



Factors Associated with Pregnancy among Adolescents in Amphur Phiboon Mangsaharn, Ubon Ratchathani Province

Pho-Ngam S, M.Sc.¹, Suthutvoravut S, M.D.²

¹ Prasimahabodi Psychiatric Hospital, Amphur Muang, Ubon Ratchathani, 34000 Thailand.

² Department of Obstetrics and Gynecology, Faculty of Medicine Ramathibodi Hospital, Mahidol University, Bangkok 10400, Thailand.

Abstract

Background: Adolescent pregnancy has become an important public health issue. It affects not only a maternal and child health, but also affects socioeconomic status of the country.

Objective: To study factors associated with pregnancy among adolescent women in a rural area of Thailand.

Methods: Cases in the study were 48 primigravida pregnant women, aged 11-19 years old who lived in Amphur Phiboon Mangsaharn, Ubon Ratchathani Province. Controls were 144 adolescent women who had never been pregnant and lived nearby or in the same village with cases. (Case : Control = 1:3) The data were collected by self-administered questionnaires during 1 March - 31 May 2012. Descriptive statistics were frequency, percentage, mean and standard deviation. Chi-square test, Fisher's exact test, t-test and logistic regression were used to test the association between these variables. Significant level was set at $p < 0.05$.

Results: By logistic regression analysis, factors significantly associated with adolescent pregnancy were staying with husband or friends, working as housewife or farmer, receiving monthly allowance from husband or husband's family and attitude towards sex.

Conclusion: Three of four statistically significant factors which were 1) staying with husband or friends, 2) working as a housewife or a farmer and 3) receiving monthly allowance from husband or husband's family, were resulted from pregnancy rather than causes. Normally in the rural area, most adolescents after getting married, get out of school to work, move to stay with husband and husband's family, and rely on support from their husbands and families. Attitude towards sex was the only factor that could be applied to effectively prevent adolescent pregnancy. The measures should start from the smallest unit which influence the thought and attitude of adolescents i.e. family and school.

Keywords: Adolescent pregnancy

Corresponding Author: Pho-Ngam S, M.Sc.

Prasimahabodi Psychiatric Hospital, Chaengsanit Rd., Tumbol Nai-Mauang, Amphur Muang, Ubon Ratchathani, 34000 Thailand. Tel. +668 5493 6161 Email. p__somkiart@hotmail.com

Introduction

Adolescent pregnancy is nowadays, one of the important problems in the Maternal and Child Health worldwide which affects not only adolescent health but also socioeconomic system. About 16 million adolescent girls aged 15-19 give birth each year, roughly 11% of all births worldwide. Almost 95% of these births occur in developing countries. The worldwide adolescent fertility rate (per 1000 girls aged 15-19 years) in 2005 is 65. The average of Asia is 56 per 1,000 girls aged 15-19 years and of Thailand is 43.3 per 1,000 girls aged 15-19 years. While the rate of those developed countries such as Japan is 4.9 per 1,000 girls aged 15-19 years, and the Republic of Korea is 1.8 per 1,000 girls aged 15-19 years.⁽¹⁾

From the data review in antenatal care unit in Phiboon Mangsaharn Hospital, Ubon Ratchathani Province, found that the percentage of young women who are less than 20 years old came to the antenatal care unit in the fiscal year 2009, 2010 and 2011 were 29.80, 24.27 and 23.04 respectively. The statistics of the Labour Room in the same hospital revealed that the percentage of young women who are less than 20 years old and came to the delivery unit in the fiscal year 2009, 2010 and 2011 were 19.20, 18.61 and 21.06 respectively.⁽²⁾

Objectives of this study were to study factors associated with pregnancy among adolescents in Amphur Phiboon Mangsaharn, Ubon Ratchathani Province. The result of this study can be used to be guidelines of policy and measures to prevent adolescent pregnancy.

Methods

This study was carried out by self administrative questionnaires with informed consent of those adolescent girls during 1st March - 31st May 2012. Approval for the study was obtained from the Com-

mittee on Human Rights Related to Research Involving Human Subjects Faculty of Medicine Ramathibodi Hospital, Mahidol University (MURA/2012/80). Cases were 48 adolescent primigravida, compared with 144 controls who were not, had never been pregnant and lived in the same village as cases during the same time.

Data was collected by using questionnaire which was constructed by reviewing literature and related research. The questionnaire consisted of 4 parts as follows: general information of adolescents, sexual knowledge, attitude toward sex, and sexual risk behavior of adolescents. Three experts in the field of adolescent health evaluated the content validity of questionnaires. The reliability of the questionnaire about sexual knowledge was 0.73 by calculating Cronbach alpha coefficient.

