The Incidence of Premarital Sex among Taiwanese Young People from Late Adolescence to Young Adulthood

Introduction

A rising prevalence of early sexual debut among youth has been witnessed in Taiwan and around the world for the past decade. Early sexual debut is known to increase the risks of teenage pregnancy, maternal and perinatal mortality, and sexually transmitted infections (STIs), including HIV. Studies also document a dramatic increase in personal involvement in romantic and sexual relationships during adolescence and young adulthood (Furman et al., 1999; Christopher, 2001; Collins, 2003). As does the significance of these relationships, they serve as an essential context for psychological, social, and sexual development among adolescents (Coates, 1999; Connolly & Goldberg, 1999; Feiring, 1999).

Given the importance and complexity transited to becoming sexually active among youth, an increasing research attention has been paid to romantic and sexual relationships during this stage of the life course recently (Brown et al., 1999). Most research with a risk focus has emphasized risks in the involvement of sexual relationships during young adulthood (Collins, 2003). Along this line, the factors related to early sexual relationships of youth included individual socio-demographic factors, such as gender, education, and race/ethnicity (Cuffee, Hallfors, & Waller, 2007; Simbayi, Chauveau, & Shisana, 2004; Stallworth et al., 2004), interpersonal factors associated with attitude, beliefs, and expectations (Simbayi et al., 2004; Steele, Bukusi, Cohen, Shell-Duncan, & Holmes, 2006), and family background (Lammers et al., 2000; Stallworth et al., 2004). A few studies have also highlighted the importance of school environment, peer influence and relationship context, but our understanding of such relation and context related factors in affecting youth sexual behavior remains limited.

Figure 1 presents the conceptual model that guides our analysis. We focus on the role of dating experience, value for premarital sex, exposure to pornography, peers' sexual experience, and school attendance in the incidence of premarital sex. We first describe incidence in premarital sex among never married youth from their ages 20 to 22 in Taiwan using a longitudinal data conducted in 2004 and 2006. We then examine differentials in premarital sex incidence by sex, and explore whether gender shape dating experience, value for premarital sex, exposure to pornography, peers' sexual experience, school attendance, other selected socioeconomic characteristics, or their association with premarital sex involvement of youth.

Methods

Data

Data were from the survey of Taiwan Youth Project (TYP), conducted since 2000 to 2007. This survey was designed to study the growth trajectory of the youth and focusing on three main social mechanisms of adolescent development: family, school and community, and their interplay. A multi-stage sampling frame was used to obtain a school-based representative sample of junior high students in three areas of Taipei city, Taipei county, and Yi-Lan county. We use all eligible respondents in the 2004 wave who were re-interviewed in 2006 to observe the prospective intimate and sexual experiences between individual's characteristics and their subsequent likelihood in sex involvement. After retaining respondents who were never married and interviewed in 2004 (N=1,816), remained never married and re-interviewed in 2006 (N=1,471), and keeping those who reported sex in the

2004 and 2006 interviews, we obtain an analytical sample of 1,429 respondents, including 1,215 youths who reported no sexual experience in the 2004 wave.

Measures

The outcome measure was incidence of premarital sex. The incidence of premarital sex was defined as the rate at which premarital sex was self-reported by their ages of 22 in the sample cohort of never married youth aged 20 who had never had sexual intercourse.

The main explanatory variables were related to own behaviors and peer influence (dating experience, exposure to pornography, peers' sexual experience) as well as ideology and structural context (value for premarital sex, school attendance). The information of dating experience and peers' sexual experience was collected in the 2004 interview by asking the youth whether s/he ever had a boy/girl friend. If the youth responded yes, they needed to continue answering how many girl/boy friends they ever had. The questionnaire also included an item about sexual experience of your best friends with the possible responses ranging from knowing none, less than half, and half or greater of best friends who ever had a sexual experience. Exposure to pornography was assessed by frequency of exposure to pornography in the past year. We collapsed two categories due to small proportion (less than 9%) of female youth who ever had pornography exposure. Value for premarital sex was measured with an item that asked youth what they think if their peers have premarital sex and response ranged from not wrong, a little bit wrong, wrong, and no opinion. The variable of school attendance was measured by pooling two waves of data and categorizing it into no school attendance, continuous school attendance, and school attendance change between two waves. Other explanatory variables included background socio-demographic variables such as parental education and urban/rural residence.

