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Sex and Marriage: How Closely are they Related in the Philippines, Taiwan, and Thailand

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AYARR

Asian Young Adult Reproductive Risk Project

This research is a product of the East-West Center's Asian Young Adult Reproductive Risk (AYARR) project, supported by USAID through its MEASURE Evaluation Project. The AYARR project supports a research network devoted to producing an Asian regional perspective on young adult risk behaviors through secondary and cross-national comparative investigation of large-scale, household-based surveys of youth.

The project presently involves investigators and national surveys in six Asian countries. The government of **Hong Kong** (now the Hong Kong Special Administrative Region) has supported area-wide youth surveys, both household-based and in-school, in 1981, 1986, 1991, and 1996. The 1994 **Philippines'** Young Adult Fertility and Sexuality Survey (YAFS-II) was conducted by the Population Institute, University of the Philippines, with support from the UNFPA. **Thailand's** 1994 Family and Youth Survey (FAYS) was carried out by the Institute for Population and Social Research at Mahidol University, with support from the UNFPA. In **Indonesia**, the 1998 Reproduksi Remaja Sejahtera (RRS) baseline survey was funded by the World Bank and by USAID through Pathfinder International's FOCUS on Young Adults program. The RRS was carried out by the Lembaga Demografi at the University of Indonesia under the supervision of the National Family Planning Coordinating Board (BKKBN). The **Nepal** Adolescent and Young Adult (NAYA) project, which includes the 2000 NAYA youth survey, is being carried out by Family Health International and the Valley Research Group (VaRG) with support from USAID to Family Health International (FHI). The **Taiwan** Young Person Survey (TYPF) of 1994 was carried out by the Taiwan Provincial Institute of Family Planning (now the Bureau for Health Promotion, Department of Health, Taiwan) with support from the government of Taiwan.

Abstract

Using large-scale national young adult reproductive health (YARH) surveys conducted in 1994, this paper examines the sexual activities among young men and women aged 15–24 in the Philippines, Taiwan, and Thailand. We examine the extent of sexual activity and its association with marriage among the 15–24 year olds. We then analyze the factors associated with the probabilities of experiencing sexual initiation by types of first sexual partner classified as marital and non-marital.

Among the three countries, sexual initiation begins earliest in Thailand and latest in Taiwan, both for men and women. Sexual initiation that precedes marriage by a few years is very common among men. By age 24, 64% of Filipino men, 44% of Taiwanese men, and 78% of Thai men experience sex but only 26%, 9%, and 27% respectively get married. The age patterns of sexual initiation and marriage are similar among young women, except in Taiwan. Over 90 percent of the Filipino women and over 98% of Thai women aged 24 who have had sex are married but only about two-thirds of Taiwanese women aged 24 who have had sex are married.

In all three countries, men's first sexual experiences were predominantly non-marital. Among the 15–24 year old men who ever had sex, 87% in the Philippines 92% in Taiwan, and 93% in Thailand had non-marital first sex. Among women aged 15–24 who ever had sex, 30% had non-marital first sex in the Philippines and Thailand, but 70% of did in Taiwan.

Two indicators of early transition to adulthood, leaving parental home at an early age and leaving school at an early age, increase the risk of having had non-marital first sex to a large extent among women. Among men, the first one is associated with increased risks of non-marital first sex in Taiwan and Thailand, and the second one, only in Taiwan. Urban exposure increases the risk of having had non-marital first sex for both men and women with two exceptions. Among Thai men, it lowers the risk, and among Taiwanese men, it has no effect.

Having some college education or planning to have college education lowers the probability of having non-marital first sex substantially among Filipino women and Thai women. Among Taiwanese women, it increases the probability of having non-marital first sex. It has no effect on non-marital first sex among men.

Separation of sex from marriage among women is not only more common in Taiwan, but is also more common among socially more advanced group of women within Taiwan. This finding suggests that separation of sex from marriage is likely to increase in other countries with further social modernization once the pattern initiates within the country.

The prevalence of contraceptive use among sexually active single youth is surprisingly low in all three countries. A new approach for educating young adults about reproductive health risks associated with unprotected non-marital sex and ways of reducing the risks need to be developed and implemented.

Sex and Marriage: How Closely Are They Related in the Philippines, Taiwan, and Thailand?

*Minja Kim Choe, Hui-Sheng Lin, Chai Podhisita,
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Introduction

Recent social, economic, and demographic changes that took place in Asian countries have resulted in dramatic changes in the lives of young adults. Educational opportunities have increased greatly as well as employment opportunities for women. These changes, in turn, resulted in delayed marriages and increases in the proportions of men and women who would never marry (Feranil 1984; Guest and Tan 1994; Jones 1997; Lin, Choe, and Tsuya 1999; Lin, Lee, and Thornton 1994; Tan 1993; Smith, Alcantara, and de Guzman 1984; Xenos et al. 2001)

In most Asian countries, sexual activities of men and women used to be limited to within marriage to a large extent. Sexual relationships between a single man and a single woman, if it happened at all, would quickly lead to marriage. Exceptions, however, have been practiced. Some men had sexual relationships outside the marriage, mostly with commercial sex workers. Increasing age at marriage, together with social changes that facilitate close relationships between single men and women, and exposure to non-traditional life-styles through globalized mass media, are likely to have resulted in changes in the sexual behavior. Specifically, it is likely that, sexual activities among men and women that are not associated with marriage have increased. Previous studies indicate that such changes were occurring in the Philippines (Tan 1994) and Taiwan (Lin and Lin 1996; Thornton, Chang, and Lin 1994). Although national level studies do not exist, the prevalence of premarital sex among Thai male is believed to have increased (Isarabhakdi 2000).

Understanding the relationship between marriage and sexual behavior is important both for theoretical and practical reasons. Close examination of marriage and sexual behavior among youth provide better understanding of the nature of family formation and relationships within family, and how these may be changing during the process of economic development and social changes. High levels of sexuality not associated with marriage carry serious implications for the reproductive health risks. Risks of unwanted pregnancies and sexually transmitted infections would rise unless proper protections are practiced regularly. It is important to learn about the extent of non-marital sexuality and assess what the health policies and programs can do to meet the needs of youth to protect themselves from increased reproductive health risks.

This paper examines the sexual activities among young men and women in relation to marriage in the Philippines, Taiwan, and Thailand using large scale national young adult reproductive health (YARH) surveys conducted in 1994. We examine the extent of sexual activity and its association with marriage among men and women age 15–24 in the three countries. We then analyze the factors associated with the probabilities of experiencing sexual initiation by types of first sexual partner. Implications on the needs of policies and programs to protect youth from increased reproductive health risks will be discussed.

Data

We use data from large-scale youth surveys in each of the three countries, all conducted in 1994. These surveys were designed and carried out independently from each other, but have some common characteristics. All of them are based on youth residing in nationally representative samples of households in each country. All of these surveys include youth in their late teens and early 20s and covered both men and women of all marital statuses.

For the Philippines, we use data from the second Young Adult Fertility and Sexuality Survey (YAFS-II) conducted in 1994 by the University of Philippines Population Institute. The survey collected data from a national sample of 5,266 men and 5,612 women aged 15 to 24. See Raymundo, Xenos, and Domingo (1999) for more details about the survey and the main findings. For Taiwan, the 1994 Taiwan Young People Survey (TYS) conducted by Taiwan National Institute for Family Planning is used. The survey collected data from 884 men and 2,766 women of ages 15–29, a probability sample of residents in the Taiwan area. Some more details of the survey are described in Choe and Lin (2000). For Thailand, the Family and Youth Survey of 1994 is used. The survey collected data from a nationally representative sample of 1,087 men and 1,092 women age 15 to 24. The Institute for Population and Social Research, Mahidol University, conducted the survey. For more details about the survey and the main findings, see Podhisita and Pattaravanich (1995).

