

Factors Associated with Sexual Relationship Among High School Female Students in Ratchaburi Province.

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Abstract

Objectives: To study sexual behavior and factors associated with sexual relationship among female adolescent students in high school in Ratchaburi province.

Methods: A cross-sectional study among adolescents 216 female high school students in Ratchaburi Province were recruited. Data was collected using self-administrated questionnaires from June 15th and July 31st, 2009. Statistical analysis included descriptive statistics, Chi-square test, Pearson's Correlation Coefficient, and Stepwise Multiple Regression Analysis.

Results: The results showed that 54.2% of adolescents have had a sexual relationship. The mean age of the first sexual relationship was 14.6 years old. The partners in their first sexual relationship were their lovers (55.6%), girlfriends (25.6%), boyfriends (12.0%) and strangers (1.7%). The main reason for having a sexual relationship was love (72.6 %). Factors significantly associated with sexual relationships were the sexual behavior of close friends, receiving sexual information from lovers or friends, family relationships, and using the Internet to have sex chats with a lover. 18.5% of adolescents have had coitus. The mean age of first coitus was 15.5 years old. Most of their partners were their lovers (78%). Love is still the main reason for having coitus for the first time (57.5%). 20% were drunk before coitus. Significant factors associated with coitus were sexual behavior of close friends, using the Internet to have sex chats with a lover, and attitude towards sex. Interestingly, receiving sexual education from by parents/relatives/teachers/books may decrease the rate of coitus.

Conclusion: The rate of sexual relationships among adolescents in Ratchaburi Province was fairly high. Due to these associated factors, it is rather difficult to prevent sexual relationship and coitus among adolescents. However, sexual education from parents and teachers may have a protective effect on the rate of coitus among adolescents. Good relationships in the family, good friends, and proper source of information about sexual health underlined the basic prevention program.

Key words: Sexual relationship / coitus / adolescents

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Introduction

Adolescence is the period that many changes have occurred in regard to physical, mental, social, and intelligence. These are the developmental processes of childhood to adulthood. They dare to take a risk, to try new things in order to serve their emotion needs, to try and learn by themselves. The stimulation from sex hormone makes adolescents have sexual feeling, are interested in the opposite sex and have a dating relationship. Due to adolescents' sexual drives for serving their natural needs and their changed attitude towards sex as well as the present social situations that aroused sexual behaviors by various matters including pornographic movies and magazines and internet have made the adolescents want to try and to seek more experiences about sexual relationship. These phenomena revealed the accelerated severity of sexual behavior problems of adolescents because premarital sexual relationship is the risk of unwanted pregnancy, unsafe abortion, sexual transmitted infection especially HIV infection which have great impact to infection which have great impact to family and society as a whole.

Teen sexuality is influenced by the mass media today more than any other time in history. Internet, television, music video and sexually explicit lyrics all contribute to adolescents' attitudes and behavior concerning sexual activity. Only 9% of the sex scenes on 1,300 of cable network programming discusses and deals with the negative consequences of sexual behavior.⁽¹⁾ The Internet and anonymous interaction involved with it allows adolescents real concerns relating to false information on health issues, sexuality, and sexual violence in the world of intimate sexual relationships.⁽²⁾ Exposure to sexually explicit media by adolescent males tend to view women as objects, use this exposure as a platform to identifying traditional models of gender identification and potentially express negative views of women.⁽³⁾

Evidences corroborated the early initiation of

sexual activity among young men. Recent data from the National Behavioural Surveillance (2004) among 2nd year secondary school students indicated that the average age of first sex among sexually active 8th grade students was 13 years for both boys and girls.⁽⁴⁾

Ratchaburi province is a province at the located at the central part of Thailand. Its economic status was rather high. The 4th Regional Health Promotion Center, Ratchaburi reported that rate of pregnancy of women under 20 years old were 19.9%, 20.5%, 19.3% and 19.1% in the year 2005-2008 respectively.⁽⁵⁾

Teenage pregnancy is the result of unprotected and improper time of sexual relationship. In order to prevent teenage pregnancy, circumstances arousal sexual relationship should be understood. Several factors are involved in the event of sexual relationship including families, schools, peers, environments as well as other socioeconomic determinant.

