

Before First Sex: Gender Differences in Emotional Relationships and Physical Behaviors Among Adolescents In the Philippines

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CONTEXT: Early age at first sex has been identified as a risk factor for unplanned pregnancy and HIV infection. However, the emotional relationships and physical behaviors that precede first intercourse, and how they differ by sex, also may provide important cues about how to prevent sexual risk behavior.

METHODS: The precoital activities of 2,051 adolescents aged 17–19 in Cebu, Philippines, are examined using 1998–2000 and 2002 data from the Cebu Longitudinal Health and Nutrition Survey. The timing and tempo of emotional relationships and physical behaviors for males and females are described. Cox proportional hazards models are used to identify the characteristics associated with age at first sex.

RESULTS: Males engage in precoital physical behaviors and first sex at younger ages than females. Although the standard order in which the two sexes engage in emotional relationships for the first time is the same, males progress through the sequence more quickly than females. After adolescents have progressed through the sequence of emotional relationships, there is a gap of a least a year before they begin to have sex. In the multivariate analysis, rapid progression through the sequence of emotional relationships was associated with initiating sex at a younger age for females (hazard ratio, 1.5), but not for males.

CONCLUSION: The period between first date and first sex experienced by both males and females provides an opportunity to ensure that adolescents have access to the information and services that will allow them to make informed choices about sexual behavior.

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Studying the progression toward first sexual intercourse could improve the understanding of adolescent sexuality in the developing world and aid in identifying and preventing the risky sexual behaviors young people engage in. Studies in the developing world point to early age at first sex as a risk factor for HIV infection and unplanned pregnancy.¹ It is likely, however, that poor reproductive health outcomes are predicted by factors that can be measured before first sex.

Miller and colleagues argue that the category of not being sexually active is too broad and that studying the behaviors that adolescents engage in before first sex can provide useful insight into their potential risk.² For example, their cross-sectional study of U.S. adolescents aged 14–17 who had not had sex found that those who engaged in more precoital behaviors, such as kissing and petting, were significantly more likely to anticipate having sex in the next year than were those who did not engage in any precoital behaviors. Studying the pace at which adolescents progress through increasingly more intimate precoital behaviors also helps anticipate when adolescents will first have sexual intercourse. Smith and Udry suggest that in cultures with normative expectations of a lengthy precoital period, adolescents tend to be better prepared for first sexual intercourse.³

The sequence of precoital behaviors that adolescents experience is generally consistent. Data from the 1994 Young

Adult Fertility Survey, a national study of Filipino adolescents, show that adolescents first had crushes, then had admirers or began admiring others, had their first group date, had their first boyfriend or girlfriend, and finally had their first single date.⁴

Studies in several other cultures have shown similar patterns. Adolescents experience these behavioral milestones, however, at different ages in different cultures. Further, males and females initiate specific precoital behaviors at different ages, with males doing so substantially earlier than females in most countries.⁵

Studies in Malaysia, Korea, Hong Kong and Slovenia⁶ confirm that most adolescents gradually progress through a sequence of precoital activities, and that there are large differences between the sexes. For example, in a cross-sectional survey in Malaysia, 45% of the 1,181 participating adolescents had dated. Of those who had dated, almost 60% of males and 17% of females had kissed and necked, almost 50% of males and 10% of females had engaged in petting, and 27% of males and 5% of females had had sexual intercourse.⁷ A 1996–1997 Hong Kong study among 4,116 heterosexual students found a gradual progression from holding hands, kissing and caressing to sexual intercourse. As in Malaysia, males were more likely than females to have engaged in every behavior examined.⁸

Although the Malaysian study was community-based,

the studies in Korea, Hong Kong and Slovenia used data collected from surveys done in schools. A limitation of studies done among students is that they may underestimate the true prevalence of precoital behaviors because those who are absent from or have dropped out of school may be more likely to have engaged in these behaviors.⁹ The present study is community-based, and includes adolescents both in and out of school.

This analysis has several goals: First, we aim to understand the precoital behaviors of Filipino adolescents, including the prevalence of emotional relationships (crushes, courtships, romantic relationships and dating) and precoital physical behaviors (holding hands, kissing and petting), and how males and females differ. We hypothesize that males engage in each precoital behavior earlier than females and progress through behaviors at a faster pace. Second, we want to determine whether there is a consistent sequence of precoital behaviors; we hypothesize that a single, predominant pattern will emerge. Finally, we aim to discover whether progressing through types of emotional relationships quickly is related to the timing of first sex. We hypothesize that adolescents who progress through types of emotional relationships more quickly have sex earlier than peers who do not.

Gender and Sexual Behavior in the Philippines

Both the timing of first sexual intercourse and the factors that influence it differ between males and females in many countries around the world. Most studies in developing countries, particularly in Asia, find that males become sexually active earlier than females because of greater tolerance for premarital sexual behavior for males.¹⁰ A review of research on the risk and protective factors for early sexual initiation found that in eight of the 10 studies that included gender in their models, males were significantly more likely to have had sex than females.¹¹ Although this review did not examine the reasons males have sex earlier than females, in the countries studied, this practice is often acceptable.

Expectations about sexuality differ sharply for females and males in the Philippines. Males are encouraged to engage in sexual activities.¹² They initiate dating and sexual activities earlier than females, and are allowed more sexual freedom; many Filipino youth consider it natural for males to have multiple partners. In contrast, social norms about young women's behavior tend to be conservative. Females are expected to control and set limits on male sexuality.¹³ Philippine society continues to uphold the value of *hiya*, or shame, which strongly influences female behavior.¹⁴ Young people believe that females should adhere to strict roles in dating; subtle flirting is acceptable, but the outright wooing of men is not.

