

Premarital sexual intercourse among adolescents in Malaysia: a cross-sectional Malaysian school survey

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ABSTRACT

Introduction: Sexual intercourse among Malaysian adolescents is a major concern, especially with the worry of HIV/AIDS. This study was done to determine the prevalence of sexual intercourse among secondary school students aged 12 to 19 years in Negeri Sembilan, Malaysia.

Methods: This is a cross-sectional school survey conducted on 4,500 adolescent students based on a structured questionnaire. Data were collected using the self-administered questionnaire (translated version of the Youth Risk Behaviour Surveillance in Bahasa Malaysia).

Results: The study showed that 5.4 percent of the total sample were reported to have had sexual intercourse. The proportion among male students who had had sex was higher (8.3 percent) compared with female students (2.9 percent). The mean age at first sexual intercourse was 15 years. One percent of students reported that they had been pregnant or had made someone else pregnant. Adolescent sexual intercourse was significantly associated with (1) socio-demographical factors (age, gender); (2) environmental factors (staying with parents); and (3) substance use (alcohol use, cigarette smoking, drug use), even after adjustment for demographical factors. The survey showed that 20.8 percent of respondents had taken alcohol, 14.0 percent had smoked cigarettes, 2.5 percent had tried marijuana, 1.2 percent had tried ecstasy pills, 2.6 percent had tried glue sniffing, 0.7 percent had tried heroin, and 0.7 percent had intravenous drugs.

Conclusion: Prevalence of sexual intercourse among Malaysian adolescents was relatively low compared to developed countries. However, certain groups of adolescents tend to be at higher risk of engaging in sexual

intercourse. This problem should be addressed early by targeting these groups of high-risk adolescents.

Keywords: adolescents, premarital sex behaviour, sexual intercourse, substance abuse

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INTRODUCTION

The topic on sexuality has largely remained a taboo subject in Malaysia. Despite this, there are increasing numbers of sexual activities reported among Malaysian youth⁽¹⁻³⁾. Due to sensitivity of this issue, adolescents receive inadequate education, guidance and services on reproductive health⁽⁴⁾. With their limited knowledge about their bodies and their sexuality, adolescents find themselves vulnerable to sexually transmitted diseases and infections, including HIV/AIDS, unplanned early childbearing and unsafe abortions. In the USA, sexual behaviour differed by ethnicity, age, and urban/rural location⁽⁵⁾. In Thailand and the Philippines, family structure was associated with premarital sex: youths living with one parent have higher rate of sexual activity than those living with both parents⁽⁶⁾. For many adolescents, experimenting with tobacco, alcohol, sex, and drugs are rites of passage. Associations between sexual activity and substance use have been a consistent research finding. In Kenya, the single most important predictor of sexual activity among adolescent women was the use of alcohol, drugs, or tobacco⁽⁷⁾. Studies from the USA also reported similar findings^(8,9).

The purpose of this study is to describe the prevalence of premarital sexual intercourse and the determinants of sexual intercourse among Malaysian secondary school students. Data on premarital sex in Malaysia with its multi-ethnic background and rapid modernisation is interesting because data from Western countries may not be applicable to this country. This study hopes to provide updated information on premarital sex

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among the adolescents in Malaysia, and specifically in Negeri Sembilan.

METHODS

This is a cross-sectional descriptive study that was carried out from June 2001 to August 2001. The study was conducted in seven districts (Seremban, Port Dickson, Kuala Pilah, Jempol, Jelevu, Tampin and Rembau) in Negeri Sembilan (purposeful sampling of one of the states in Malaysia). Sampling of schools was done using stratified random sampling. Schools were divided, based on their districts and locality, into either urban or rural. Six schools were chosen randomly from the urban areas and eight schools from the rural areas. Urban areas were defined as gazetted areas with their adjoining built-up areas that had a combined population of 10,000 or more at the time of the year 2000 census. Other areas with populations less than 10,000 people were considered rural areas.

The study population consisted of students (aged 12-19 years) in form 1 to form 6 (form here refers to the grades of schools according to the age of the students). Two classes were randomly chosen from each form to be the study sample, resulting in a sample of 4,500 secondary school students. Response rate was calculated based on the number of questionnaires distributed and the number of questionnaires collected back at the end of the session.