Data Analysis

We examined the incidence in premarital sex separately for female and male youth. We began with bivariate analyses that characterized the incidence in premarital sex involvement separately for female and male youth. Then, multivariate logistic regression models were conducted to estimate adjusted effects (odds ratios) of dating experience, value for premarital sex, exposure to pornography, peers' sexual experience, and school attendance in the incidence of premarital sex involvement. Multivariate models were estimated after pooling data from the 2004 and 2006 TYP surveys, accounting for clustering in the survey design. All models were separately estimated for female and male youth with STATA 9.0 (Stata Corporation., 2005).

Preliminary Results

Table 1 shows the percent distribution of never married female and male youth included in various rounds of Taiwan Youth Project Surveys by selected characteristics. We find substantial gender differences in the incidence of premarital sex; 26 percent of male youth compared to 15 percent of female youth in this cohort sample that was not sexually active in 2004 but reported engaging in premarital sex in 2006 ($p<0.001$). About 52 percent of female youth compared to nearly 60 percent of male youth reported never having a dating experience at their ages of 20. The gender difference in exposure to pornography is also statistically significant; more than half of male youth compared to less than one-tenths ever had exposure to pornography for past year. Although we do not find a substantial and statistically significant gender difference in peers' sexual experience, a substantial gender difference is found in value for premarital sex.

In Table 2, logistic regression models with robust standard errors accounted for complex survey design. The adjusted odds ratios (aOR) were estimated to adjust for clustering of individual youth in the same schools. The estimates of odds ratios were the likelihoods of engaging in premarital sex of the youth with certain explanatory variables by sex. Analyses showed that dating experience in 2004 was associated with increased likelihood of premarital sex involvement in 2006 for both sexes. In contrast, conservative value for premarital sex and continuous school attendance were associated with lower likelihood of premarital sex for both sexes. Exposure to pornography was significantly associated with higher likelihood of premarital sex for male youth (aOR=1.62; $p<0.05$) not for female youth. The peer's sexual experience, knowing best friends who had sex, was significantly associated with higher odds of premarital sex for female youth not for male youth.

Preliminary analyses conclude that dating experience, value for premarital sex, and school attendance have significant effects on likelihoods of premarital sex involvement among both male and female youth. The effect of peer influence was only significant on the likelihood of premarital sex involvement among female youth; the effect of exposure to pornography was only significant among male youth. These preliminary findings warrant further investigation and models extensively incorporating other variables sensitive to gender and network characteristics as well as protective behavior adaption such as condom use.

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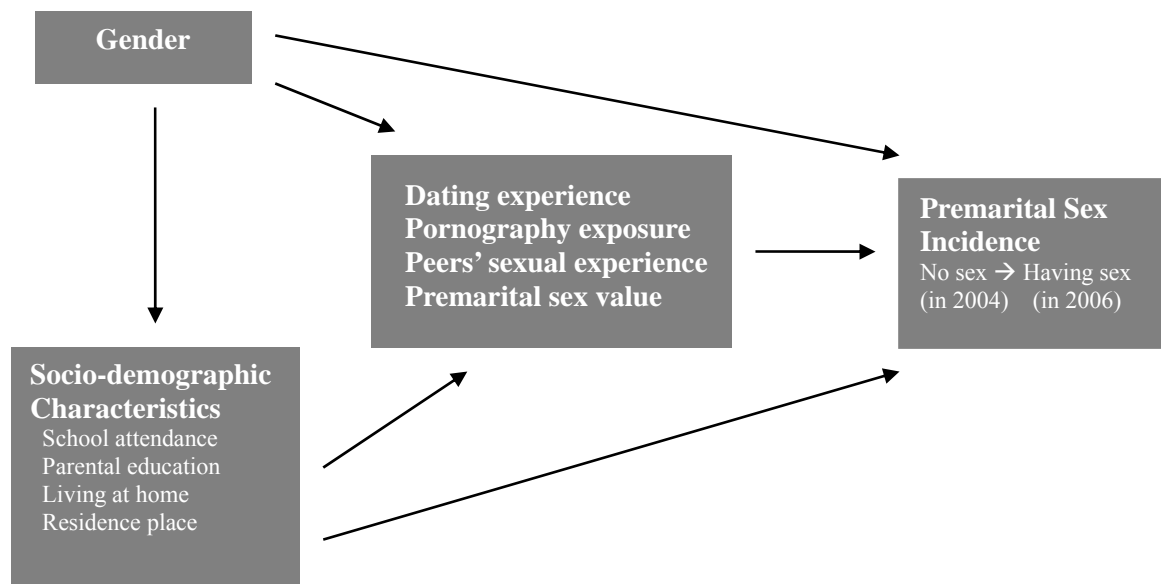
Figure **1.** Conceptual framework