In the Philippines, premarital sex is generally not approved of for women, even during the engagement period;¹⁵ the majority of Filipina women have sex for the first time after marriage. Nevertheless, premarital sex is becoming more common, especially in urban areas, as are many other behaviors, such as dating and kissing.¹⁶

Group dating is a common way for Filipino youth to initiate acquaintances with the opposite sex, particularly in urban areas.¹⁷ Usually, adolescents begin to go out on group dates at ages 13–16, and then go on single dates a couple of years later.¹⁸ National data from 2002 reveal that by age 19, 43% of single women and 48% of single men have ever had a boyfriend or girlfriend; those figures increase to 72% and 76%, respectively, by age 24.¹⁹

The median age at first sex in the Philippines is relatively high when compared with developed countries and many other developing countries.²⁰ National data, however, suggest it may be declining. According to the Young Adult Fertility and Sexuality Survey, the median age at first sex for all adolescents was 18.0 in both 1982 and 1994, but was 17.5 in 2002.²¹

Demographic and Health Survey (DHS) data find later ages at first sex, probably because the survey measures age at first sex among females only. In 1993, the reported median age at first intercourse among women aged 25–29 was 22.3; 10 years later, by 2003, it was 22.1.²² In 2003 (when the DHS interviewed men as well), the reported median age at first sex was 21.0 among men aged 25–29.

METHODS

Study Setting

Cebu, an island in the Central Visayas region, is one of the most developed provinces in the Philippines. The study area, Metro Cebu, is a major port city and the second-largest metropolitan area in the country, with a population of almost 1.7 million in 2000. Metro Cebu accounts for 15% of the land area and 44% of the population of the entire province. Although Cebu is not as modern a city as Metro Manila, it embodies most of the characteristics of highly urbanized (and fast urbanizing) areas in the Philippines.

Data Collection

The Cebu Longitudinal Health and Nutrition Survey (CLHNS) provides the data for the present study. The survey provides data from an ongoing study of a cohort of more than 3,000 Filipina women who gave birth between May 1, 1983, and April 30, 1984. The CLHNS followed these women and their newborns (the index children) in Metro Cebu. Follow-up surveys were conducted in 1991–1992, 1994–1995, 1998–2000 and 2002. The CLHNS follow-up surveys in 1998–2000 and 2002 also included extensive interviews with the then-adolescent index children. Because of survey implementation issues, the 1998–2000 round of the CLHNS was conducted first with all the female adolescents and then with males.

All rounds of the survey were conducted as approved by the University of North Carolina School of Public Health institutional review board for research involving human subjects; the 2002 survey was also approved by the Johns Hopkins Bloomberg School of Public Health Committee on Human Research.

The adolescents in the sample have become geographically dispersed since the 1983–1984 baseline survey and

TABLE 1. Selected characteristics of adolescents participating in the Cebu Longitudinal Health and Nutrition Survey, by survey year and gender, Cebu, Philippines

| Characteristic | 1998–2000 | | 2002 | |
|--------------------------------------|-----------------|-------------------|-----------------|-----------------|
| | Males (N=1,110) | Females (N=1,007) | Males (N=1,089) | Females (N=962) |
| MEANS | | | | |
| Age | 15.58 | 14.55*** | 18.18 | 18.19 |
| Wealth index† | -0.73 | -0.76 | -1.81 | -1.83 |
| Highest grade completed | 8.7 | 8.7 | 9.7 | 10.8*** |
| PERCENTAGES | | | | |
| Urban | 71.5 | 72.1 | 74.4 | 73.9 |
| Church attendance ≥3 times per month | 58.9 | 72.0*** | 39.9 | 58.3*** |

***Difference from males is significant at $p < .001$. †Index was calculated by assessing household assets based on the methodology described by Filmer and Pritchett. Principal components analysis was used to derive weights for each asset in the index. The index is a continuous variable ranging from -2.82 to 1.23. Source: **Wealth index**—reference 23.

now live in 172 different communities (*barangays*) scattered throughout Cebu province. Most adolescents were interviewed in their homes. On average, each interview took two sessions, for a total of 2.5 hours, to complete. In some cases, it took the interviewers several visits to the original household or to other households to complete an interview.

The 1998–2000 survey included 2,117 adolescents. By 2002, 101 of these adolescents were lost to follow-up, primarily because of out-migration. In the 2002 survey, however, 35 adolescents who had not been interviewed in the 1998–2000 survey were located and returned to the sample. The final sample in 2002 thus included 2,051 adolescents.

Instruments

Both the 1998–2000 and 2002 adolescent surveys asked respondents whether they had experienced several types of emotional relationships: crushes, courting, romantic relationships and dating. The 1998–2000 survey asked only those adolescents who had ever had a romantic relationship about all physical behaviors (holding hands, kissing, petting and sexual intercourse) because of concerns over asking young adolescents sexually explicit questions; those who had never had a relationship were asked only if they

TABLE 2. Percentage of adolescents who had experienced specific emotional relationships and physical behaviors, by survey year and gender

| Relationships and behaviors | 1998–2000 | | 2002 | |
|--------------------------------|-----------------|-------------------|-----------------|-----------------|
| | Males (N=1,110) | Females (N=1,007) | Males (N=1,089) | Females (N=962) |
| Mean age | 15.58 | 14.55 | 18.18 | 18.19 |
| Emotional relationships | | | | |
| Crush | 81.5 | 86.5** | 98.9 | 99.1 |
| Courtship | 36.3 | 42.5** | 83.1 | 90.6*** |
| Romantic relationship | 34.1 | 18.4*** | 75.2 | 75.3 |
| Dating | 35.1 | 22.8*** | 72.1 | 69.2 |
| Physical behaviors | | | | |
| Holding hands | 37.2 | 27.3*** | 89.1 | 87.7 |
| Kissing | na | na | 72.0 | 65.2*** |
| Petting | na | na | 53.7 | 33.6*** |
| Sexual intercourse | na | na | 30.8 | 19.5*** |

Difference from males is significant at $p < .01$. *Difference from males is significant at $p < .001$. Note: na=not available.

had held hands. In 2002, however, all respondents were asked if they had engaged in each of the physical behaviors.

Unlike studies of precoital behaviors in other countries, the CLHNS includes questions that focus on emotional relationships (i.e., courting, dating, etc.), in addition to particular sexual activities (i.e., kissing, petting, etc.), thus providing richer data. In addition, the adolescents were asked to define the various emotional relationships asked about in the survey, and their responses for 2002 are reported here. Adolescents were asked open-ended questions such as, “What do you understand by courtship?” The responses were collected, categorized and then coded by native Cebuano speakers. Definitions for each emotional relationship reported by the adolescents were grouped into general categories. A categorical variable was created, with each category representing a different definition; chi-square testing was done to compare each categorical variable between females and males.