Data were collected using the supervised self-administered questionnaire. The questionnaire was established with reference to the Youth Risk Behaviour Surveillance conducted in the USA⁽¹⁰⁾. It had been translated into Bahasa Malaysia and retranslated back to English to ensure accuracy of translation into Bahasa Malaysia. The questionnaires were pretested in one of the schools in Negeri Sembilan, before they were used in the field, to ensure clarity of questions. Ambiguous questions were revised before the questionnaire was finalised and printed. Consent was sought from the State Education Department, school management and all study participants. To ensure maximal response, students were assured that the information gathered would be treated confidentially by strongly emphasising the anonymity of questionnaire responses. To maximise confidentiality of answers, teachers were not present during the survey and no discussions were permitted throughout the survey.

Background information about the respondents includes age, gender, education level, ethnic group and religion. Questions related to sexual behaviour include (a) "Have you ever had sexual intercourse?"

(b) "How old were you when you had sexual intercourse for the first time?" and (c) "Have you ever been pregnant or ever made a girl pregnant?" Questions related to smoking and alcohol include "During the past 30 days, on how many days did you smoke cigarettes?", "During the past 30 days, on how many days have you had at least one drink of alcohol?" and "During the past 30 days, on how many days did you have five or more drinks of alcohol in a row and within a few hours?". Substance use was based on responses to the questions on each substance: "During your life, how many times have you used marijuana, used ecstasy pills, sniffed glue, used heroin, or used a needle to inject an illegal drug?" Analysis was done on factors that were possibly related to the adolescents' sexual behaviour.

Statistical significance of differences between groups was tested using χ^2 test. Factors related to the adolescents' sexual activity were analysed using multiple logistic regression. The statistical analysis was performed using Statistical Package for Social Sciences (SPSS) version 11.5 (Chicago, IL, USA). However, owing to some missing answers to certain survey questions, the denominator used in percentage computation varies according to the responses obtained for the survey question.

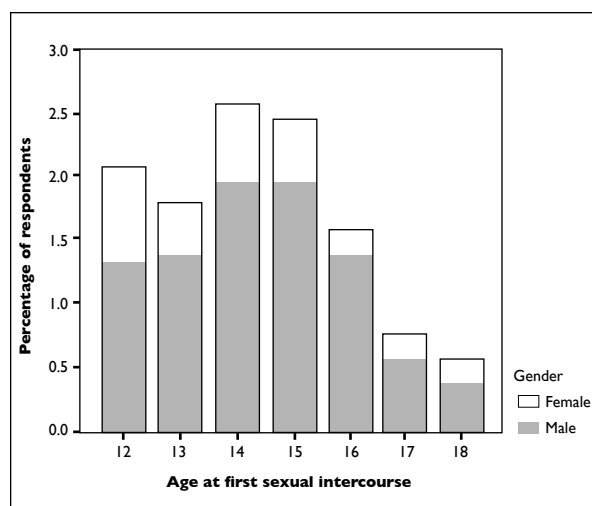
RESULTS

Response rate was 100% as all the 4,500 questionnaires distributed were collected back. Levels on non-response to questions on sexual intercourse were quite low – less than 1% (n=35). Of the total sample (4,500 adolescents), 53.6% of the respondents were female, 46.4% were male (Table I). The mean age was 15.3 years of age (median 15). In terms of ethnic group distribution, there were 51.8% Malay, 29.2% Chinese, 17.1% Indian and 1.8% from other ethnic groups (mainly indigenous people) (Table I), which reflect the ethnic breakdown of the population in Malaysia. More of the adolescents (51.7%) were from the urban areas as compared to rural areas (48.3%) (Table I), which is in proportion to the urban/rural population in Negeri Sembilan.

5.4% of the total sample were reported to have had sexual intercourse (Table I). The proportion among males who had had sex was 8.3% compared with 2.9% of females, and the difference was statistically significant ($p < 0.0001$) (Table I). Table I showed that there was significant difference in sexual experience among those not staying with their parents (12.2% had had sexual intercourse) as compared to those staying with their parents (only 5.1% had had sexual intercourse). There were no significant differences in sexual experience by ethnic group, religion or urban/

Table I. Distribution of respondents by background characteristics and sexual experience, Malaysia.