Although several studies had been done on the issue of teenager pregnancy and sexual relationship, few was done in Ratchaburi Province. The objective of this study is to explore factors involved teenage sexual relationship especially their general appearances, their families and friends as well as their spending of leisure time.

Material and Methods

Research Design

This research is a cross-sectional survey in which data are collected female adolescent students in co-education government high schools in Ratchaburi province by a method of self administered questionnaire.

Population and Sample

The population of this study were students in Mathayom 4-6 in co-education high government schools, who studying in Amphur Muang Ratchaburi province, and samples were under 20 years old, had

Thai nationality, Thai literate and agreed to participate in this study.

The sample size

The sample sizes in this research are female adolescent students, who studying in 2 co-education government schools in Amphur Muang Ratchaburi province. The reported of child watch Organization to survey about sexual behavior of senior high school students, who had sexual intercourse in Ratchaburi province, found that teenage had sex 15.5%⁽⁶⁾. The required sample size was calculated using the formula.⁽⁷⁾ The number of samples in this study was 216 students.

Research Instrument

The instrument of this research was the self administered questionnaire constructed and revised from review literature and related research. The questionnaire consisted of 6 parts as follows:

Part 1 : general information 20 questions.

Part 2 : These are 8 closed and opened questions about external appearance of female students including physical attractiveness.

Part 3 : questions about sexual knowledge of female students

Part 4 : questions about attitude towards sex.

Part 5 : questions concerning receiving sexual information of adolescents.

Part 6 : questions concerning sexual behavior of adolescents.

Validity and Reliability Test

1. Content Validity

Correlation and revision of the questionnaire were made according to suggestion and recommendation by 3 experts who participated in the validation of the self-administered questionnaires.

2. Reliability

Questionnaires were tested in a pilot study

of 30 students. This had the same characteristic in the selection population. The reliability of the measurement of knowledge about sex and attitude towards sex was calculated by using Cronbach alpha coefficient and Kuder-Richardson as follows

- The sexual knowledge = 0.73
- The attitude toward premarital sex = 0.77

Method of analysis

The self-administered questionnaires were coded and analysed using computer. The statistics used for data analysis are as follows:

1. Descriptive statistic : percentage, mean, standard deviation were calculated to describe individual characteristic and other background information of the respondents.
2. Analytic statistic:
 - Chi-square test used to test the association between the variable which is normal scale.
 - Pearson's Product Moment Correlation Coefficient used to test the association between the variable which is interval scale
 - Correlation Logistic Stepwise regression was used to account for the factor effecting sexual relationship/coitus.

Results

1. Sexual relationships among adolescents

The results showed that 54.2% (95%CI= 47.0%-61.0%) of adolescents had experience of sexual relationship. They were 100.0% holding hands, 64.0% hugging, 55.6% petting, and 39.3% kissing. Partners of first sexual relationship were their lovers (54.7%), girlfriends (25.6%), boyfriends (12.0%) and strangers (1.7%). Main reason for having sexual relationship was love (72.6%). Mean age of first sexual relationship was 14.6±1.5 years old.

2. Coitus among adolescents

18.5% (95%CI =15.5%-21.5%) have had coitus.



Mean age of first coitus was 15.5 ± 1.3 years old. Most of their partners were their lovers (77.5 %), strangers (2.5%). Love is still the main reason for having coitus for the first time (57.5%). Twenty percent were drunk before coitus.

Most of adolescents who had coitus used contraception (57.5%), 52.2% were condom.

3. Factors significantly associated with sexual relationships/coitus

From Chi-square Test and Pearson's Correlation Coefficient significant factors associated with sexual relationship/coitus ($p < 0.05$) were monthly allowance received, sexual behavior of female siblings (coitus), sexual behavior of close friend (coitus), relationship between adolescents and parents, attitude toward sex, source of sexual information from parents/relative/teacher/book, internet website/ video/ CD/ comic books, lover or friend, internet sex chat with lover, boyfriend, girlfriend, and all internet sex chat that were showed in table 1.