Independent variables include the order and pace of progression through types of emotional relationships. Models adjust for a set of social and demographic variables that includes a household wealth index (based on Filmer and Pritchett’s index),²³ whether the adolescent lived in a rural area, frequency of church attendance and highest grade completed.

Data Analysis

The data analysis was done in three parts. First, we examined the respondents’ progression through emotional relationships and physical behaviors. Second, we analyzed the timing and tempo of this progression. In this step, Kaplan-Meier plots were used to show the age in years at which respondents experienced their first crush, courtship, romantic relationship, date and sexual intercourse.

We created scales to assess the order and pace of adolescents’ movement through emotional relationships and physical behaviors. The scale assessing order was created by looking at the age at which each adolescent first experienced each type of emotional relationship (as reported when they were aged 17–19). These reported ages were then used to establish the order in which each adolescent experienced the different types of emotional relationships. The number of adolescents following each distinct order was calculated; the order that was most common was considered the dominant one. The scale assessing tempo, or how quickly males and females moved through types of relationships, divided the adolescents into three categories: Those who had experienced only 0–2 emotional relationships (in their lifetime), those who had experienced 3–4 emotional relationships slowly (over more than one year) and those who had experienced 3–4 emotional relationships quickly (within one year).

Bivariate analyses were conducted to examine the characteristics associated with ever having had sex, and multivariate survival analysis was conducted to examine the characteristics associated with males’ and females’ age at first sex, taking into account the effects of selected social and

demographic factors.

The Cox proportional hazards models control led for such demographic variables as wealth, urban residence, church attendance and highest grade of school completed. All analyses were done separately for males and females. Standard errors in the analysis were adjusted for clustering based on community of residence. All analyses were conducted using STATA version 7.²⁴

RESULTS

The final sample included 1,110 males and 1,007 females aged 14–16 in 1998–2000 and 1,089 males and 962 females aged 17–19 in 2002. Table 1 shows selected characteristics of the sample in both years. The only variable that demonstrated unanticipated differences over time was church attendance: Rates fell significantly between survey rounds. In addition, a sizable gender gap was evident in both rounds, with significantly more females reporting frequent church attendance than males. In 2002, females had significantly more years of education than males.

Emotional Relationships

Table 2 shows the percentage of adolescents who reported engaging in specific emotional relationships and physical behaviors. Gender differences in reports of emotional relationships were apparent in the 1998–2000 survey, when the males were interviewed later than the females. Many of the differences found in 1998–2000 were no longer significant in 2002, when males and females were interviewed at the same age.

For example, at ages 14–16, 82% of males and 87% of females reported having had a crush on someone of the opposite sex; crushes were reported by almost all respondents at ages 17–19. When asked at ages 17–19 to define a crush, about 40% of both males and females said that it is an attraction to or fascination with attitudes, physical aspects, abilities or talents in another person. About 45% of males and 26% of females said it was a liking or fondness for another person, and 9% of males and 28% of females said a crush is admiration or appreciation of another. Overall, the distribution of the definitions differed significantly between males and females ($p \leq .001$; data not shown).

Between ages 14–16 and 17–19, the proportion of adolescents who reported having courted someone or having been courted increased from 36% to 83% among males and from 43% to 91% among females. Differences between males and females were significant in both surveys, with females significantly more likely to report having been courted. When asked at ages 17–19 to define courting, 19% of males and 28% of females said it was liking, being fond of or attracted to a girl or boy, and 19% of males and 15% of females said it was expressing one's feelings toward the person one liked; the distribution of the definitions was significantly different between males and females ($p \leq .001$; data not shown).

About 34% of males and 18% of females reported having had a romantic relationship by ages 14–16, a difference

TABLE 3. Median number of years between types of romantic relationships (and range), by gender, 2002

| Relationships | Males | Females |
|---|---------------|---------------|
| | (N=1,089) | (N=962) |
| First crush and first courtship | 2.00 (–4–13) | 2.00 (–6–12) |
| First courtship and first romantic relationship | 0.00 (–3–8) | 0.00 (–3–8) |
| First romantic relationship and first date | 0.00 (–9–6) | 0.00 (–9–8) |
| First date and first sex | 1.00† (–8–11) | 1.00† (–4–10) |
| First crush and first date | 2.00 (–5–12) | 4.00 (–6–12) |
| First crush and first sex | 4.00† (–3–14) | 5.00† (0–13) |

Note: Ranges include negative numbers because in some cases, adolescents experienced emotional relationships in a nonstandard sequence. †Median age between first date or first crush and first sex is underestimated because half of the sample had not yet had sex.

that was significant. This proportion rose to 75% of both males and females by ages 17–19. Among the females who reported having been in a romantic relationship by ages 17–19, 84% had older partners. Among those who reported having been in a romantic relationship (not shown), similar proportions of the males (63%) and females (60%) reported ever having had one or two romantic partners; the rest reported more. Two males and one female reported having a cumulative total of 20 or more romantic partners.

The proportion of males who reported ever having been on a date increased from 35% at ages 14–16 to 72% at ages 17–19. For females, those proportions were 23% and 69%, respectively. At ages 14–16, significantly fewer females reported having been on a date than males but when asked again at ages 17–19, the difference was no longer significant. When asked what they understood by the word “date,” 35% of males and 34% of females said it meant going out alone with a boyfriend or girlfriend, and 27% of both males and females reported a date was simply talking alone with boyfriend or girlfriend. Another 13% of males and 18% of females said it was going out and talking with an admirer. Once again, the distribution of the definitions differed significantly between males and females ($p \leq .001$; data not shown).