The SPSS software package version 18 licensed to Mahidol University, was used for data analysis. Chi-square, t-test and Logistic Regression were used for hypothesis testing at α level = 0.05.

Results

Adolescents who were pregnant (cases) were older than those who were not pregnant (controls). Sixty nine percent of cases aged 17-19 years old compared to 29% of controls. Mean age of cases was 17 (SD \pm 1.540) years old compared to 15 (SD \pm 1.925) years old of controls. Cases had higher education than controls. Nineteen percent of cases finished high school compared to 11% of controls. Most of cases were housewives or farmers (58%) whereas most of controls were students (84%). Cases received more monthly allowance than controls. Sixty one percent of cases had monthly allowance more than 3,000 baht compared to 30% of controls. Mean monthly allowance of cases was 3,308 (SD \pm 1,658.9) baht compared to 2,460 (SD \pm 1,347) baht of controls.

**Table 1** Association between characteristics and pregnancy.

Factors	Cases (n=48) No. (%)	Controls (n=144) No. (%)	p-value
Age (years)			
11-16	15 (31.3)	102 (70.8)	<0.001*
17-19	33 (68.7)	42 (29.2)	
Education			
Primary	7 (14.6)	52 (36.1)	0.005*
Secondary or higher	41 (85.4)	92 (63.9)	
Occupation			
Student	6 (12.5)	121 (84.0)	<0.001*
Housewife/farmer and others	42 (87.5)	23 (16.0)	
Monthly allowance (baht/month)			
0-2,000	6 (12.5)	40 (27.8)	<0.001*
2,001-3,000	13 (27.1)	62 (43.1)	
>3,001	29 (60.4)	42 (29.2)	
Sources of allowance			
From husband or husband's family	37(77.1)	8(5.6)	<0.001*
From own family	11(22.9)	136 (94.4)	
Residency			
Stay with parents and family	26(54.2)	137(95.1)	<0.001*
Stay with husband or friends	22(45.8)	7(4.9)	
Father's occupation			
Farmer	26 (54.2)	56 (38.9)	0.064
Not farmer	22 (43.8)	88 (61.1)	
Mother's occupation			
Farmer	27(56.3)	54(37.5)	0.023*
Not farmer	21(43.8)	90(62.5)	
Father's education			
Primary	46(95.8)	115(79.9)	0.009**
Secondary or higher	2(4.2)	29(20.1)	
Mother's education			
Primary	46(95.8)	113(78.5)	0.006**
Secondary or higher	2 (4.2)	31 (21.5)	
Level of knowledge (0-10 scores)			
High (8-10 scores)	5(10.4)	28(19.4)	0.356
Moderate to low (0-7 scores)	43(89.6)	116(80.6)	
Level of attitude (0-5 scores)			
High (>3.62)	6(12.5)	66(45.8)	<0.001*
Moderate to low (= \leq 3.62)	42(87.5)	78(54.2)	

* = χ^2 test

** = Fisher's exact test

Table 2 Logistic regression analysis.

Significant variables	B	95% C.I.	Exp (B)
Residency (staying with husband or friends)	3.004	(3.521, 115.490)	20.164
Occupation (working as a housewife or a farmer)	2.769	(2.923, 86.875)	15.935
Source of allowance (husband or husband's family)	2.313	(1.736, 58.798)	10.102
Attitude towards sex (moderate to low)	1.697	(1.026, 29.040)	5.457

Seventy seven percent of cases got allowance from their husbands or husband's family compared to 6% of controls. Half of cases (49%) stayed with husband or friends compared to 5% of controls. Mothers of 56% of cases worked as a farmer compared to 35% of mothers of controls. Ninety five percent of mothers and fathers of cases finished primary school compared to 80% of mothers and fathers of controls. The differences among these factors between cases and controls were statistically significant. ($p < 0.05$) (Table 1)

There was no statistically significant difference in sexual knowledge between cases and controls. Regarding attitudes towards sex, cases had statistically less appropriate attitude than controls. ($p < 0.001$)

There was no statistically significant difference in sexual behaviors of adolescents (alcohol drinking, smoking, sexy dress, private dating, watching pornography and use of condom) between cases and controls.

When logistic regression analysis was applied, factors which were statistically significantly associated with adolescent pregnancy were residency (staying with husband or friends), occupation (working as a housewife or a farmer), source of allowance (receiving monthly allowance from husband or husband's family), and attitude towards sex. (Table 2)

Discussion

Adolescent pregnancy is one of the major problem in Maternal and Child Health in Thailand. The

rate of adolescent pregnancy in Thailand which was rather high in comparison to other countries of the same socioeconomic level.⁽¹⁾ Program to prevent or reduce the rate of adolescent pregnancy in Thailand has been done more than five years without success.⁽³⁾

Previous studies on adolescent behaviors in Thailand were done in school in Bangkok or in the urban areas.⁽⁴⁾ Although the problem of adolescent pregnancy also prevailed in the rural areas, few studies had been focused on the incidence and problems among adolescents in those areas where the socioeconomic status and culture are different. This study explored factors associated with adolescent pregnancy in a rural area in the Northeastern part of Thailand which was considered to have the lowest socioeconomic status.

