2003). Sex in Australia: Attitudes towards sex in a representative sample of adults. *Australian and New Zealand Journal of Public Health*, 27(2), 118-123.
- Rossi, A. (1997). The impact of family structure and social change on adolescent sexual behavior. *Children and Youth Services Review*, 19(5/6), 369-400.
- Rubin, I. (1968). Review: The social context of premarital sexual permissiveness. *Journal of Marriage and Family*, 30(2), 534-535.
- Schulz, B., Bohrnstedt, G. W., Borgatta, E. F., & Evans, R. R. (1977). Explaining premarital sexual intercourse among college students: A causal model. *Social Forces*, 56(1), 148-165.
- Tang, C. S.-k., Lai, F. D.-m., & Chung, T. K. H. (1997). Assessment of sexual functioning for Chinese college students. *Archives of Sexual Behavior*, 26(1), 79-90.
- Thornton, A., & Camburn, D. (1987). The influence of the family on premarital sexual attitudes and behavior. *Demography*, 24(3), 323-340.
- Wang, B., Li, X., Stanton, B., Fang, X., Lin, D., & Mao, R. (2007). HIV-related risk behaviors and history of sexually transmitted diseases among male migrants who patronize commercial sex in China. *Sexually Transmitted Diseases*, 34(1), 1-8.
- Wilson, S. M., & Medora, N. P. (1990). Gender comparisons of college students' attitudes toward sexual behavior. *Adolescence*, 25(99), 615-627.
- Wu, L. L., & Martinson, B. C. (1993). Family structure and the risk of a premarital birth. *American Sociological Review*, 58(2), 210-232.
- Wu, Z. C., Gao, E. S., Ku, X. Y., S. Y. Lu, M. J. Wang, Hong, W. C., et al. (1992). Induced Abortion Among Unmarried Women in Shanghai, China. *International Family Planning Perspectives*, 18(2), 51-53.
- Xu, Q., Shenglan, T., & Garner, P. (2004). Unintended pregnancy and induced abortion among unmarried women in China: a systematic review. *BMC Health Services Research*, 4(1), 1-4.
- Yu, J. (2007). British-born Chinese teenagers: The influence of Chinese ethnicity on their attitudes towards sexual behavior. *Nursing and Health Sciences*, 9, 69-75.
- Yu, J. (2010). Young people of Chinese origin in western countries: a systematic review of their sexual attitudes and behaviour. *Health and Social Care in the Community*, 18(2), 117-128.
- Zha, B., & Geng, W. (1992). Sexuality in urban China. *The Australian Journal of Chinese Affairs*, 28, 1-20.
- Zhang, K., Li, D., Li, H., & Beck, E. J. (1999). Changing sexual attitudes and behaviour in China: implications for the spread of HIV and other sexually transmitted diseases. *AIDS Care*, 11(5), 581-589.

Zheng, Z., Zhou, Y., Zheng, L., Yang, Y., Zhao, D., Lou, C., et al. (2001). Sexual behaviour and contraceptive use among unmarried, young women migrant workers in five cities in China. *Reproductive Health Matters*, 9(17), 118-127.

Zhou, X. (1989). Virginity and premarital sex in contemporary China. *Feminist Studies*, 15(2), 279-288.