Factors significantly associated with sexual relationships by Stepwise Multiple Regression Analysis, the results revealed that sexual behavior of close friend (coitus) was the highest strength of association (Beta = 0.284), the second was sexual information by lover or friend (Beta = 0.213), the third was relationship between adolescents and parents (Beta = 0.206), and the last was internet sex chat with lover (Beta = 0.165), These factors could predict 23.9 % ($R^2 = 0.239$) of factors significantly associated with sexual relationship, that were showed in Table 2.

Factors significantly associated with coitus from Stepwise Multiple Regression Analysis showed that sexual behavior of close friend (coitus) was the highest strength of association (Beta = 0.378), the second was internet sex chat with lover (Beta = 0.239), the third was sexual information by parents / relative/ teacher/ book (Beta = -0.233), and the last was attitude towards sex (Beta = -0.209), These factors could predict 46.0% ($R^2 = 0.460$) of the factors significantly associated with coitus, that were showed in Table 3.

Table 1. Significant factors associated with sexual relationship/and/or coitus

Factors	Sexual relationship (n=117)				Coitus (n=40)			
	χ^2	p-value	r	p-value	χ^2	p-value	r	p-value
Age (years)	-	-	0.022	0.751	-	-	0.022	0.791
Number of siblings	-	-	0.020	0.772	-	-	0.062	0.472
Order of siblings	0.686	0.710	-	-	0.072	0.399	-	-
Academic achievement (Grade point average)	-	-	-0.079	0.247	-	-	-0.072	0.399
Residence	2.459	0.117	-	-	3.864	0.060	-	-
Monthly allowance received (baht/month)	-	-	0.119	0.080	-	-	0.246	0.004*
Spending leisure time	1.081	0.298	-	-	1.978	0.160	-	-
Personality	0.402	0.526	-	-	0.124	0.724	-	-
Sexual behavior of female siblings (coitus)	9.511	0.002*	-	-	3.834	0.063	-	-
Sexual behavior of close friend (coitus)	19.523	<0.001*	-	-	22.190	<0.001*	-	-

Table 1. Significant factors associated with sexual relationship/and/or coitus (*cont.*)

Factors	Sexual relationship (n=117)				Coitus (n=40)			
	χ^2	p-value	r	p-value	χ^2	p-value	r	p-value
Parental status	0.892	0.345	-	-	0.001	0.979	-	-
Father's occupation	0.692	0.406	-	-	0.263	0.608	-	-
Mother's occupation	0.103	0.748	-	-	0.082	0.775	-	-
Relationship between adolescents and parents	7.993	0.005*	-	-	1.889	1.169	-	-
External appearance of adolescents								
- Body Mass Index (BMI)	-	-	0.022	0.749	-	-	0.060	0.382
- Breast circumference (inch.)	-	-	0.010	0.889	-	-	0.097	0.154
- Skin complexion	0.678	0.410	-	-	0.839	0.360	-	-
- Hair style	3.110	0.078	-	-	0.115	0.734	-	-
- Leg	0.047	0.829	-	-	0.142	0.706	-	-
- Dress	1.235	0.266	-	-	1.358	0.386	-	-
- Dressing with outside home	2.743	0.098	-	-	2.936	0.078	-	-
- Sex appealed	1.499	0.221	-	-	0.124	0.724	-	-
Sexual knowledge	-	-	0.071	0.296	-	-	0.048	0.577
Attitude toward premarital sex	-	-	-0.245	<0.001*	-	-	-0.327	<0.001*
Source of sexual information								
- Parents/ relative/ teacher/ book	13.188	<0.001*	-	-	23.608	<0.001*	-	-
- Internet website/ video/ CD/comic book	6.093	<0.001*	-	-	0.016	0.900	-	-
- Lover, friend	19.497	<0.001*	-	-	4.504	0.034*	-	-
Using media to arousal sexual desire								
- Video/CD	1.438	0.231	-	-	1.596	0.325	-	-
- Internet	1.996	0.158	-	-	1.584	0.113	-	-
- Pornographic picture/ entertainment magazine/comic book	0.004	0.948	-	-	0.005	0.875	-	-
Internet sex chat								
- Lover	11.629	0.001*	-	-	13.937	<0.001*	-	-
- Boyfriend	6.852	0.009*	-	-	5.186	0.023*	-	-
- Girlfriend	9.239	0.002*	-	-	0.025	0.824	-	-
- All internet sex chat	9.594	0.002*	-	-	6.476	0.011*	-	-