One of the disadvantages of case-control study is that the incidence rate cannot be verified. Also the incidence rate of adolescent pregnancy in this study was not determined but cases of adolescent pregnancy were not difficult to find. The prevalence of adolescent pregnancy in the Northeastern part of Thailand is estimated to be of the same or greater magnitude compared to other regions.⁽³⁾

Attitude towards sex is the only statistically significant factor which can be applied to prevent adolescent pregnancy. This study showed that higher level attitude was associated with lower pregnancy rate. Attitude means feeling or belief toward something which arises from learning from past experience.



periences or copying action of a person and cause mental readiness that push a person to act in either good or bad way. Attitude towards sexual matters may be psychological feelings that depend on situation, environment, an important factor influencing sexual behaviors.⁽⁵⁾ The result of this study is in accordance with the study of Adolph C et al.⁽⁶⁾ who found that adolescents who accepted premarital sex tend to have chance to be pregnant and Laksitanont R⁽⁷⁾ who also found that attitude towards sex was significant associated with coitus among adolescent students. This means having a good attitude towards sex among adolescents can reduce the adolescent pregnancy problem in our society. They would know how to avoid or how to have a safe sexual relationship in critical situation and understand why premarital sexual intercourse should be avoided. Therefore, establishing good attitude towards sex among children and youths should begin with family and in school.

More cases stayed with friends, worked as housewife or farmer and received support from husband or husband's family more than controls. It is in accordance with the studies of Tonsakul S⁽⁸⁾ who found that adolescents who stayed in a dormitory or rented house had more sexual risk and relationship than those who lived with family or parents. Staying alone or with friends had more freedom and had more opportunity to have sexual relationship. More cases were housewives or farmers than controls. Boonyathan W⁽⁹⁾ found that occupation was signifi-

cantly associated with adolescent pregnancy. Maybe because of pregnancy, adolescents had to leave school, stayed with their husband, and received support from husband or husband's family. Normally in Thai society, adolescents who get married and pregnant, always leave home to husband's family and had to rely on husbands or their families for the support. These significant factors were the condition resulted from pregnancy not the cause of adolescent pregnancy.

Conclusion

This case - control study of adolescent pregnancy in Amphur Phiboon Mangsaharn, Ubon Ratchathani Province revealed that statistically significant factors were 1) staying with husband or friends, 2) working as a housewife or a farmer, 3) receiving monthly allowance from husband or husband's family and attitude towards sex. The first three factors were conditions resulted from pregnancy rather than conditions leading to pregnancy. Normally in the rural area, most adolescents after getting married, get out of school to work, move to stay with husband and husband's family, and rely on support from their husbands and families. Attitude towards sex was the only factor that could be applied to effectively prevent adolescent pregnancy. The measures should start from the smallest unit which influence the thought and attitude of adolescents i.e. family and school.

References

1. Mehta S, Groenen R, Roque F. Adolescents in changing times: issues and perspectives for adolescent reproductive health in the ESCAP Region. United Nations Social and Economic Commission for Asia and the Pacific, Bangkok; 1998.
2. Phiboon Mangsaharn Hospital. Annual report of Phiboon Mangsaharn Hospital, Ubon Ratchathani Province, 2010.
3. Pattarakulwanich S, Jeng K. Situation Assessment and Strategy for Teenage Pregnancy Prevention 2011-2014. *J Health Sci* 2011;20:903-13.
4. Ruangkanhasetr S, Plitponkarpim A, Hetrakul P, Kongsakon R. Youth risk behavior survey: Bangkok, Thailand. *J Adolescent Health* 2005;36:227-35.
5. Fishbein M, Ajzen I. Belief, Attitude, Intention and Behavior: An Introduction to theory and Research. London: Addison-Wesley; 1975.
6. Adolph C, Ramos D, Linton K, Grimes D. Pregnancy among Hispanic teenagers: Is good parental communication deterrent?. *Contraception* 1995;51:303-6.
7. Laksitanon R. Factors associated with sexual relationship among high school female students In Ratchaburi Province. [M.Sc. Thesis in Human Reproduction and Population Planning Research]. Bangkok: Faculty of Graduate Studies, Mahidol University; 2009.
8. Tonsakul S. The factors related to sexual risk behavior of students in university at Chonburiprvince. *J Health Ed* 2003;26:1-13.
9. Boonyathan W. Factors associated with adolescent pregnancy among adolescent primigravida attending antenatal care clinic at Samutsakhon hospital. [M.Sc. Thesis in Family Health Research]. Bangkok: Faculty of Graduate Studies, Mahidol University; 2006.