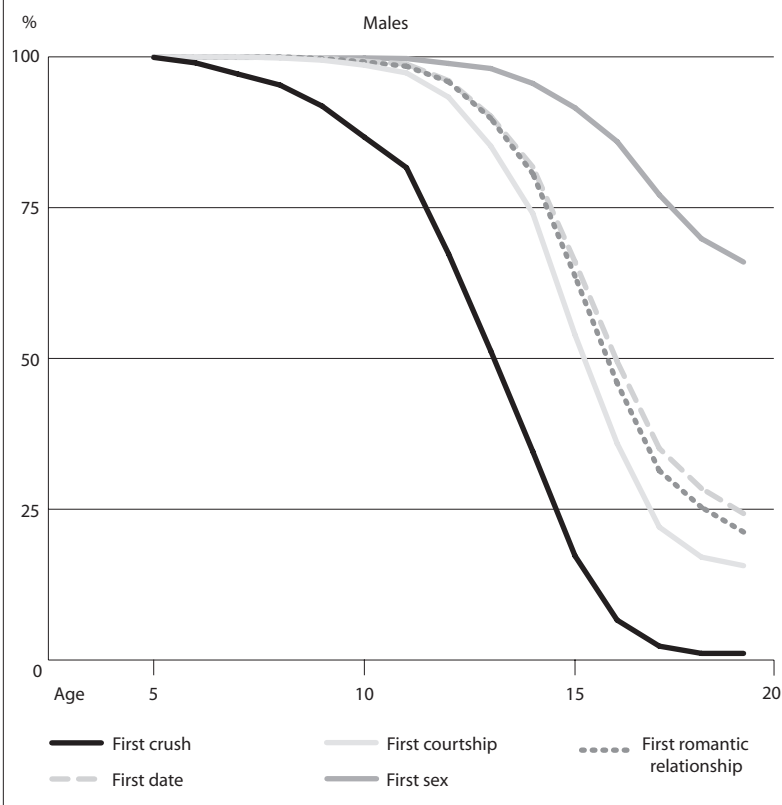
In 2002, 67% of males and 46% of females reported that their first date had been unchaperoned ($p \leq .001$; data not shown). Females were significantly more likely than males to report that their first date had been chaperoned (18% vs. 10%; $p \leq .001$), and were also significantly more likely to report that their first date had occurred as part of a group (36% vs. 23%; $p \leq .001$).

The specific activities of first dates varied widely, but the most common one was going to the mall, plaza or school ground and eating together, with 29% of females and 23% of males who had ever been on a date reporting having done so. A significantly higher proportion of males than females reported just talking on their first date (25% vs. 17%). Just 10% of males and 12% of females reported going to a movie alone on their first date (data not shown).

Physical Behaviors

There were also significant differences between males and females in the reported experience of physical behaviors (Table 2). At ages 14–16, 37% of males and 27% of females

FIGURE 1. Proportion of male adolescents who had not yet experienced selected types of emotional relationships and sexual intercourse, by age



reported having held hands. At ages 17–19, these proportions were similar—89% and 88%, respectively. Because information on other physical behaviors was not collected from the full sample in the earlier survey, we report only the 2002 data. In that survey, each of these behaviors was reported by a significantly higher percentage of males than females. Among males, 72% reported ever having kissed and 54% reported having engaged in petting; among females, those proportions were 65% and 34%, respectively. Twenty-five percent of the sample (data not shown) reported ever having had sex, with significantly more males reporting having done so than females (31% vs. 20%).

Of those who reported having had sex, 97% of females

and 52% of males reported that their first time was with their boyfriend or girlfriend. For 5% of males and 2% of females, their first time was with someone who had previously been a romantic partner, and 39% of males and fewer than 1% of females said it was with someone with whom they did not have an emotional relationship (unpaid). Finally, 4% of males and no females said they had paid for their first sexual encounter. Among those who reported having had sex, 24% of males and 37% of females said they had had sex for the first time at their partner’s house, while 13% of males and 28% of females said they had had sex for the first time at their own homes; 12% of both males and females said they had first had sex at a rented cottage, hotel, inn or brothel (data not shown).

Timing and Tempo of Relationships and First Sex

Figures 1 and 2 show the proportions of males and females by the age at which they first engaged in each type of emotional relationship and in sexual intercourse, as reported in 2002. Both males’ and females’ reported first crushes occurred well before other types of relationships. In general, males and females reported experiencing their first courtship, their first romantic relationship and their first date within a few years of one another. Tests for significance determined that the curves for first crush, first courtship and first sex for males were significantly different from those for females ($p \leq .001$).

Median ages were 14 for males and 13 for females at first crush, 16 for males and 15 for females at first courtship, 16 for both sexes at first romantic relationship, and 16 for males and 17 for females at first date. The reported median age at first intercourse was not estimated because at least half of the sample had not yet experienced intercourse. The median number of years between reported first crush and first date was two years for males and four years for females (Table 3, page 113).

In general, there was more time between events for females than for males. There was a considerable amount of time between reported first crush and first sex for both sexes, but this gap was even longer for females than for males. These results suggest that when adolescents begin engaging in emotional relationships, sexual intercourse tends to follow after several years.

According to the emotional relationships scale constructed with 2002 data, 87% of males and 83% of females experienced emotional relationships in a particular order: They first experienced crushes, then courting, romantic relationships and dating (Table 4). Males and females differed significantly in the number of emotional relationships they had experienced in order. For example, significantly more males than females experienced a crush before courting, a romantic relationship or dating.

Almost 12% of males and 16% of females had experienced emotional relationships in an order other than the dominant one. Many reported not having experienced all of the emotional relationships stages yet, but a clear pattern was still apparent. Females who followed other pat-

TABLE 4. Percentage of adolescents following standard sequence of emotional relationships, by gender, 2002

| Sequence | Males (N=1,089) | Females (N=962) |
|--|--------------------|--------------------|
| No emotional relationships | 1.1 | 0.8 |
| Crush only | 14.0 | 7.9*** |
| Crush before courting | 6.0 | 10.5*** |
| Crush before courting before romantic relationship | 6.4 | 10.1** |
| Crush before courting before romantic relationship before dating | 60.9 | 55.0** |
| Another sequence | 11.7 | 15.7** |
| Total | 100.0 | 100.0 |

** $p < .01$. *** $p < .001$. Note: Percentages may not total 100.0 because of rounding.

terns were about half as likely to have ever had sex as females who followed the dominant order (odds ratio, 0.5; $p=.01$, not shown), but this was not seen among males. The majority of adolescents who followed patterns other than the dominant ones reported experiencing their first date before their first romantic relationship, which is fairly common in other countries. Among the 127 males who followed patterns other than the dominant one, 95% reported experiencing their first date before their first relationship. Among the 151 females who went out of order, 91% reported experiencing their first date before their first relationship.

Many of the adolescents reported experiencing several of these emotional relationships for the first time in a single year. Similar proportions of males and females reported having experienced only 0–2 emotional relationships in their lifetime (Figure 3). Among those who reported experiencing 3–4 emotional relationships, males were significantly more likely than females to experience them quickly: More than 49% of males and 32% of females were considered to be progressing through types of relationships quickly.