* statistically significant

**Table 2.** Significant factors associated with sexual relationship by Stepwise Multiple Regression Analysis

Factors	Sexual relationship				
	R ² change	B	Beta	t	p-value
1. Sexual behavior of close friend (coitus)	0.098	0.331	0.284	4.466	<0.001*
2. Sexual information by lover or friend	0.051	0.254	0.213	3.361	0.001*
3. Relationship between adolescents and parents	0.064	0.230	0.206	3.260	0.001*
4. Internet sex chat with lover	0.026	0.196	0.165	2.620	0.009*

R² = 0.239, constant = 2.288, Sig of constant = 0.023*

F Change = 6.862, Sig of F Change = 0.009*

Table 3. Significant factors associated with coitus by Stepwise Multiple Regression Analysis

Factors	Coitus				
	R ² change	B	Beta	t	p-value
1. Sexual behavior of close friend (coitus)	0.220	0.814	0.378	5.742	<0.001*
2. Internet sex chat with lover	0.075	0.527	0.239	3.491	0.001*
3. Sexual information by parents/ relative/ teacher/ book	0.128	-0.453	-0.233	-3.298	0.001*
4. Attitude towards sex parents / relative/ teacher/ book	0.036	0.380	-0.209	2.952	0.004*

R² = 0.460, constant = 2.858, Sig of constant = 0.005*

F Change = 8.713, Sig of F Change = 0.004*

Discussion

The results showed that 54.2% of the adolescents had experience sexual relationship. Sexual relationship included holding hand (100%), hugging (64.0%), petting (55.6%), kissing (39.3%) and coitus (18.5%).

These finding were comparable with the study of Attaveelarp O.⁽⁸⁾ who found 50% of adolescents had sexual relationship in Phuket in the year 2000. She found 40.8% going out with boyfriend alone. 35.0%

holding hand, 18.1% kissing and petting and also found that 12.7% of adolescent had sexual intercourse. This was accordance with Guruge R⁽⁹⁾ who found 80% of adolescents had sexual relationship in Sakaeo province in the year 2004 found 80.0% being along with a date, 70.0% holding hands, 52.1% kissing and petting, 25.0% had sexual intercourse. Besides that In 2002, The International survey was conducted, with the aim of studying the sexual behavior of teenagers found sexually active, about 40% in England, 34% in Scotland

and 33% in Finland.⁽¹⁰⁾

Partners of the first sexual relationship mostly were their lovers (54.7%), girlfriends (25.6%), boyfriends (12.0%) about 2% had sexual relationship with strangers. Partners of the first coitus mostly were their lovers (77.5%), about 2.5 % had coitus with strangers. This study showed that most of partners with sexual relationship and coitus were their lovers.

Mean age of first sexual relationship was 14.6 ± 1.5 years old. Mean age of coitus was 15.5 ± 1.3 years old. This study showed that adolescents had coitus earlier than the past. This was accordance with Attaveelarp O⁽⁸⁾, and Petkal A⁽¹¹⁾ who found that mean age of coitus was 15 years, 14.7 years respectively. Besides the International survey in England in 2008 survey conducted by YouGov for Channel showed that 14-17 year-olds have had a sexual experience under the age of consent.⁽¹²⁾

This can be explained that at the present time, Thai society accepts more western culture than before. Thai adolescents have a date by going out with their friends privacy and stay at the place where they were stimulated to desire having sex with lovers. Adolescents are at the age that have much sex drive. And this is because adolescents now have more freedom than those day and the spreading of AIDS, these made them afraid of having sexual inter-course with prostitutes.

Significant factors associated with sexual relationship

1. Sexual behavior of close friend (coitus) was the factor lead the highest strength of association when list with regression analysis. This was accordance with Attaveelarp O⁽⁸⁾, Krisawekwisai N⁽¹³⁾, Brooks-Gunn and Furstenderg⁽¹⁴⁾, and Nguyen Thanh Son⁽¹⁵⁾ who found that peer group are more strongly associated with sexual behavior in adolescent.