All of the surveys collected information on transition to adulthood such as schooling, living arrangements, employment, and marriage, as well as further information on dating, cohabitation, sexual behavior, and marriage, together with family composition and characteristics. The surveys used interview method for most part of data collection. However, items relating to more sensitive issues such as dating and sexual relationships were filled out by respondents.

We examine two events, first sexual intercourse and first marriage. The three surveys used slightly different approaches for obtaining information on whether the respondent ever experienced sexual intercourse, the date of first sex, first sexual partner, and the date of first marriage. In YAFS-II of the Philippines, single respondents were asked three questions to see if they ever had sexual experiences. The respondents who reported having experienced a single date were asked “*On the first single date, did you go all the way?*” and “*How old were you on your single date?*” The respondents who reported having a boy/girl friend at the time of survey were asked “*When you go out on dates, do (did) you go all the way?*” and “*What was your date’s relationship with you at that time?*” Later in the survey, everyone was asked “*Have you ever had sexual intercourse?*” “*What was her(his) relationship with you then?*” and “*At the time of your first sexual intercourse, how old were you?*” From these questions, we extract the information about whether the respondent ever had sex and whether the first sexual partner was the respondent’s fiancé(e) or not.

Married respondents in YAFS-II were asked same questions about the first date and dates with current husband. In addition, they were asked “*When you were still single, did you ever have sexual intercourse?*” The respondents who answered “yes” were then asked “*Was that with your first husband/wife or with someone else?*” “*In what month and year did you have your first sexual experience?*” “*How old were you then?*” and “*What was his/her relationship with you at that time?*” From these questions we determine the time of first sex and whether the first sexual partner was the first spouse or not. In our analysis, we identify the date of first marriage to be the date the respondent began to live with first spouse or partner of cohabitation. It is determined by questions “*In what month and year did you and your present husband/wife marry?*” “*In what month and year did you and your present husband/wife start living together?*” For the respondents who have been married more than once, the survey also asked “*In what month and year were you first married (did you and your first husband/wife start living together)?*”

The TYS of Taiwan asked “*Have you ever had sexual intercourse with someone in opposite sex?*” and “*How old were you then?*” for single respondents. The survey also asked number of different partners the respondent had sex with, whether the respondent was engaged or not at the time of survey, and if yes, time of engagement. The survey did not ask the relationship of the first sexual partner with the respondent. We assume that if the single respondent had sex with only one partner, and if the first sex took place after engagement, the partner was fiancé(e) of the respondent.

Married respondents in TYS were asked different set of questions: “*When is the first time you had the experience of sexual intercourse?*” “*How old were you then?*” “*When is the first time you had the experience of sexual intercourse: before engagement, after engagement and before marriage, or at the time of marriage?*” and “*Did you ever have sexual relationship with someone else other than your spouse?*” From responses to these questions we determine the time of first sex and whether the partner of first sex was first spouse or not. The time of marriage is determined by the responses to questions: “*When did you and your current spouse marry?*” “*How old were you at the time of this marriage?*” “*How many times have you been married?*” “*When did your first, (second, third) marriage take place?*” and “*How old were you then?*”

The FAYS of Thailand asked two questions about the date of marriage: “*Were you ever married?*” “*At what age did you first cohabit or marry?*” Regarding the first sexual experience, the survey asked “*Have you ever had sexual intercourse?*” “*At what age did you first have sexual intercourse?*” “*At the time of first sexual intercourse, were you married?*” and “*Who was your first sexual partner?*” From responses to these questions, we determine the time of first sex the time of first marriage or cohabitation, and whether the partner of first sex was first spouse or not.

Methods

We first examine the age pattern of first sexual experience and first marriage. Namely, we estimate the cumulative proportions of men and women who have experienced first sex by selected ages. We also estimate the cumulative proportions of men and women who are married by selected ages. These cumulative proportions are estimated using life table methods based on the age at first sexual intercourse and the age of first marriage. As mentioned earlier, marriage includes both formal and consensual marriage, and the age of first marriage is the age the couple first began to live together. Respondents who did not have premarital sex are considered to have had the first sex at the time of first marriage. Comparing the two sets of proportions, we will have some clues on how closely sexual initiation and first marriage are related.

As the key indicator of the close association between sexual relationship and marriage, we examine the respondent’s relationship with the first sexual partner in more detail. For this purpose we classify the respondents into three groups based on their sexual experiences and types of first sexual partner: (1) those who had their first sex with the spouse or fiancé(e) (labeled as “marital” first sex for convenience), (2) those who had their first sex with others (labeled as “non-marital” first sex for convenience), and (3) those with no sexual experiences. A variable indicating the type of first sex will be created (value 1 for the first group, value 2 for the second group, and value 0 for the third group) and used for analysis.

We then try to identify factors associated with the probability of having experienced marital first sex and non-marital first sex. In other words, we will identify factors associated with increased probabilities of having sex by the type of first sexual partner. Factors associated with the type of first sex (marital or non-marital) will be estimated using multinomial logit regression models. We limit the analyses for youth aged 15–24 although the TYS of Taiwan included older youth. The analyses are done separately for three countries and separately for men and women.

Studies on the timing of marriage document that socioeconomic development and modernization delay marriage (Lin, Lee, and Thornton 1994; Xenos and Gultiano 1992). We therefore expect that covariates that indicate socioeconomic status and modernization lower the probability of marital first sex. Previous studies have identified some key factors associated with variations in premarital sexual behavior among youth. Physical maturity, permissive community norms, not being connected strongly to family, school, or religion have been identified as key factors associated with higher probabilities of premarital sexual behavior in the U.S. (CDC 1994; Goodson et al. 1997; Kann et al. 1993; Neumark-Sztainer et al. 1996; Resnick et al. 1997; Udry et al. 1986). We expect that these factors are associated with increased probabilities of non-marital first sex in the Philippines, Taiwan, and Thailand as well.

As an indicator of the permissiveness of the community, we include urban exposure as one of the covariates. Youth population is quite mobile and it is difficult to describe the urban exposure fully. We take a simple approach of using just one indicator that is likely to measure the urban exposure during most of the childhood. We chose to use place of birth as indicator of urban exposure, except for Taiwan where we use current residence because the place of residence is not available. As indicators of socioeconomic status of the family, we use father's education and mother's education. Controlling for the effects of other factors, respondents with parents with high levels of education are likely to marry at later age than respondents whose parents have low levels of education. Parental education may not have a large effect on the probability of having sex not associated with marriage. Father's and mother's education are not included in the models for the Philippines because the information is missing for a large proportion of respondents.

Education has been identified as the key factor associated with delay of marriage in Asian countries including the Philippines, Taiwan, and Thailand (Casterline 1980; Guest and Tan, 1994; Lin 1988). We expect that higher education is associated with lower probability of marital first sex. The effect of education on non-marital first sex is expected to be complex. Higher education may increase non-marital first sex in communities where non-traditional behavior is tolerated to some extent. If non-traditional behavior is not tolerated well to the extent that future lives of youth is affected in some adverse manner, youth with higher education are more likely to want to avoid such behavior and are able to do it more successfully than the youth with lower level of education. In such communities, higher education may be associated with lower probability of non-marital first sex. Because our samples consist of youth aged 15–24, many respondents have not finished their education. As the indicator of level of completed education, we combine the current level of education and the respondents' plan for further education. A variable is created indicating whether the respondent already have some college education or plans to have college education.