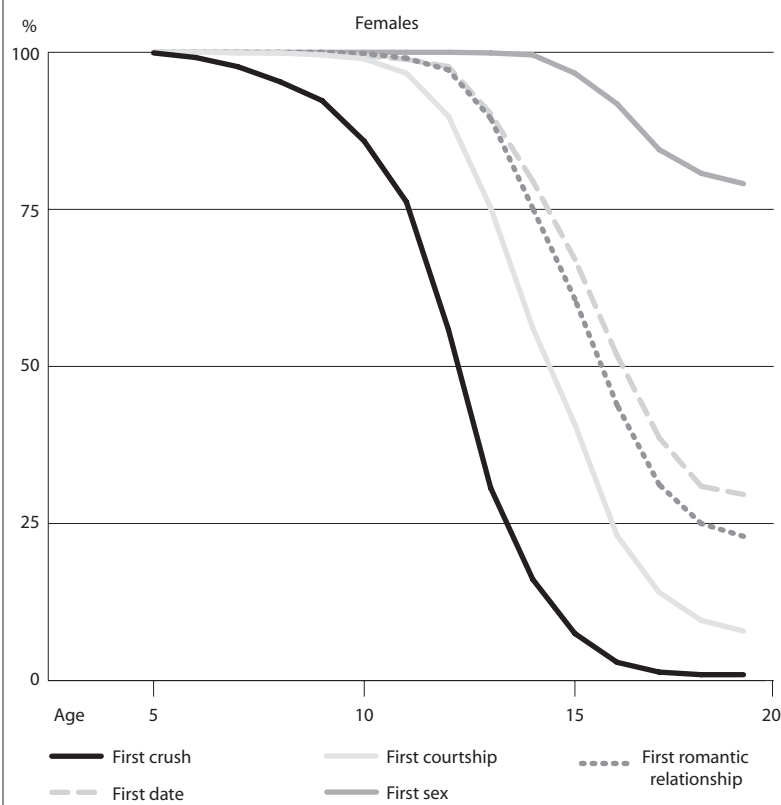
Characteristics Associated with Delayed Sex

The effect of experiencing emotional relationships quickly on having sex at an early age was examined among males and females separately. Taking age into account, we therefore ran Cox proportional hazards models to identify the factors associated with the risk of having sex.

In Table 5 (page 116), Model 1 shows the unadjusted association between the pace of progression through types of emotional relationships and the hazard of having had sex at any given age for males and females. The middle category, 3–4 emotional relationships experienced slowly, is the reference group. Males who had experienced 0–2 emotional relationships in their lifetime were significantly less likely to have had sex than males who had experienced 3–4 emotional relationships slowly (hazard ratio, 0.1). Males who had experienced 3–4 emotional relationships quickly were more likely to have had sex than males who had experienced the same number of emotional relationships slowly (hazard ratio, 1.2), but this association was not significant at the $p \leq .05$ level and the effect dissipated when social and demographic variables were added to the model (Model 2). After adjustment for these variables, the strength and magnitude of the effect of having few emotional relationships remained. In addition, for males, living in rural areas (hazard ratio, 0.6) and having achieved more education (hazard ratio, 0.9) were associated with a lower risk of first sex at a given age.

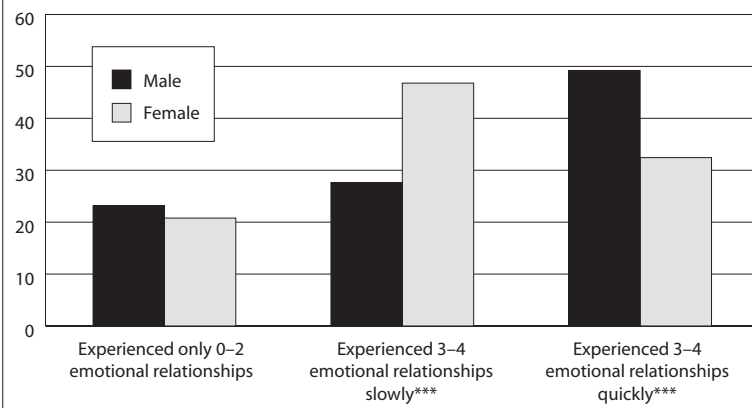
Among females, the pace of progression through types of emotional relationships and the hazard of having had sex at a given age were also associated. Model 1 shows that females who had experienced emotional relationships quickly were at a significantly increased risk of having had sex than females who had experienced 3–4 types of relationships slowly. The hazard ratio for females who experienced

FIGURE 2. Proportion of female adolescents who had not yet experienced selected types of emotional relationships and sexual intercourse, by age



only 0–2 relationships was 0 because none of those females reported ever having had sex. When social and demographic variables were added to the model, the association between a fast progression through types of relationships and the hazard of having sex remained (hazard ratio, 1.5). Model 2 shows that females who attended church frequently were about 40% less likely to have had sex than females of the same age who did not attend frequently (hazard ratio, 0.6). In addition, for each additional year of education, adolescents' hazard of having sex at any given age was reduced by 17% (hazard ratio, 0.8).

FIGURE 3. Percentage of males and females, by pace of progression through types of emotional relationships



***Differences between males and females are significant at $p \leq .001$.

TABLE 5. Hazards ratio (and 95% confidence intervals) from multivariate models predicting risk of having sex at a given age, by pace of progression through types of emotional relationships and selected social and demographic characteristics

| Pace and characteristic | Males (N=1,089) | | Females (N=962) | |
|------------------------------------|---------------------|---------------------|---------------------|---------------------|
| | Model 1 | Model 2 | Model 1 | Model 2 |
| Few emotional relationships (0–2)‡ | 0.12*** (0.07–0.22) | 0.12*** (0.06–0.23) | 0‡ | 0§ |
| Fast-paced relationships (3–4)‡ | 1.17† (0.93–1.48) | 1.16 (0.96–1.40) | 1.85*** (1.39–2.47) | 1.47*** (1.17–1.85) |
| Wealth index | na | 0.92 (0.78–1.09) | na | 0.89 (0.68–1.16) |
| Rural | na | 0.62*** (0.49–0.78) | na | 0.84 (0.62–1.13) |
| Frequent church attendance | na | 0.88 (0.69–1.11) | na | 0.62*** (0.49–0.77) |
| Highest grade completed | na | 0.94*** (0.90–0.98) | na | 0.82*** (0.79–0.85) |

*p≤.05. **p≤.01. ***p≤.001. †p≤.10. ‡Reference category is slow-paced relationships (3–4 over more than one year). §Cell size was too small to calculate standard errors. Notes: All models adjusted for clustering by community. na=not applicable.