Characteristics	Sexual experience						p-value
	n	%	No	%	Yes	%	
All respondents	4,500	100	4,243	93.8	242	5.4	
Gender							
Male	2,089	46.4	1,892	91.7	172	8.3	<0.0001
Female	2,411	53.6	2,331	97.1	70	2.9	
Ethnic group							
Malay	2,332	51.8	2,182	94.5	127	5.5	0.314
Chinese	1,314	29.2	1,238	94.7	69	5.3	
Indian	771	17.1	730	95.1	38	4.9	
Others	83	1.8	73	90.0	8	9.9	
Religion							
Muslim	2,355	52.3	2,202	94.5	129	5.5	0.061
Buddhist	1,120	24.9	1,068	95.5	50	4.5	
Christian	221	4.9	209	94.6	12	5.4	
Hindu	693	15.4	652	94.5	38	5.5	
Others	111	2.5	92	87.6	13	12.4	
Location							
Urban	2,325	51.7	2,191	94.7	122	5.3	0.692
Rural	2,175	48.3	2,032	94.4	120	5.6	
Family structure							
Both parents	3,983	89.3	3,778	94.9	205	5.1	0.001
Single parent	477	10.7	130	87.8	18	12.2	

**Fig. I** Age at first sexual intercourse.

rural location (Table I). Age at first sexual intercourse varied and was inconsistent, with the highest number of those having sex at age 14-15 years. There was no significant age difference for first sexual intercourse between males and females. The mean age at first sexual intercourse for males in the study was 14.9 years and the median age was 15 years. For females, the mean age at first sexual intercourse was 14.4 years

and the median age was 15 years. There seemed to be a higher proportion of male students as compared to females that first started having sexual intercourse (Fig. 1). Out of the 242 students who had had sexual intercourse, 17.8% (n=43) reported that they had been pregnant or had made someone else pregnant. Another 23.1% (n=56) of students were unsure whether they had been pregnant or had made someone else pregnant. The rest (n=143) of the students had never been pregnant or made anyone pregnant.

The influence of alcohol, drugs and substance abuse on young people's sexual relationships was also explored. The survey showed that 20.8% of respondents had taken alcohol before. Out of those who had taken alcohol, 2.8% were heavy drinkers (having five or more drinks per occasion in the past one month). The prevalence of smoking among the students was 14.0%. Among the adolescents, 2.5% had tried marijuana, 1.2% had tried ecstasy pills, 2.6% had tried glue sniffing, 0.7% had tried heroin and 0.7% had taken intravenous drugs. In general, males reported significantly more frequent use of smoking, alcohol drinking and substance use than females ($p < 0.05$ for all variables).

Bivariate analyses showed that respondents who smoked, used alcohol or drugs were more likely to have sexual intercourse than those who did not (Table II). For example, 12.3% of those who reported alcohol use had had sexual intercourse, compared with 4.0% of those who did not drink; 28.7% who reported heavy alcohol drinking had had sexual intercourse, compared with 4.7% of those who did not drink. 17% of respondents who smoked cigarettes had had sexual intercourse, compared with 3.5% of those who did not smoke. Likewise, respondents who used marijuana, ecstasy pills, glue sniffing, heroin and intravenous drug were more likely than those who abstained to have had sex (Table II).

After adjusting for age and gender, there was still a strong positive association between substance use and sexual intercourse (Table II). Those who used alcohol was 2.7 times more likely to have had sexual intercourse, for cigarettes it was 4.1 times, marijuana 10.6 times, ecstasy pills 21.7 times, glue sniffing 6.8 times, heroin 17.5 times and intravenous drug 15.6 times. The basic profile of adolescents who are sexually active is a male aged 14-15 years, lives with a single parent, smokes, drinks alcohol and uses illicit drugs.