Two variables indicating stages of transition to adulthood are examined. The variable indicating early experiences of living away from parents and being out of school are examined. Early experiences are defined as experiences before age 13 in the Philippines and Thailand, and before age 15 in Taiwan, considering that all transitions to adulthood (mean ages at completion of education and marriage, for example) occurs at substantially older ages in Taiwan than in the Philippines and Thailand. Early transition to adulthood is closely related to weak connectedness to family and school. Based on studies elsewhere (Han et al. 2001; Kann et al. 1993; Resnick et al. 1997), we expect that early transition to adulthood is associated with higher probability of marital first sex as well as non-marital first sex, controlling for the effects of other factors including age.

Results

Age Patterns of Sexual Initiation and First Marriage

Table 1 shows two related sets of statistics. The first is the set of cumulative proportions of men and women who have ever experienced sexual intercourse by ages 18, 20, and 24 in the three countries under study, by gender of respondents. These proportions are estimated using the life table method. The second is the set of cumulative proportions of men and women who have ever married by ages 18, 20, and 24. The complete age patterns are also shown in Figures 1.1 through 1.3.

Among the Filipino men, sexual onset begins quite early. About one in seven men experience first sex before age 18 and by age 24, nearly two-thirds have experienced sex. Marriage among the Filipino men lags behind their sexual initiations. Marriages before age 20 are rare. Only about a quarter of men marry before age 24. These patterns indicate that a large proportion of Filipino men engage in sex that are not related to marriage. A large proportion of young men become sexually active many years before they marry. It is not likely that much of their sexual activities involve partners whom they are marrying. The survey report documents that these premarital sexual activities of young men in the Philippines often involve casual partners and nearly half young men experience sex with more than one partner before marriage (Balk et al. 1999).

Most Filipino women behave differently from their male counterparts. But at any age, cumulative proportions of women who ever had any sex are only slightly smaller than the proportions of men. Among women, however, the cumulative proportions who have had sex and who are married are not very different at any age. For example, more than 90 percent of women who have experienced sexual activities by age 24 are married. It implies that most Filipino women become sexually active around the time of marriage. It is likely that their sexual partners are their husbands or future husbands.

Taiwanese men become sexually active at somewhat slower pace than the Filipino men, and they are marrying at very late ages. Less than one in ten Taiwanese men marry before reaching age 24. The sexual initiation among Taiwanese women is somewhat slower, but they are marrying at earlier ages than their male counterpart. Thus, the gap between the sexual initiation and marriage among Taiwanese women is smaller than among their male counterpart. The gap between sexual initiation and marriage among the Taiwanese women, however, is substantial and much larger than the gap among the Filipino women.

Thai men become sexually active very early. Nearly one-third of men become sexually active before age 18 and by age 24, nearly four out of five men have had sexual experiences. Among Thai men, marriages before age 20 are rare but they become quite common after age 20. By age 24, nearly half of Thai men are married or cohabiting. Thai women become sexually active quite early as well. By age 24, about three-quarters of women have experienced sex. However, the age patterns of the sexual initiation and first marriage are very similar to each other among Thai women. At any age, only very small proportions of women who have had sexual experiences are not married.

Among the three countries, sexual initiation is earliest in Thailand and latest in Taiwan, both for men and women. One of the common patterns found in the three countries is that, sexual initiation that precedes marriage by a few years is very common among men but rare among young women, except in Taiwan. Marriages among Taiwanese women lag behind their sexual initiation substantially. About two-thirds of Taiwanese women aged 24 who have had sex are married, but the proportion is over 90 percent in the Philippines and over 98% in Thailand.

Table 2 shows the percentages of men and women aged 15–24 who ever had sexual experience by the respondent's relationship to the first sexual partner. As described earlier, we group

the first sexual partner into two groups: one consisting of spouse and fiancé(e) (marital) and one consisting of others (non-marital). In all three countries, men's first sexual experiences were predominantly non-marital. Among 15–24 year old men who ever experienced sex, 87% in the Philippines, 92% in Taiwan, and 93% in Thailand had first non-marital sex. The separation of sex and marriage is much more prevalent among Thai male youth than among their counterparts in the Philippines and Taiwan. Not surprisingly, the YAFS-II report and the FAYS report show that Thai male youth are much more likely to have had their first sex with a commercial sex worker than Filipino male youth. Among male youth with sexual experiences, 18 percent had their first sex with a commercial sex worker in Thailand compared to only 2 percent in the Philippines (Taiwan survey does not have information on experiences with commercial sex workers). Some studies on sexual behavior of Thai youth report even higher levels of sexual activities of Thai male involving commercial sex workers (Nopkesorn et al, 1991; Deemar 1990).

Among women in the Philippines and Thailand aged 15–24 who have had sexual experiences, 70% had marital first sex. Among Taiwanese women, however, only 30% of youth aged 15–24 who experienced sex had marital first sex. Among the three countries, Taiwan is economically most developed, and the mean age at marriage is the highest (Xenos et al. 2001). Continuing research is needed to find out whether further economic development and postponement of marriage will result in more separation between marriage and sex among women in the Philippines and Thailand.

Covariates of types of sexual initiation

We now proceed to the analysis of the covariates of sexual initiation, differentiating respondents with experiences of marital and non-marital first sex. We use multinomial logit regression models to estimate the net effects of a number of covariates on the probability of having had sex and the first sex being marital, having had sex and the first sex being non-marital, and having had no sexual experiences. Once the coefficients of multinomial logit models are estimated, we apply multiple classification analysis technique to compute proportions of respondents who have sexual experiences by type of first sexual partner. The multiple classification analysis technique amounts to substituting appropriate values for a selected covariate in the estimated model equation holding other variables at their sample means, and estimating the probabilities. Thus, the estimated proportions are adjusted for the effects of other covariates in the estimation model, in the sense that the effects of other covariates are controlled by the multiple classification analysis technique.

Philippines

Table 3 shows estimated adjusted percentages of Filipino youth aged 15–24 who have (1) never had sex, (2) had sex and the first sex was marital, and (3) had sex and the first sex was non-marital. Among male Filipino youth, those born in urban areas are much more likely to have had sex than those born in rural areas, and their first sex more likely to be non-marital. The distribution of sexual experiences for men born in pablación is in between the pattern for urban and rural areas. In contrast, among female Filipino youth, those born in pablación or rural areas are slightly more likely to have had sex than those born in urban areas, by having marital first sex.

Young Filipino men and women who have college education or are planning to have college education are less likely to have had sex. The effect of college education is much stronger among women than men. Among men, college education has large effect on non-marital first sex but no effect on marital first sex. Among women, college education is associated with lower probability of both marital and non-marital first sex.

Having lived away from parental home before age 13 and having been out of school before age 13 both have large effects on women's marriage and sexual behavior. Young women who have

these experiences are more likely to have had sexual experiences, both marital and non-marital first sex. The impacts are greater for having had non-marital first sex than for having marital first sex. Having these experiences, however, has no statistically significant effects on men's marriage and sexual behavior.

Taiwan

Table 4 shows estimated adjusted percentages of Taiwan youth aged 15–24 who have (1) never had sex, (2) had sex and the first sex was marital, (3) had sex and the first sex was non-marital. Urban residence has no statistically significant effect on young men's sexual and marriage behavior but has small but statistically significant effect on young women's sexual and marriage behavior. Rural women are slightly more likely to have had first marital sex than urban women and urban women are slightly more likely to have had first non-marital sex than rural women.