DISCUSSION

This study found significant differences in precoital behavior between adolescent males and females in the Philippines. Females experienced some emotional relationships at younger ages than did males, but males progressed through types of relationships at a faster pace than females. As in other countries in Asia,²⁵ males engaged in precoital physical behaviors and sexual intercourse at younger ages than females did.

The finding that females who moved quickly through types of emotional relationships were at a significantly higher risk of having sex at a younger age than those who did not suggests that those who move quickly through different types of emotional relationships probably move quickly through physical behaviors as well. For males, experiencing emotional relationships quickly is not associated with an increased risk of having sex at a younger age, perhaps because many males are having sex outside of their emotional relationships.

Most adolescents in the Philippines advanced through relationships in an ordered progression—experiencing crushes, courtships, romantic relationships, dating and then sexual intercourse, a pattern similar to that found in a national study and elsewhere.²⁶ It is possible that males’ and females’ differing definitions of emotional relationships affect how they report experiencing them; this may explain some of the differences between males and females.

Although most adolescents in the Philippines followed a standard sequence in their emotional relationships, some—particularly females—followed a different sequence. Following a nonstandard sequence was not associated with younger age at first sex. Females who experienced emotional relationships in a nonstandard order had significantly fewer romantic relationships than those who experienced emotional relationships in the expected order (p=0.04). Therefore, following a nonstandard order should not be considered a risk behavior.

Adolescents in the Philippines begin their physical relationships later than adolescents in other developing countries,²⁷ which is apparent in this sample. Among both males and females who had had sex, median age at first sex was 17; however, not even half of the sample had had sex. By the time all have had sex, the median age at first sex in this

sample will likely be at least one or two years older than it would be if calculated now.

The precoital behaviors of the adolescents in this sample reveal important cues about their future sexual activity. Most males and females had crushes early on, and a few years later they engaged in courting, dating and romantic relationships, all around the same time. It is not until a few years later that they engaged in sexual intercourse. Females started to have emotional relationships earlier than did males, and they waited longer to have sex. As Smith and Udry proposed, engaging in precoital behaviors over an extended period of time may allow the adolescent to become prepared mentally and emotionally for sexual intercourse, as well as to obtain contraceptive protection.²⁸ This period before an adolescent begins to have sex also offers parents, schools and adolescent health programs an opportunity to help adolescents make informed choices about sexual intercourse.

One of the primary limitations of the current research is that all data come from adolescent self-reports, and may be subject to recall bias or social desirability bias. Because of the strong conservative culture in the Philippines, the self-reported data may not reflect true behavior. Many females may be uncomfortable discussing their sexual behavior, and thus underreport it. Young men, on the other hand, may overreport their sexual experiences to give the impression that they are conforming to societal expectations.²⁹

Because the adolescent participants have been involved in this longitudinal survey for almost two decades, the interviewers have established a strong rapport with them. Although the respondents may be embarrassed to report their sexual behaviors to someone they know well, the interviewers have been trained to reassure the adolescents that their responses will be kept confidential.

The findings in the present study can be checked against the results from other studies of Filipino adolescents. According to national data collected in 2002, much lower proportions—26% of males and 9% of females aged 17–19—reported ever having had sex.³⁰ An unpublished survey using a self-administered questionnaire among 1,196 students aged 15–24 in Dumaguete City in the Philippines found that 50% of males and 10% of females were sexually active.³¹ According to DHS data for the Philippines from

2003, 28% of males and 21% of females had had sex by age 19.³² The current data fall well within these ranges, with 31% of males and 20% of females aged 17–19 reporting that they had had sex. However, given the cultural norms against premarital sex, these studies may all provide underestimates of true levels of sexual activity.

This study has several important strengths. The CLHNS provides a unique opportunity to consider relationship progression from both a physical and an emotional perspective. Rarely do studies consider the behaviors of adolescents before first sex, much less their emotional relationships. In addition, unlike earlier studies, this study considered the pace at which adolescents moved through types of emotional relationships. Many other studies of sexual behavior among adolescents have been done in schools, which excludes young people who are absent, are out of school, stay at home or go to work; having a population-based sample allows for more accurate estimates of sexual activity because in a school-based sample, those who are out of school are also more likely to engage in high-risk behaviors, which would lead to underestimates of sexual activity.³³ Although the results from this study may not apply to cities where premarital sex is more common, such as Manila,³⁴ the results are likely to be generalizable to other major metropolitan areas.

Currently, several governmental and nongovernmental initiatives in the Philippines address the reproductive health needs of adolescents; unfortunately, they face many challenges. The most important is addressing the lack of high-level political support for contraception in general, a problem that is magnified for family planning information and service delivery to adolescents.³⁵ Cultural disapproval of unmarried youth using contraceptives, negative attitudes among health care providers, pressure from the church and lack of adequate supplies at the local health system level all help to form barriers to adolescent sexual and reproductive health.³⁶

Programs should reflect the reality of adolescent sexual behavior, and tailor interventions to address the unique needs of males and females. It is clear from our findings that adolescents are engaging in sexual behaviors and have immediate reproductive health needs. Males are sexually active earlier than females, and many first have sex outside of an emotional relationship. In general, females progress through their emotional relationships more slowly than do males, but those who progress through them quickly are at significantly greater risk of having sex at a relatively young age. Most females have sex for the first time with their current romantic partner. As young people become increasingly likely to engage in pre-coital behaviors and premarital sex, it is important for parents to ensure that their children have access to the information and services they need for sexual activity. This study suggests that this preparation must start earlier for boys, but girls too need information and counseling before marriage, beginning when parents realize that their adolescents are engaging in emotional relationships.