DISCUSSION

The proportion of adolescents who had experienced sexual intercourse was 5.4% in this study. In the Second National Health and Morbidity Survey

of 1996, 1.8% of the respondents in secondary schools claimed to have had sex⁽¹⁾. The percentage of premarital sexual activity seems to have increased in Malaysia over the years. This can be due to rapid modernisation and social changes in the country. However, the result of this study was lower compared to those of other countries (percentage of adolescents aged 15-19 years who had had sex: Thailand 15%, Brazil 33%, Great Britain 60% and USA 50%)⁽¹¹⁾. In earlier local studies, the proportion of unmarried adolescents aged 15-21 years who had experienced sexual intercourse was also higher, i.e. 13% and 9%^(2,3). This could be due to the fact that in this study, all the respondents were students while in the other studies^(2,3), the respondents were older youths. We also have to bear in mind that the figures in this study may not show the true picture as adolescents in Malaysia are not forthcoming about sex, which was probably why the results were rather conservative.

In this study, adolescent sexual activity varies greatly with gender in several important ways. Adolescent males were more likely to be sexually experienced than adolescent females, with 8.3% boys reporting that they had had sex, compared to only 2.9% of girls. These figures were higher when compared to the figures from the Second National Health and Morbidity Survey in 1996 where only 2.5% of boys and 1.3% of girls reported having had sexual intercourse⁽¹⁾. In other settings, youth's degree of sexual experience varies across regions, but is generally consistent within regions.

Studies of female youths suggest that 2%-11% of Asian women have had sexual intercourse by the age of 18 years; 12%-44% of Latin American women by the age of 16 years; and 45%-52% of sub-Saharan African women by the age of 19 years⁽¹¹⁾. In developed countries, most young women have had sex prior to the age of 20 years – 67% in France, 79% in Great Britain, and 71% in the USA⁽¹²⁾. Among male youths, studies suggest that 24%-75% of Asian men have had sex by the age of 18 years; 44%-66% of Latin American men by the age of 16 years; and 45%-73% of sub-Saharan African men by the age of 17 years⁽¹¹⁾. In developed countries, most young men have had sex prior to the age of 20 years – 83% in France, 85% in Great Britain, and 81% in the USA⁽¹²⁾. This suggests a gender-based double standard where there is lesser social pressure on boys to remain virgins until marriage or greater tolerance to premarital sexual experimentation among boys than girls. This gender imbalance where boys are more sexually active than girls may be due to the condoning attitude and behaviour of the young people and the society⁽¹¹⁾.

Table II. Percentage of respondents who had sexual intercourse, and odd-ratios after adjustment for demographical variables, by history of substance use.

Substance use	Bivariate analysis				Multivariate analysis	
	Sexual activity				Sexual activity	
	Yes		No		Odds-ratio	95% CI
n	%	n	%			
Alcohol use						
Never	137	4.0	3,295	96.0	1.0	Ref
Sometimes	78	12.3	557	87.7	2.7	1.99, 3.66
Heavy drinking						
Never	204	4.7	4,128	95.3	1.0	Ref
Sometimes	36	28.8	89	71.2	6.9	4.57, 10.64
Cigarette use						
Never	136	3.5	3,706	96.5	1.0	Ref
Sometimes	106	17.0	517	83.0	4.1	3.06, 5.56
Marijuana use						
Never	196	4.5	4,147	95.5	1.0	Ref
Sometimes	45	41.3	64	58.7	10.6	6.99, 16.13
Ecstasy pill use						
Never	211	4.8	4,184	95.2	1.0	Ref
Sometimes	30	55.6	24	44.4	21.7	12.19, 38.46
Glue sniffing						
Never	208	4.8	4,138	95.2	1.0	Ref
Sometimes	33	29.5	79	70.5	6.8	4.39, 10.64
Heroin use						
Never	224	5.1	4,200	94.9	1.0	Ref
Sometimes	17	51.5	16	48.5	17.5	8.55, 35.71
Intravenous drug use						
Never	225	5.1	4,200	94.9	1.0	Ref
Sometimes	16	48.5	16	48.5	15.6	7.58, 32.26

Note: Subtotals are not consistent because of missing data.