The estimation model for Taiwanese young men did not include the variable indicating college education. None of the young men who have some college education or are planning to have college education have experienced marital first sex. The variable had no statistically significant effect on having non-marital first sex. Taiwanese women who have or plan to have college education is much less likely to have had marital first sex, and more likely to have had non-marital first sex than those who do not.

Young men and women in Taiwan who have lived away from parents before age 15 are much more likely to have had sex than those who have live with parents until age 15, but only for non-marital first sex. Young Taiwanese women who have left school before age 15 are much more likely to have had sex, the first sex being non-marital.

Thailand

Table 5 shows estimated adjusted percentages of Thai youth aged 15–24 who have (1) never had sex, (2) had sex and the first sexual partner was marital, (3) had sex and the first sex was non-marital. Young Thai men who were born in rural areas are more likely to have experienced non-marital first sex than young men born in urban areas. Birthplace has somewhat different effect on the sexual behavior of young Thai women. Women born in urban areas are less likely to have experienced marital first sex and more likely to have experienced non-marital first sex than women born in rural areas. Temporary migration from rural to urban areas is common among male Thai youth (Podhisita 1994). It is likely that these migrant young Thai men have more exposure to non-marital sex than the young men who were born in urban areas who are more likely to have lived continuously with their parents. Thai young women's mobility behavior may be different from young men's mobility in terms of prevalence, motivation, and patterns of residence when they are away from home.

The estimation model for Thai young men did not include the variable indicating college education. None of the young men who have some college education or are planning to have college education have experienced marital first sex, and the variable had no statistically significant effect on having non-marital first sex. Having college education or plans for college education does not have statistically significant effects on sex and marriage among men but have statistically significant effect on both marital sex non-marital sex among women. Young Thai women who have some college education or are planning to get college education are much less likely to have had either type of sex. The effect on marital sex is especially large.

Having the experience of living away from parents lowers the probability of marital sex and increases the probability of non-marital sex for both young men and women in Thailand. The effect is especially large for young men's non-marital first sex. Having the experience of being out of school

lowers the probability of marital sex and increases the probability of non-marital sex for young men. But the same experience increases the probability of marital sex among young Thai women.

Contraceptive Use among Sexually Active Single Youth

Since the 1960s, family planning programs have been an integral part of National Development Programs in Taiwan and Thailand, with high level of commitment from multiple sectors of government. Family planning programs in these countries are viewed as model cases that have contributed to rapid decline of fertility and infant mortality (Freedman et al. 1994; Knodel, Chamratrithong, and Debavalya 1987). In the Philippines, national family planning programs has been characterized by an active period up to mid-1970s followed by a period of program stagnation in the 1980s (Cabigon 1988). Family planning programs in all three countries have focused on providing information on and access to contraceptive methods focusing on married couples. Single youth in these countries have had limited access to family planning programs and contraceptive methods. Condoms, however, have been available in all three countries from private outlets such as drug stores and supermarkets.

The three surveys used different approaches for collecting information on contraceptive use. The Philippines survey asked the contraceptive use at the most recent sexual intercourse. Table 6 shows the percentages of sexually active single men and women who used a contraceptive method at the most recent sexual intercourse, by methods. Among single youth with sexual experiences, 30% of men and 16% of women used some kind of contraceptive methods. Most popular contraceptive method used by Filipino youth was the withdrawal, 12% of sexually active single men and 10% of sexually active single women used withdrawal at last sex. Only 9% of sexually active single men and 4% of sexually active single women used condoms at last sexual intercourse. The large gender difference may be partly due to the fact that non-marital sex is more common among men than among women.

For sexually active single Taiwan youth, the survey collected information on the frequency of contraceptive use. Table 7 shows the result by whether the first sexual partner was fiancé(e) or not. Not surprisingly, the prevalence of contraceptive use is higher among single men and women if they had their first sex with someone other than the fiancé(e). But only about half of them were using contraceptives at all times or most of the time they had sex. The prevalence of contraceptive use among sexually active single women is slightly higher, but more than one third of them are not using contraceptives at all or using them only once in a while.

For Thailand youth, we have information on the contraceptive use at the time of first sex. Table 8 shows the percentages of Thai young men who used contraceptives at the time of non-marital first sex, by the relationship of the partner to the respondent. There are too few women who had non-marital first sex to compute reliable statistics. Not surprisingly, the less committed the relationship of the respondent with the partner, the more likely that they used contraceptives methods. Yet, less than half of young men who had first sex with uncommitted partners used contraceptives.

Summary and Discussion

In all three countries, sexual initiation among men begins much earlier than marriage, and most of their sexual initiation is with a partner not other than their first wife. Among men, sexual initiation begins earliest in Thailand, and latest in Taiwan. In the Philippines and Thailand, timing of sexual initiation of marriage does not differ much among women, but among Taiwanese women, sexual initiation begins somewhat earlier than marriage for a substantial proportion of women. Non-marital

sex is common among young men in all three countries, rare among young women in the Philippines and Thailand, and substantial among Taiwanese women.

The finding that non-marital sex is common among young men but rare among young women raises some questions. How is it possible for men to have much non-marital sex and for women to have very little non-marital sex? Who are the partners of young men in their non-marital sex? To what extent are these gender differences due to data collection and reporting biases? There are a few likely explanations for these questions. One possibility is that there are women in these countries who are sexually very active but are not captured by our surveys. All of the surveys are based on samples of households and youth in the selected households were interviewed. This sampling approach is likely to have missed most of women who are commercial sex workers or who are working in entertainment establishments who engage in casual sexual relationships with men frequently. Their households are likely to have been excluded from the sample of households and they are likely to be hard to reach for interviews.

Another possible explanation is that men and women differ in the reporting of their marital, engagement, or cohabitation status. The same relationship may be viewed as married, engaged, or cohabiting by the female partner but not by the male partner. The third possibility is that women in our surveys underreported their premarital sexual activities and men exaggerated their premarital sexual activities. Assessment of biases due to sampling and gender-specific differences in response patterns need further research, probably involving different types of data collection approaches.

Some commonalities and differences are observed in the patterns of covariates of marital and non-marital first sex across the three countries. Among male youth in the three countries, only a few variables have statistically significant effects on explaining the variations of sexual and marriage behavior. The magnitudes of effects of some of the statistically significant variables are small. For example, the effect of having or planning for college education has small effect on sexual and marriage behavior among the Filipino men. Among female youth, all of the variables we examined have statistically significant effects on explaining the variations of sexual and marriage behavior in all three countries. Among women, having or planning for college education has the largest effect on sexual and marriage behavior in all three countries. Urban exposure measured by place of birth or residence has statistically significant but small effects.

The directions of effects of all of the statistically significant variables are the same in all three countries with two exceptions. One is the effect of having lived away from home at young ages. This experience increases the probability of having had sexual experiences among young women in the Philippines and Taiwan for both the marital and non-marital first sex. Among Thai women, the experience is associated with higher probability of having had non-marital sex but lower probability of marital sex. We need more careful study on the association between living away from home and sexual behavior among Thai women. For what reasons do young Thai women under age 13 live away from home, and where do they live when they are not living with their parents? Fortunately, the Thai survey collected detailed information on life course events including education, change of residence, work, and marriage from age 10, we may be able to find some explanations for these questions through further analyses.