REFERENCES

- Pettifor AE et al., Early age of first sex: a risk factor for HIV infection among women in Zimbabwe, *AIDS*, 2004, 18(10):1435–1442; Zaba B et al., Age at first sex: understanding recent trends in African demographic surveys, *Sexually Transmitted Infections*, 2004, 80(Suppl. 2):ii28–ii35; Blanc AK and Way AA, Sexual behavior and contraceptive knowledge and use among adolescents in developing countries, *Studies in Family Planning*, 1998, 29(2):106–116; and Magnani R et al., Why the rise in adolescent fertility rates in the Dominican Republic in the 1990s? *Population Research and Policy Review*, 2001, 20(5):535–563.
- Miller KS et al., Adolescent heterosexual experience: a new typology, *Journal of Adolescent Health*, 1997, 20(3):179–186.
- Smith EA and Udry JR, Coital and non-coital sexual behaviors of white and black adolescents, *American Journal of Public Health*, 1985, 75(10):1200–1203.
- Raymundo CM, Xenos P and Domingo LJ, eds., *Adolescent Sexuality in the Philippines*, Quezon City, Philippines: University of the Philippines Population Institute, 1999.
- Lam TH et al., Timing of pubertal maturation and heterosexual behavior among Hong Kong Chinese adolescents, *Archives of Sexual Behavior*, 2002, 31(4):359–366; Youn G, Sexual activities and attitudes of adolescent Koreans, *Archives of Sexual Behavior*, 1996, 25(6):629–643; and Zulkifli SN, Low WY and Yusof K, Sexual activities of Malaysian adolescents, *Medical Journal of Malaysia*, 1995, 50(1):4–10.
- Zulkifli SN, Low WY and Yusof K, 1995, op. cit. (see reference 5); Youn G, 1996, op. cit. (see reference 5); Lam TH et al., 2002, op. cit. (see reference 5); and Pinter B and Tomori M, Sexual behavior of secondary-school students in Slovenia, *European Journal of Contraception and Reproductive Health Care*, 2000, 5(1):71–76.
- Zulkifli SN, Low WY and Yusof K, 1995, op. cit. (see reference 5).
- Lam TH et al., 2002, op. cit. (see reference 5).
- Guttmacher S et al., Classroom-based surveys of adolescent risk-taking behaviors: reducing the bias of absenteeism, *American Journal of Public Health*, 2002, 92(2):235–237; and McCrystal P et al., Adolescent substance abuse among young people excluded from school in Belfast, *Drugs: Education, Prevention & Policy*, 2005, 12(2):101–112.
- Isarabhakdi P, Factors associated with sexual behavior and attitudes of never-married rural Thai youth, *Journal of Population and Social Studies*, 1999, 8(1):21–44; Meekers D and Ahmed G, Contemporary patterns of adolescent sexuality in urban Botswana, *Journal of Biosocial Science*, 2000, 32(4):467–485; Rani M, Figueroa ME and Ainsle R, The psychosocial context of young adult sexual behavior in Nicaragua: looking through the gender lens, *International Family Planning Perspectives*, 2003, 29(4):174–181; and Zulkifli SN and Low WY, Sexual practices in Malaysia: determinants of sexual intercourse among unmarried youths, *Journal of Adolescent Health*, 2000, 27(4):276–280.
- Blum R and Mmari K, *Risk and Protective Factors Affecting Adolescent Reproductive Health in Developing Countries*, Geneva: World Health Organization (WHO), 2004.
- Medina BTG, *The Filipino Family*, Quezon City, Philippines: University of Philippines Press, 2001; Cruz GT, Laguna EP and Raymundo CM, Family influences on the lifestyle of Filipino youth, *East-West Center Working Papers, Population Series*, Honolulu, HI, USA: East-West Center, 2001, No. 108-8; and Santa Maria M, Youth in south-east Asia: living within the continuity of tradition and the turbulence of change, in: Brown BB, Larson RW and Saraswathi TS, eds., *The World's Youth: Adolescence in Eight Regions of the Globe*, Cambridge, UK: Cambridge University Press, 2002, pp. 171–206.
- Medina BTG, 2001, op. cit. (see reference 12); and Santa Maria M, 2002, op. cit. (see reference 12).
- Cruz GT, Laguna EP and Raymundo CM, 2001, op. cit. (see reference 12).
- Medina BTG, 2001, op. cit. (see reference 12); Lacson RS et al., Correlates of sexual abstinence among urban university students in the Philippines, *International Family Planning Perspectives*, 1997, 23(4):168–172; and Raymundo CM, Xenos P and Domingo LJ, 1999, op. cit. (see reference 4).
- Medina BTG, 2001, op. cit. (see reference 12); Raymundo CM, Xenos

P and Domingo LJ, 1999, op. cit. (see reference 4); and Raymundo CM and Cruz GT, eds., *Youth and Sex and Risk Behaviors in the Philippines*, Quezon City, Philippines: University of the Philippines Population Institute, 2004.

17. Raymundo CM, Xenos P and Domingo LJ, 1999, op. cit. (see reference 4).

18. Medina BTG, 2001, op. cit. (see reference 12).

19. Laguna E, 2002 Young Adult Fertility and Sexuality Study, University of the Philippines Population Institute, Quezon City, Philippines, personal communication, July 4, 2006.

20. Singh S et al., Gender differences in the timing of first intercourse: data from 14 countries, *International Family Planning Perspectives*, 2000, 26(1):21–28 & 43.

21. Raymundo CM, Xenos P and Domingo LJ, 1999, op. cit. (see reference 4); and Raymundo CM and Cruz GT, 2004, op. cit. (see reference 16).

22. National Statistics Office (Philippines) and Macro International, *Philippines National Demographic and Health Survey*, 1993, Calverton, MD, USA: Macro International, 1994; National Statistics Office (Philippines) and Macro International, *Philippines National Demographic and Health Survey*, 1998, Calverton, MD, USA: Macro International, 1999; and National Statistics Office (Philippines) and ORC Macro, *Philippines Demographic and Health Survey*, 2003, Calverton, MD, USA: ORC Macro, 2004.

23. Filmer D and Pritchett LH, Estimating wealth effects without expenditure data—or tears: an application to educational enrollments in states of India, *Demography*, 2001, 38(1):115–132.