Male adolescents become sexually active at earlier ages than females (14.9 years old as compared to 14.4 years old). The mean age at first sexual intercourse for males in the study was 14.9 years and the median age was 15 years. For females, the mean age at first sexual intercourse was 14.4 years and the median age was 15 years. Age at first intercourse is important in health terms, as it places young people into a group exposed to risks of unintended pregnancy and sexually transmitted diseases, including AIDS, and these risks vary by age at onset of sexual activity. Younger ages at first intercourse were associated with higher odds of sexually-transmitted infection in comparison with older ages⁽¹³⁾. At the population level, a younger age at first intercourse results in more sexually active teens and a longer period of sexual activity before

entering into a lasting relationship. Studies have shown gender differences in the age at first sexual experience^(14,15). Explanations for the observed younger ages at first sexual experience for males have centred on differences in societal expectations and values regarding male and female sexual behaviour, biological and maturational differences, variations in sexual controls, such as parental supervision, and differences in the opportunity costs of becoming sexually active (and the subsequent risk of unintended pregnancy)^(14,15).

In this study, adolescents living with single parents had significantly higher rates of sexual intercourse than did those living with both biological parents. Some studies do indicate that adolescents living with a single parent are more likely to become sexually active than those living with both parents⁽¹⁶⁾. On the other hand, teens who grow up in two-parent families are more likely to delay sexual activity and use contraception⁽¹⁷⁾. In single-parent families, the absence of a second adult may contribute to the parent's difficulty in monitoring and controlling a teenager's activities⁽¹⁶⁾.

The findings of this study indicate that sexual intercourse was positively associated with alcohol and other drug use, even after adjusting for age and gender. The relationship between alcohol and other drug use and sexual activity is well established; studies have shown that prior substance use increases the probability of an adolescent initiating sexual activity^(18,19). However, one must be cautious in interpreting these results, because no causal influence of substance use on sexual activity can be inferred from the data. The implication of this finding can be used by healthcare practitioners and health educators to build prevention messages that stress the relationships between substance use and sexual intercourse. For example, if substance-induced disinhibition is causing sexual risk-taking, education and counselling should warn young people about the potential dangers of alcohol and other drugs on judgment, and should stress the connection between substance use and risky sexual behaviours in certain social contexts. Such education and counselling should help young people recognise the social cues involved and help them avoid the social situations that may lead to sexual risk behaviour⁽¹⁸⁾.

Adolescent pregnancy in this study seems to be low. However, the risks associated with adolescent pregnancy are high – in terms of both maternal and infant health – as well as being unplanned. Unplanned pregnancies among adolescents pose a considerable problem for the young parents, the child, and

society. In an earlier local study, it was found that 72% of adolescents did not use contraception at first intercourse⁽²⁾. Sex education is still not available in Malaysian schools. Despite the controversy of sex education, studies conducted indicate that sex education does not encourage sexual activity and in fact encourages abstinence and provides adolescents with the knowledge and skills related to responsible sexual behaviour⁽²⁰⁻²²⁾. The school is an ideal setting for life skills, sexual and reproductive health education, as a large number of children can be reached in schools. Therefore, it is essential that programmes for adolescents should consider providing sex education as well as contraceptive service to prevent unwanted pregnancies.

One of the limitations of the study was that the results were based on adolescents' self-reports of their sexual behaviour. Although every effort was made to assure the students that their responses would be confidential, the possibility remains that some students may have under-reported their sexual activity as sex is still a taboo subject in Malaysia. Another limitation of the study was that some of the students, especially those in the poorer academic classes, were not able to answer the questions because they were unable to read and write. Although assisted by our interviewer, some of the answers received were not valid. These answers have been omitted from the analysis. However, various efforts were made during the survey to minimise possible under-reporting by the students, including using a self-administered anonymous questionnaire, asking the teachers to leave the classroom during the survey, and strongly emphasising the anonymity of questionnaire responses. Another shortcoming of this study was that data were only collected in schools. School age children who have left or dropped out of school at various ages were not reached, so the results cannot be generalised to all adolescents nationwide. This group might be especially at risk for high-risk sexual behaviours. In addition, an important limitation of all cross-sectional studies is that they can suggest associations, but not prove causality.

In conclusion, prevalence of premarital sexual intercourse among Malaysian adolescents was relatively low compared to developed countries. However, certain groups of adolescents tend to be at higher risk of engaging in sexual intercourse. This problem should be addressed early by targeting these groups of high-risk adolescents.

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