The second variable that does not have similar effects across the three countries is whether the respondent has or planning to have college education. The variable has strong negative effect on the probability of having had first marital sex in all three countries. The effect on the probability of non-marital first sex is not similar across countries. Among the Filipino and Thai women, the variable is associated with lower probability of having non-marital first sex whereas the variable is associated with higher probability of having non-marital first sex among Taiwanese women. Separation of sex from marriage among women is not only more common in Taiwan, but is also more common among socially more advanced group of women within Taiwan. This finding suggests that separation of sex

from marriage is likely to increase in other countries with further social modernization once the pattern initiates within the country.

The prevalence of contraceptive use among sexually active single youth is surprisingly low in all three countries. Because the three surveys used different indicators of contraceptive use, it is difficult to compare the levels of contraceptive use in the three countries. The statistics suggest that the prevalence is somewhat higher in Taiwan than in the Philippines and Thailand.

Young men and women in these countries are at potentially high reproductive health risks such as unwanted pregnancies and sexually transmitted infections. Reports of these surveys indicated that although most young men and women are very much aware of sexually transmitted infections including HIV, there are not fully aware of how consistent use of condoms can lower the risks of spread of HIV infections. Furthermore, most youth in these countries have negative attitudes about condoms which many explain the low prevalence (Balk et al. 1999; Podhisita and Pattaravanich 1995).

Among young men in the three countries non-marital sex is very common. It is likely that non-marital sex will increase among women as these countries experience further social changes and more women choose to remain single for longer periods of time. A new approach for educating young adults about reproductive health risks and ways of reducing the risks need to be developed and implemented. The programs should increase awareness of risks associated with unprotected uncommitted sex, increase the awareness of ways to minimize such risks through consistent use of condoms, and to increase the access to condoms. Young men and women who leave parental home and school at early ages are at higher risks of initiating non-marital sex. Appropriate reproductive health education should begin early at schools, and the school-based programs should be complemented by community-based programs. Programs that provide alternatives to strong connection to family and school to these high-risk youth is likely to reduce prevalence of non-marital sex.

References

- Balk, Deborah, Lita J. Domingo, Grace T. Cruz, and Tim Brown. 1999. "HIV/AIDS," pp. 81–98 in Raymundo, Xenos, and Domingo, eds. *Adolescent Sexuality in the Philippines*. Quezon City, Philippines: UP Office of the Vice Chancellor for Research and Development.
- Cabigon, Josefina V. 1988. *Contraceptive Practice: Levels, Trends, and Differentials, Current Use and Continuation*. M. B. Concepción, ed. *Demography at the Crossroads*, Vol 1. Manila: University of the Philippines, Population Institute.
- Casterline, John B., 1980. *The Determinants of Rising Female Age at Marriage: Taiwan, 1905–1976*. Ph.D. Dissertation. University of Michigan.
- Center for Disease Control (CDC). 1994. Health Risk Behaviors among Adolescents Who Do and Do Not Attend School—United States, 1992. *Morbidity and Mortality Weekly Report* 1994 43: 129–132.
- Choe, Minja Kim and Hui-Sheng Lin. 2000. *Effect of Education on Premarital Sex and Marriage in Taiwan*. Paper presented at the 2000 Annual Meeting of the Population Association of America, 23–24 March, Los Angeles, California.
- Deemar Corporation. 1990. *Presentation of Findings, Knowledge, Attitudes and Practices: Studies on AIDS in Urban Thailand*. Manuscript.

- Feranil, Imelda Z. 1984. *Effects of Employment on Nuptiality: A Longitudinal Case Study of Bataan Export Processing Zone*. Manila: University of the Philippines Population Institute.
- Freedman, Ronald, M. C. Chang, T. H. Sun, and M. Weinstein. 1994. The Fertility Transition in Taiwan. A. Thornton and H.-S. Lin, eds. *Social Change and the Family in Taiwan* pp 264–304. Chicago: The University of Chicago Press.
- Goodson, P., A. Evans, and E. Edmundson. 1997. Female Adolescents and Onset of Sexual Intercourse. *Journal of Adolescent Health* 21: 147–56.
- Guest, Philip and JooFan Tan. 1994. *Transformation of Marriage Patterns in Thailand*. Nakhon Pathom, Thailand: Institute for Population and Social Research, Mahidol University.
- Han, Sunghyun, M. K. Choe, M.-S. Lee, and S.-H. Lee. 2001. Risk-Taking Behavior among High School Students in South Korea. *Journal of Adolescence* 24: 571–574.
- Isarabhakdi, P. 2000. *Sexual Attitude and Experience of Rural Thai Youth*. IPSR Publication No. 249. Nakhon Pathom, Thailand: Institute for Population and Social Research, Mahidol University.
- Jones, Gavin W. 1997. Population dynamics and their impact on adolescents in the ESCAP region. *Asia-Pacific Population Journal* 12(3): 3–30.
- Kann, L., W. Warren, J. T. Collins, J. Ross, et al. 1993. Results from the National School-Based 1991 Youth Risk Behavior Survey and Progress Toward Achieving Related Health Objectives for the Nation. *Public Health Reports* 108 (Supp): 47–55.
- Knodel, John E., Aphichat Chamrathirong, and Nobhon Debavalya. 1987. *Thailand's Reproductive Revolution: Rapid Fertility Decline in a Third-World Setting*. Madison: University of Wisconsin Press.
- Lin, Hui-Sheng. 1988. *The Determinants of the Timing of Marriage for Women in Taiwan*. Ph.D. Dissertation. University of Michigan.
- Lin, Hui-Sheng, M. K. Choe, and N. O. Tsuya. 1999. *Marriage in Taiwan, Japan, and South Korea*. Paper presented at the 1999 Annual Meeting of the Population Association of America, 25–27 March, New York.
- Lin, Hui-Sheng, M. L. Lee, and A. Thornton. 1994. Trends in the Timing and Prevalence of Marriage. A. Thornton and H.-S. Lin, eds. *Social Change and the Family in Taiwan*. pp 202–263. Chicago: The University of Chicago Press.
- Lin, Hui-Sheng and Su-Hui Lin. 1996. Knowledge of, Attitude toward, and Practice of Sex and Their Changes among Senior High, Senior Vocational, and College Students in Taiwan. Paper presented in the Fourth Congress of Sexology, 6 July 1996. Taipei.
- Neumark-Sztainer, D. M. Storey, S. S. French, et al. 1996. Patterns of Health-Compromising Behaviors among Minnesota Adolescents: Sociodemographic Variations. *American Journal of Public Health* 86: 1599–1606.
- Nopkesorn, T., S. Sungkorom, and R. Sornlum. 1991. *HIV Prevalence and Sexual Behavior among Thai Men Aged 21 in Northern Thailand*. Bangkok: Thai Red Cross Society.