24. Stata Corporation, *Stata User's Guide: Release 7*, College Station, TX, USA: Stata Press, 2003.

25. Zulkifli SN and Low WY, 2000, op. cit. (see reference 10); and Isarabhakdi P, 1999, op. cit. (see reference 10).

26. Raymundo CM, Xenos P and Domingo LJ, 1999, op. cit. (see reference 4); Hansen WB, Paskett ED and Carter LJ, The Adolescent Sexual Activity Index (ASAI): a standardized strategy for measuring interpersonal heterosexual behaviors among youth, *Health Education Research*, 1999, 14(4):485–490; Lam TH et al., 2002, op. cit. (see reference 5); Pinter B and Tomori M, 2000, op. cit. (see reference 6); Youn G, 1996, op. cit. (see reference 5); and Zulkifli SN, Low WY and Yusof K, 1995, op. cit. (see reference 5).

27. Singh S et al., 2000, op. cit. (see reference 20).

28. Smith EA and Udry JR, 1985, op. cit. (see reference 3).

29. Eggleston E, Leitch J and Jackson J, Consistency of self-reports of sexual activity among young adolescents in Jamaica, *International Family Planning Perspectives*, 2000, 26(2):79–83; Gregson S et al., Methods to reduce social desirability bias in sex surveys in low-development settings: experience in Zimbabwe, *Sexually Transmitted Diseases*, 2002, 29(10):568–575; and Singh S et al., 2000, op. cit. (see reference 20).

30. Commission on Population and United Nations Population Fund, *State of the Philippine Population Report—Pinoy Youth: Making Choices, Building Voices*, Mandaluyong City, Philippines: United Nations Population Fund, 2003.

31. Brown A et al., *Sexual Relations Among Young People in Developing Countries: Evidence from WHO Case Studies*, Geneva: WHO, 2001; and Cadelina C, *Sexual Behaviour and Level of Awareness of STDs: A Survey Among College Students*, Dumaguete City, Philippines: Department of Sociology/Anthropology, Silliman University, 1998.

32. National Statistics Office (Philippines) and ORC Macro, 2004, op. cit. (see reference 22).

33. Guttmacher S et al., 2002, op. cit. (see reference 9); and McCrystal P et al., 2005, op. cit. (see reference 9).

34. Raymundo CM, Xenos P and Domingo LJ, 1999, op. cit. (see reference 4).

35. Human Rights Watch, *The Philippines: Unprotected Sex, Condoms and the Human Right to Health*, New York: Human Rights Watch, 2004.

36. Varga C and Zosa-Feranil I, *Adolescent and Youth Reproductive Health*

in *Philippines: Status, Issues, Policies, and Programs*, Washington, DC: POLICY Project, Futures Group International, 2003.

RESUMEN

Contexto: Las relaciones sexuales a temprana edad han sido identificadas como un factor de riesgo de los embarazos no planeados y de la infección por VIH. Sin embargo, las relaciones personales románticas y las actividades que preceden la primera relación sexual, y la forma en que difieren las mismas entre un sexo y otro, también pueden ofrecer importantes datos sobre las posibles estrategias de prevención de una conducta sexual riesgosa.

Métodos: Se examinaron las actividades previas al coito de 2.051 adolescentes, de 17–19 años de edad, en Cebú, Filipinas, mediante el uso de datos de la Cebu Longitudinal Health and Nutrition Survey realizada en 1998–2000 y en 2002. Se describieron el momento y la duración de las relaciones personales románticas y de las actividades físicas de hombres y mujeres. Se utilizaron modelos de riesgo proporcionales de Cox para identificar las características relacionadas con la edad de los jóvenes en el momento de la primera relación sexual.

Resultados: Los hombres se inician y mantienen su primera relación sexual antes que las mujeres. Aunque ambos grupos inician las relaciones personales románticas en la misma orden estándar, los hombres avanzan en la secuencia de pasos románticos más rápidamente que las mujeres. Después que los adolescentes han progresado por esta secuencia de pasos de relaciones románticas, hay una brecha de por lo menos un año antes de que comiencen a mantener relaciones sexuales. En el análisis multivariado, se relacionó la progresión rápida por los pasos de relaciones románticas con la iniciación temprana de la actividad sexual entre las mujeres (razón de riesgo, 1,5), pero no entre los hombres.

Conclusión: El período entre la primera cita y la primera relación sexual, tanto entre hombres como entre mujeres, ofrece una oportunidad para asegurar que los adolescentes tengan acceso a la información y los servicios que les permitirán observar una conducta sexual informada y adecuada.

RÉSUMÉ

Contexte: L'âge précoce au moment des premiers rapports sexuels a été identifié tel un facteur de risque de grossesse non planifiée et d'infection à VIH. Les relations affectives et les comportements physiques qui précèdent les premiers rapports sexuels, de même que la manière dont ils diffèrent en fonction du sexe, peuvent cependant aussi apporter d'importants indices quant à la manière de prévenir les comportements sexuels à risques.

Méthodes: Les activités pré-coïtales de 2.051 adolescents de Cebu (Philippines) âgés de 17 à 19 ans sont examinées dans les données de 1998–2000 et 2002 de l'Étude longitudinale de Cebu sur la santé et la nutrition. Le moment et le rythme des relations affectives et des comportements physiques masculins et féminins sont décrits. Les modèles de risques proportionnels de Cox servent à identifier les caractéristiques associées à l'âge au moment des premiers rapports sexuels.

Résultats: Les garçons s'engagent dans des comportements physiques pré-coïtaux et ont leurs premiers rapports sexuels à un

âge plus jeune que les filles. L'ordre normatif dans lequel les deux sexes s'engagent pour la première fois dans des relations affectives est identique, mais les garçons progressent plus rapidement que les filles à travers les étapes successives. Après que les adolescents ont progressé à travers la succession des relations affectives, il apparaît un intervalle d'au moins un an avant qu'ils commencent à avoir des rapports sexuels. Dans l'analyse multivariée, la progression rapide à travers la succession de relations affectives est associée à des premiers rapports sexuels à un âge plus jeune pour les filles (rapport de risques, 1,5), mais pas pour les garçons.

Conclusion: La période entre le premier rendez-vous et les premiers rapports sexuels des garçons et des filles offre une occasion d'assurer l'accès des adolescents à l'information et aux services qui leur permettront d'effectuer des choix informés sur leurs comportements sexuels.

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