Table **1**. Sample characteristics and distributions of individual and peers' related variables among never married youth by sex, TYP 2004-2006 (N=1,215)

	Total (N=1,215)	**Male** (N=560)	**Female** (N=655)	*p*-value
Premarital sex in 2006				
% Transited to involvement in sex	20.08	25.89	15.11	<0.001
Dating experience in 2004				
% Number of boy/girl friends in 2004 interview				0.044
None (never dating)	55.31	59.11	52.06	
1-2	30.78	28.57	32.67	
3 and above	13.91	12.32	15.27	
Exposure to pornography				
% Pornography for past year	30.21	55.54	8.55	<0.001
Peers' sexual experience				
% Knowing proportions of best friends who ever had sex in 2004 interview				0.203
None	67.24	64.64	69.47	
Less than half	29.63	31.96	27.63	
Half or greater	3.13	3.39	2.90	
Value of premarital sex				
% Evaluating peers' premarital sex				0.045
Not wrong	30.95	33.93	28.40	
A little wrong	21.56	22.86	20.46	
Wrong	13.99	13.21	14.66	
No opinion	33.50	30.00	36.49	
Socio-demographic characteristics				
Maternal education				0.088
Elementary school or lower	24.21	21.74	26.31	
Junior high school	23.21	25.91	20.92	
Senior high school	32.70	33.51	32.00	
College or above	19.88	18.84	20.77	
Father's education				0.623
Elementary school or lower	19.90	20.18	19.66	
Junior high school	22.41	23.82	21.21	
Senior high school	28.60	27.09	29.88	
College or above	29.10	28.91	29.26	
% Enrolled in school				<0.001
Enrolled from 2004 to 2006	74.79	73.57	75.84	
Not enrolled from 2004 to 2006	10.63	14.11	7.65	
Enrollment change from 2004 to 2006	14.58	12.32	16.51	
% Living at home				0.344
None	34.43	34.88	34.05	
Living in both interviews	48.60	46.69	50.23	
Not living in both interviews	16.97	18.43	15.73	
Residence place				0.057
Taipei city	38.27	38.93	37.71	
Taipei county	38.19	35.00	40.92	
Yilan county	23.54	26.07	21.37	

Note: *p*-value for difference by sex was obtained from χ^2 tests.

Table **2**. Logistic regression models (adjusted odds ratios [aOR] and robust standard error) for premarital sex incidence among never married Taiwanese youth by sex, TYP 2004-2006

	Female		Male	
	aOR	Robust Std Err	aOR	Robust Std Err
Dating experience				
Number of boy/girl friends in 2004 interview (ref=None)				
1-2	5.64***	1.78	7.18***	1.79
3 and above	5.52***	2.08	11.58***	3.78
Exposure to pornography last year (ref=None)				
Yes	1.10	0.53	1.62*	0.38
Peers' sexual experience				
Knowing proportions of best friends who ever had sex in 2004 interview (ref=none/dk)				
Less than half	1.52	0.40	1.24	0.33
Half or greater	4.88**	2.75	2.88	2.04
Evaluating peers' premarital sex (ref=Not wrong)				
A little wrong	0.40**	0.12	0.46*	0.14
Wrong	0.09***	0.05	0.13***	0.08
No opinion	0.35***	0.10	0.50*	0.14
Socio-demographic characteristics				
Maternal education (ref= Elementary school or lower)				
Junior high school	1.15	0.46	0.56†	0.18
Senior high school	1.17	0.37	0.43**	0.13
College or above	0.87	0.34	0.28**	0.11
Enrolled in school (ref= Enrolled in 2004-2006)				
Not enrolled 2004-2006	3.14*	1.47	2.29**	0.70
Enrollment change 2004-2006	1.90*	0.60	2.03	0.81
Living at home (ref=neither in 2004-2006 interviews)				
In both interviews	0.68	0.26	0.98	0.26
Not in both interviews	1.19	0.47	1.18	0.35
Residence (ref=Taipei city)				
Taipei county	0.73	0.22	0.86	0.23
Yilan county	0.93	0.31	0.61	0.24
Model statisitics				
Wald χ^2	88.41***		117.94***	
df	17		17	
Pseudo-R^2	0.1893		0.2650	

Note: Logistic regression with robust standard errors accounted for complex survey design. Adjusted odds ratios (aOR) were estimated to adjust for clustering of same junior high schools in the same residence. ***$p<0.001$, **$p<0.01$, *$p<0.05$, $^\dagger p<0.10$