- Podhisita, Chai. 1994. Coresidence and the transition to adulthood in the rural Thai family. L.-J. Cho and M. Yada, eds. *Tradition and Change in the Asian Family*. pp 319–361. Honolulu: East-West Center.
- Podhisita, Chai, and Umaporn Pattaravanich. 1995. *Youth in Contemporary Thailand, Results From The Family and Youth Survey*. Bangkok: Institute for Population and Social Research, Mahidol University.
- Raymundo, Corazon, M. Peter Xenos, and Lita J. Domingo, eds. 1999. *Adolescent Sexuality in the Philippines*. Quezon City, Philippines: UP Office of the Vice Chancellor for Research and Development.
- Resnick, Michael D., Peter S. Bearman, Robert W. Blum, et al. 1997. Protecting Adolescents from Harm. *Journal of American Medical Association*, 278: 823–832.
- Smith, Peter C., Adelamar Alcantara, and Eliseo A. de Guzman. 1984. An Assessment of Philippines Cohort Nuptiality Trends. L. T. Engracia et al., eds. *Fertility in the Philippines: Analysis of the Philippines Fertility Survey*. Diliman: The University of the Philippines Population Institute.
- Tan, JooEan. 1993. The Effect of Social Transformation on Regional Variations in Thai Celibacy: 1970–1990. *Seattle Population Research Center, Working Paper No. 93-14*, September.
- Tan, Michael L. 1994. *A Review of Social and Behavioral Studies Related to HIV/AIDS in the Philippines*. Manila: Health Action Information Network.
- Thornton, A., J. S. Chang, and H. S. Lin. 1994. From Arranged Marriage toward Love Match. A. Thornton and H.-S. Lin, eds. *Social Change and the Family in Taiwan*. pp 148–177. Chicago: The University of Chicago Press.
- Udry, J. R., L. M. Talbert, and N. M. Morris. 1986. Biological Foundations for Adolescent Female Sexuality. *Demography* 23: 217–230.
- Xenos, Peter and Socorro A. Gultinao. 1992. Trends in Female and Male Age at Marriage and Celibacy in Asia. *Papers of the Program on Population No.120*. Honolulu: East-West Center.
- Xenos, Peter, Sulistinah Achmand, Hui-Sheng Lin, Ping-Keung Luis, Chai Podhisita, Corazon M. Raymundo, and Shyam Thapa. 2001. The Timing of Union Formation and Sexual Onset: Asian Evidence from Young-Adult Reproductive Health Surveys. *East-West Center Working Papers Population Series No. 108-4*. Honolulu: East-West Center.

Table 1. Among youth aged 15-24 in the Philippines, Taiwan, and Thailand, percentages who ever experienced sex and who ever experienced union by marriage or cohabitation by selected ages.

Country	Age	Men		Women	
		Sex	Marriage	Sex	Marriage
Philippines	18	14	1	10	8
	20	33	6	26	22
	24	64	26	54	49
Taiwan	18	9	0	8	4
	20	21	1	18	10
	24	44	9	47	31
Thailand	18	32	1	18	17
	20	56	9	43	41
	24	78	47	76	75

Note:

1. The percentages are estimated by life table methods based on the first sex and first marriage (formal and consensual).

Table 2. Percentages who ever had sexual experience by whether the first sexual partner was either their spouse of fiancé(e) or someone else, youth aged 15-24 in the Philippines (YAFS-II, 1994), Taiwan (TYS, 1994), and Thailand (FAYS 1994).

	First sexual partner	Men	Women
Philippines	Marital	4	16
	Non-marital	26	7
	Never had sex	70	77
Taiwan	Marital	2	7
	Non-marital	24	16
	Never had sex	74	77
Thailand	Marital	3	23
	Non-marital	42	10
	Never had sex	55	67

Table 3. Adjusted percentages of Filipino youth aged 15-24 who have had sex by whether the first sex was marital or non-marital, by selected characteristics.

	Men			Women		
	Never had sex	First sex marital		Never had sex	First sex marital	
		Yes	No		Yes	No
Place of birth						
Urban	55	4	42	80	13	7
Población	59	5	35	76	17	7
Rural	68	5	27	76	17	7
Have/plan college education						
Yes	67	2	31	86	9	5
No	60	9	32	62	28	10
Left home before age 13						
Yes	n.s.	n.s.	n.s.	68	21	11
No				78	16	7
Left school before age 13						
Yes	n.s.	n.s.	n.s.	69	20	11
No				78	16	7

Notes:

1. Percentages are adjusted by multiple classification analysis in conjunction with multinomial logit regression with the covariates: age, age squared, place of birth (dummy variables indicating urban and población), whether the respondent has or plan to have college education, whether the respondent has ever lived away from parents before age 13, and whether the respondent has ever been out of school before age 13.
2. First sex is labeled marital if the partner of the first sex was spouse or fiancé(e).
3. n.s. indicates that coefficients associated with the variable is not statistically significant. [For my own knowledge, when the coefficient is not statistically significant, is it a common practice that we don't show the coefficient in the Table?]
4. See Appendix table (Table A.1) for the complete set of estimated coefficients.

Table 4. Adjusted percentages of Taiwan youth aged 15-24 who have had sex by whether the first sex was marital or non-marital, by selected characteristics.

	Men			Women		
	Never had sex	First sex marital Yes	No	Never had sex	First sex marital Yes	No
Residence						
Urban	n.s.	n.s.	n.s.	77	6	17
Rural				76	9	15
Have/plan college education						
Yes						
No	n.a.	n.a.	n.a.	80	2	18
				71	15	14
Left home before age 15						
Yes	50	3	47	61	7	32
No	76	2	22	78	7	15
Left school before age 15						
Yes	n.s.	n.s.	n.s.	29	8	63
No				77	7	16

Notes:

1. Percentages are adjusted by multiple classification analysis in conjunction with multinomial logit regression with the covariates: age, age squared, place of residence (urban or not), father's education (high school or higher), mother's education (high school or higher), whether the respondent has or plan to have college education (for women only), whether the respondent has ever lived away from parents before age 15, and whether the respondent has ever been out of school before age 15.
2. First sex is labeled marital if the partner of the first sex was spouse or fiancé(e).
3. n.s. indicates that coefficients associated with the variable is not statistically significant.
4. n.a. indicates that the covariate is not included in the estimation model.
5. See Appendix table (Table A.2) for the complete set of estimated coefficients.

Table 5. Adjusted percentages of Thai youth aged 15-24 who have had sex by whether the first sex was marital or non-marital, by selected characteristics.

	Men			Women		
	Never had sex	First sex marital Yes	No	Never had sex	First sex marital Yes	No
Place of birth						
Urban	66	2	33	68	17	16
Rural	52	3	45	67	25	9
Have/plan college education						
Yes	n.a.	n.a.	n.a.	96	2	2
No				46	39	14
Left home before age 13						
Yes	52	2	46	69	20	11
No	69	9	22	59	33	9
Left school before age 13						
Yes	54	2	44	67	23	10
No	57	7	36	73	18	10

Notes:

1. Percentages are adjusted by multiple classification analysis in conjunction with multinomial logit regression with the covariates: age, age squared, place of birth (urban or not), father's education (high school or higher), mother's education (high school or higher), whether the respondent has or plan to have college education, whether the respondent has ever lived away from parents before age 13, and whether the respondent has ever been out of school before age 13.
2. First sex is labeled marital if the partner of the first sex was spouse or fiancé(e).
3. n.s. indicates that coefficients associated with the variable is not statistically significant.
4. n.a. indicates that the covariate is not included in the estimation model.
5. See Appendix table (Table A.3) for the complete set of estimated coefficients.

Table 6. Among single Filipino youth aged 15-24 who ever had sex, percentages who used a contraceptive method at their most recent sexual intercourse by contraceptive method, YAFS-II, 1994.

	Men	Women
Used a contraceptive method	30	16
Withdrawal	12	10
Condom	9	4
Pill	8	0
Others	2	2
Did not use	70	84

Table 7. Among never married Taiwan youth aged 15-29 who ever had sex, percentages who used contraceptives by frequency of use, gender of the respondent, and the relationship with their first partner, Taiwan Youth Survey, 1994.

Gender and type of first partner	Always	Most of the time	Once in a while	Never
Men				
Fiancée	9	27	36	27
Others	29	24	26	21
Women				
Fiancé	29	18	24	28
Others	40	23	21	16

Table 8. Among Thai young men aged 15-24 who ever had sex and first sexual partner was non-marital, percentages who used a contraceptive method at their first sex by the type of partner of their first sex, FAYS, 1994.