This can be explained that adolescent is a period of time when friends are very important,

adolescents are closer and more loyal to friends than to parents or family members. In addition, this is the age when they begin to have interest in people of the opposite sex and to look for a special person to date. Therefore, being accepted by peers and peer groups are very important in teenager's life. ($p < 0.001$, $\beta = 0.284$).

2. Relationship between adolescents and parents. ($p = 0.001$, $\beta = 0.213$). It was similar of Boonyathan W⁽¹⁶⁾, Juntaraviruj O⁽¹⁷⁾ who found that the female adolescent living in bad relationship family such as frequent quarrels of parents and broken home, they usually lacked love, warmth and tried to get it outside, which led to sex and pregnancy. Besides that, Resnick, et al.⁽¹⁸⁾ found that adolescents who had good relationship in family had late sexual relationship in adolescent.

This can be explained that adolescents with good family relationships in which parents and children communicate and understand each other will have more appropriate sexual behaviors than those who lack communication within their family. Family relationship is believed to be associated with sexual behavior of adolescents.

3. The study indicated that sources of sexual information by lover, friends was statistically significantly associated with sexual relationship ($p = 0.001$, $\beta = 0.206$). It was in accordance with the research of Boonyathan W.⁽¹⁶⁾ The sexual behavior began with talking about sex, changing lovers, staying privately with lovers and permitting lovers to have body touch. This meant that behavior of peers who had experience of sexual relationship was critical to the sexual behavior shown out by adolescents.

4. Internet sex chat. ($p = 0.009$, $\beta = 0.165$). This was in accordance with the study of Phoemsep R⁽¹⁹⁾ found that half of the students who had ever visited a chat room and had dated with their counterparts and some students who had sex with a male or female they had known superficially in the chat room. Because



of the present, technological advancement such as the internet and other media such as pornographic magazines and video enable teenagers to have easy access to sex-oriented materials. It what the teenagers are exposed to risky media that does not promote proper understanding of sex education. Teenagers may adopt inappropriate values about sex which in turn leads to inappropriate sexual behaviors in their real life.

Significant factors associated with coitus

1. Sexual information by parents/ relatives/ teachers/ books

This factor was form to have protective effect to prevent coitus among adolescents ($p=0.001$, $\beta = -0.233$). This was in accordance with Boonyathan W⁽¹⁶⁾ who found that if fathers, mothers and teachers talked with adolescents directly about sexuality could prevent sexual intercourse among adolescent.

Parents are the most powerful socializing agents in the lives of young teens. Parents are in a unique and powerful position to shape young people's and behavior and to socialize them to become sexually healthy adults. The parents or relatives are important to teach, give advice, promote and reduce risks of sexual behavior leading to the pregnancy. They should act as good models to their adolescent children, transfer correct knowledge to children such as sex knowledge which appropriate to the Thai society.

2. Attitude towards sex

Attitude towards sex associated lead severely with sexual relationship/coitus. ($p = 0.004$, $\beta = -0.209$). It was accordance with Attaveelap O⁽⁸⁾, Nguyen Thanh

Son⁽¹⁵⁾ and Boonyathan W⁽¹⁶⁾ who found inappropriate attitudes had more sexual relationship than those with appropriate attitudes.

Inappropriate attitude is that they agree with premarital sexual relationship and coitus. Forming right attitude of adolescents and youths towards premarital sex is important because adolescents with appropriate attitude who disagree with premarital sex good relationship will have attitude and proper sexual behavior.

Conclusion

Sexual relationships among adolescents has increasingly become a more severe social problem because of the risk of unwanted pregnancy, unsafe abortion, sexual transmitted diseases, especially HIV infection, which have great impact on family and society as a whole.

The rate of sexual relationships among adolescents in Ratchaburi Province was fairly high. Due to these associated factors, it is rather difficult to prevent sexual relationship and coitus among adolescents. However, sexual education from parents, teachers, and books may have a protective effect on the rate of coitus among adolescents. Good relationships in the family, good friends, and proper source of information about sexual health underlined the basic prevention program. It involves every sector of society including governmental agencies i.e, the Ministry of Public Health, the Ministry of Education, the Ministry of Information and Communication Technology (ICT) as well as private organizations.

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