ปัจจัยที่มีความสัมพันธ์กับการตั้งครรภ์ของสตรีวัยรุ่น ในอำเภอพิบูลมังสาหาร จังหวัดอุบลราชธานี

สมเกียรติ โพธิ์งาม, วท.ม., สมศักดิ์ สุทัศน์วรุตม์, พ.บ.

ภาควิชาสถิติศาสตร์และนิเวศวิทยา คณะแพทยศาสตร์โรงพยาบาลรามาธิบดี มหาวิทยาลัยมหิดล กรุงเทพฯ 10400

บทคัดย่อ

จุดประสงค์ เพื่อศึกษาปัจจัยที่มีความสัมพันธ์กับการตั้งครรภ์ของสตรีวัยรุ่นในต่างจังหวัดของประเทศไทย

วิธีการศึกษา กลุ่มศึกษา คือ สตรีวัยรุ่นอายุ 11-19 ปี ที่กำลังตั้งครรภ์แรก และอาศัยอยู่ในเขตอำเภอพิบูลมังสาหาร จังหวัดอุบลราชธานี จำนวน 48 คน และกลุ่มควบคุมเป็นสตรีวัยรุ่นที่ไม่ตั้งครรภ์และไม่เคยตั้งครรภ์มาก่อน อาศัยอยู่ใกล้หรือในหมู่บ้านเดียวกับกลุ่มศึกษาในช่วงเวลาเดียวกัน จำนวน 144 คน (กลุ่มศึกษา : กลุ่มควบคุม = 1 : 3) เก็บข้อมูลโดยใช้แบบสอบถามที่สตรีตอบเองระหว่าง วันที่ 1 มีนาคม ถึง 31 พฤษภาคม 2555 วิเคราะห์ข้อมูลโดยใช้สถิติเชิงพรรณนา ได้แก่ จำนวน ร้อยละ ค่าเฉลี่ย และส่วนเบี่ยงเบนมาตรฐาน การวิเคราะห์ความสัมพันธ์ของตัวแปร ใช้ Chi-square, Fisher's exact test, t-test และสมการถดถอยโลจิสติก โดยใช้ระดับนัยสำคัญทางสถิติค่า $p < 0.05$

ผลการศึกษา พบว่าเมื่อทดสอบทางสถิติโดยสมการถดถอยโลจิสติก ปัจจัยที่มีนัยสำคัญทางสถิติ ได้แก่ การอาศัยกับสามีหรือเพื่อน อาชีพแม่บ้านหรือเกษตรกร การได้รับค่าใช้จ่ายประจำเดือนจากสามีหรือครอบครัวของสามี และทัศนคติเรื่องเพศ

สรุป ปัจจัย 3 ใน 4 ปัจจัย ได้แก่ คือ การอาศัยกับสามีหรือเพื่อน อาชีพแม่บ้านหรือเกษตรกร และการได้รับรายจ่ายประจำเดือนจากสามีหรือครอบครัวของสามีเป็นผลหลังจากการตั้งครรภ์ของสตรีวัยรุ่นมากกว่าเป็นสาเหตุเนื่องจากหลังจากแต่งงานกันแล้ว สตรีวัยรุ่นชนบทส่วนใหญ่ออกจากโรงเรียน เพื่อทำงานเป็นแม่บ้านและย้ายไปอยู่กับสามีหรือแฟน และต้องพึ่งพาสามีและครอบครัวของสามี แต่ปัจจัยทัศนคติต่อเรื่องเพศ เป็นปัจจัยที่สามารถนำมาประยุกต์เพื่อแก้ไขและป้องกันไม่ให้เกิดปัญหาการตั้งครรภ์วัยรุ่นได้ การป้องกันปัญหาที่มีประสิทธิภาพจึงควรเริ่มจากหน่วยที่มีอิทธิพลต่อความคิดและทัศนคติต่อเรื่องเพศของวัยรุ่นมากที่สุด นั่นคือ สถาบันครอบครัวและโรงเรียน

Corresponding Author: สมเกียรติ โพธิ์งาม, วท.ม.

โรงพยาบาลพระศรีมหาโพธิ์ ถนนแจ้งสนิท ต.ในเมือง อ.เมือง จ.อุบลราชธานี 34000 โทรศัพท์ 085-493-6161

อีเมลล์ p_spmkiart@hotmail.com