	Men
Girl/Boy friend	33
Others	48

Figure 1.1. Life-table estimates of cumulative percentages who ever had sex and who are married by selected ages by gender, the Philippines

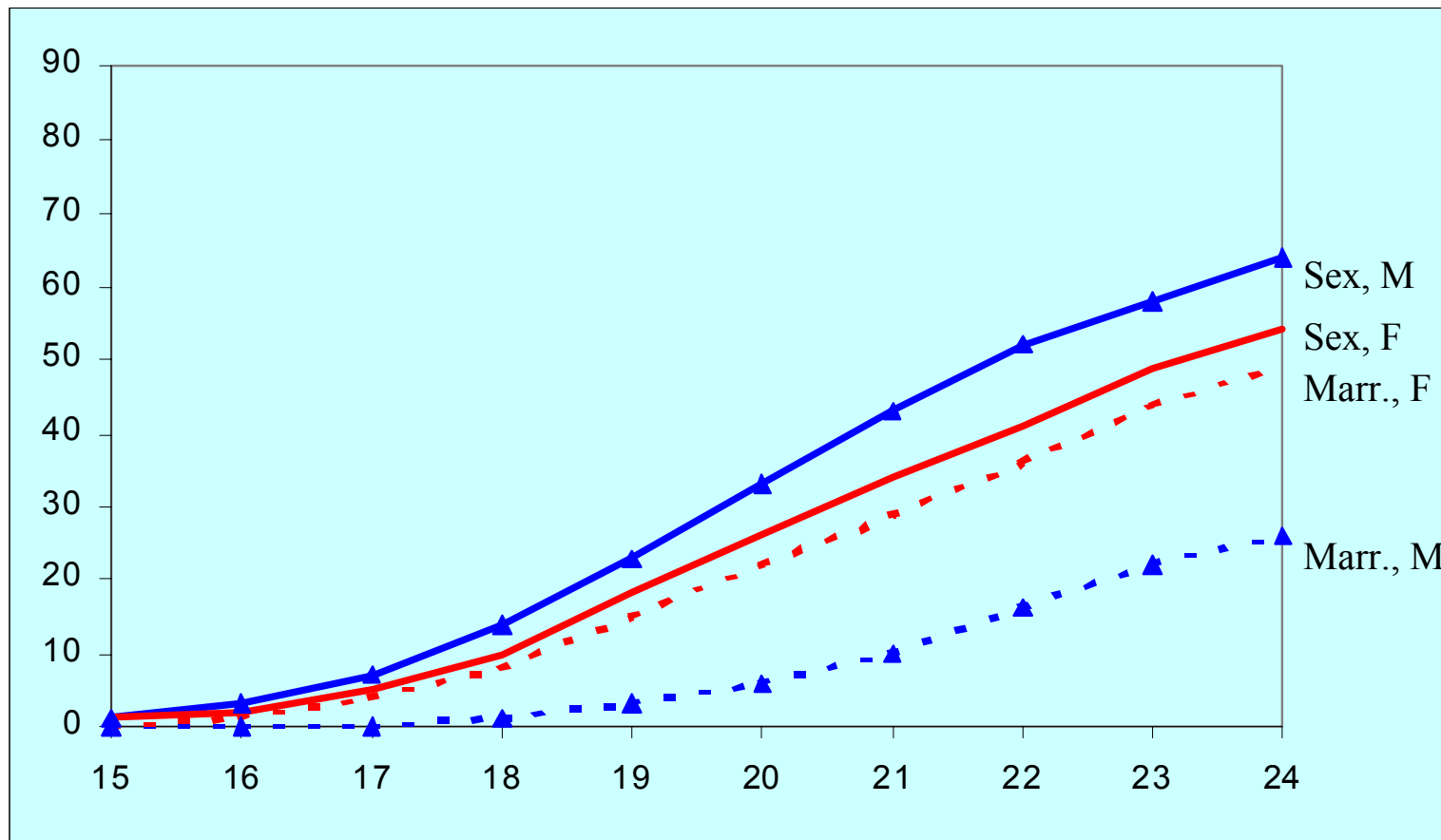


Figure 1.2. Life-table estimates of cumulative percentages who ever had sex and who are married by selected ages by gender, Taiwan

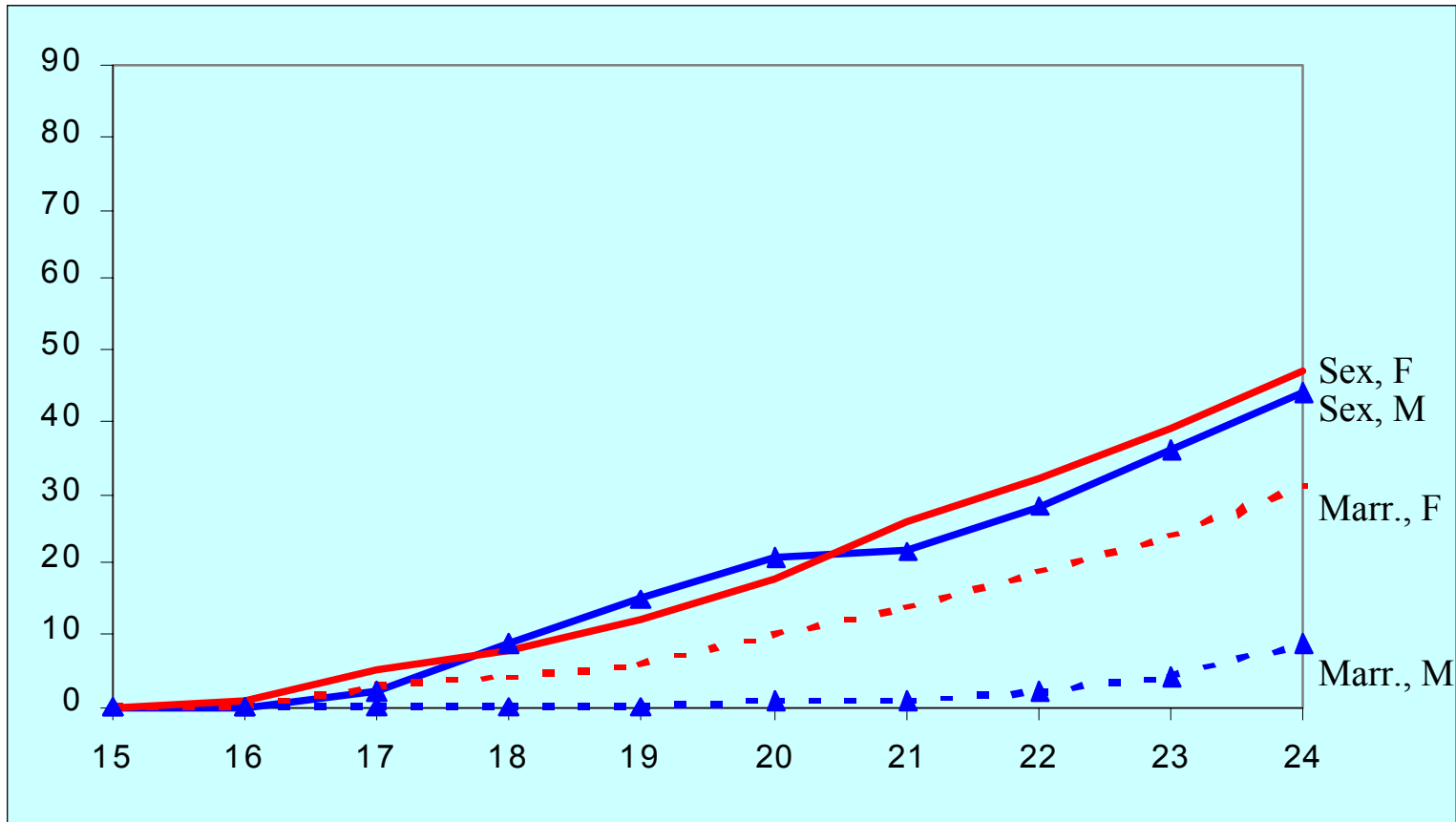
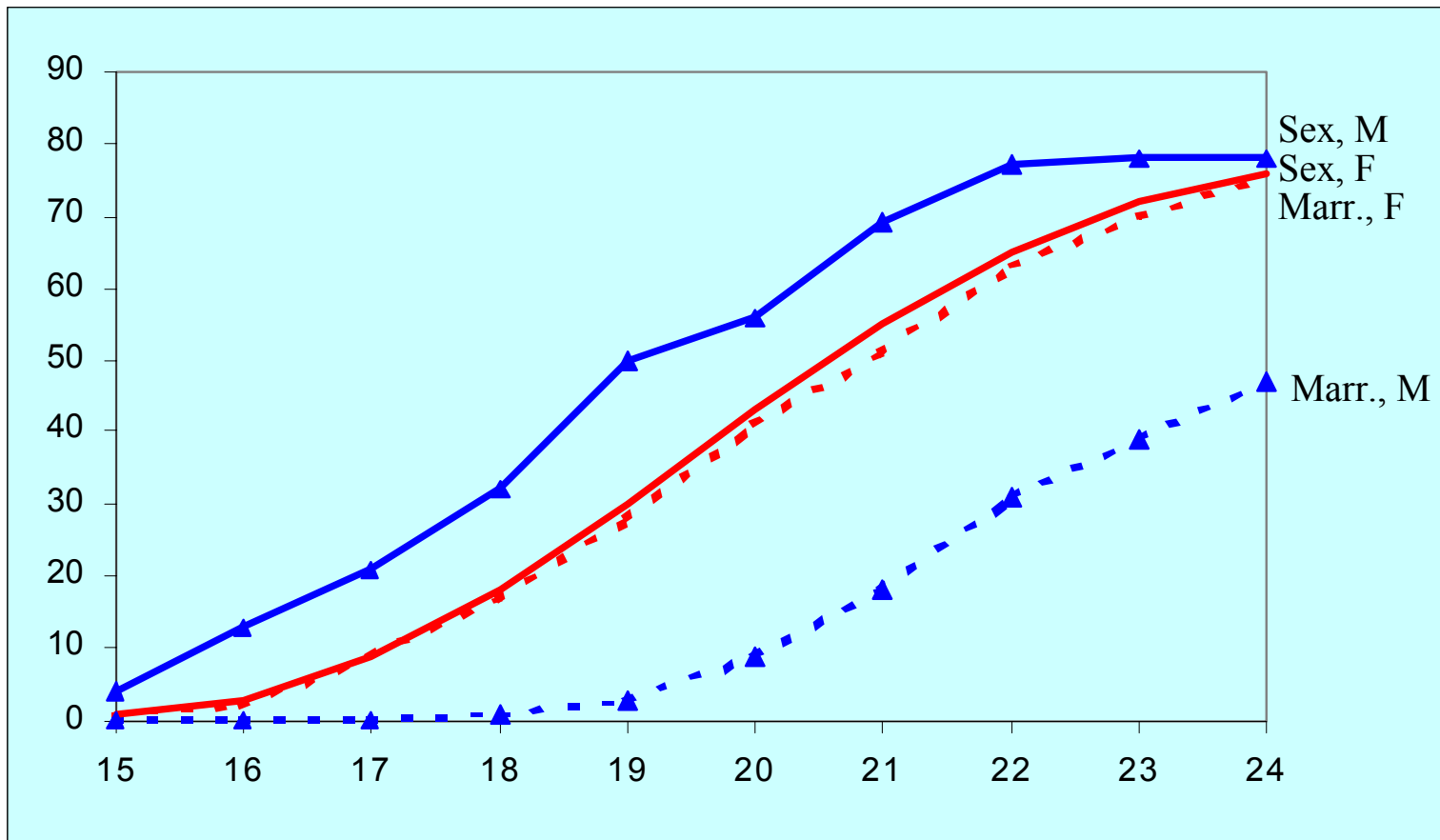


Figure 1.3. Life-table estimates of cumulative percentages who ever had sex and who are married by selected ages by gender, Thailand



Appendix tables

Table A1. Multinomial logit coefficients predicting experience of sex by type of first partner among Filipino youth aged 15-24.

	Men		Women	
	Marital first sex vs. no sex	Non-marital first sex vs. no sex	Marital first sex vs. no sex	Non-marital first sex vs. no sex
Age	1.9565*	1.7694*	2.6948*	2.4272*
Age squared	-0.0334	-0.0343*	-0.0541*	-0.0499*
Place of birth				
Urban	-0.0209	0.6507*	-0.3159*	-0.0334
Pablacion	0.3072	0.3985*	-0.0055	0.0306
Have or plan for college education	-1.4575*	-0.1353*	-1.4096*	-1.0867*
Left home before 13	-0.1115	0.2421	0.3829*	0.6198*
Left school before 13	-0.3589	-0.2142	0.4242*	0.6659*
Constant	-27.0518	-22.0737*	-31.9748*	-29.6065*

Table A2. Multinomial logit coefficients predicting experience of sex by type of first partner among Taiwan youth aged 15-24.

	Men		Women	
	Marital first sex vs. no sex	Non-marital first sex vs. no sex	Marital first sex vs. no sex	Non-marital first sex vs. no sex
Age	-1.9284	1.5651	4.3132*	0.9491*
Age squared	0.0627	-0.0272	-0.0871*	-0.0142
Urban residence	-0.2091	0.4359	-0.5151*	0.0852
Father' education				
High school+	0.1165	-0.4120	-0.3971	-0.3593
Mother's education				
High school+	-0.8332	-0.5567	0.4429	0.4460
Have or plan for college education	n.a.	n.a.	-3.7632*	-1.5204*
Left home before 15	0.8403	1.1671*	0.2115	0.9624*
Left school before 15	4.5713*	2.3504*	1.0955	2.3529*
Constant	10.4393	21.3613*	-21.3613*	-10.4393*

Note: n.a. indicates that the covariate is not included in the estimation model.

Table A3. Multinomial logit coefficients predicting experience of sex by type of first partner among Thai youth aged 15-24.

	Men		Women	
	Marital first sex vs. no sex	Non-marital first sex vs. no sex	Marital first sex vs. no sex	Non-marital first sex vs. no sex
Age	6.9519*	1.9082*	1.4470*	0.8836
Age squared	-0.1496*	-0.0390*	-0.0270*	-0.0152
Place of birth				
Urban	1.0415	0.5573*	-0.3960	-0.5813*
Father' education				
High school+	-1.1580	0.1849	0.3218	0.0829
Mother's education				
High school+	-0.1301	0.3407	0.6107	-0.0095
Have or plan for college education	n.a.	n.a.	-3.5451*	-2.7670*
Left home before 13	-1.1549	1.0263*	-0.6619*	0.0349
Left school before 13	-1.1232*	0.2689	0.3543*	0.1405
Constant	-78.0376*	-23.4656*	-17.6926*	-11.9919*

Note. n.a. indicates that the covariate is not included in the estimation model.