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Self-efficacy and social support to prevent teenage pregnancy in universities, Thailand

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Abstract

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Female teenage who have low self-efficacy and social support may experience higher rates of pregnancy. This study aimed at examining factors associated with preventing the teenage pregnancy among female teenagers in two selected universities, Thailand. The research designed was a cross-sectional study. A multistage random sampling was used to recruit 438 female teenagers in their first to fourth year of undergraduate studies, not currently pregnant from 18 faculties. Data were collected during January to June 2018 by using a self-administered questionnaire to assess self-efficacy to prevent teenage pregnancy, social support to prevent teenage pregnancy, social influence, and behavior to prevent teenage pregnancy. Descriptive statistics, and multiple logistic regression were used for data analysis.

Nearly half of the respondents had sexual intercourse, poor self-efficacy to prevent teenage pregnancy, and inappropriate behavior to prevent teenage pregnancy. In opposite, a half of the respondents had high social support to prevent teenage pregnancy. Factors statistically significantly associated with preventing the teenage pregnancy were the year of study, current residence types, previous sexual intercourse in vaginal and score of self-efficacy to prevent teenage pregnancy. The fourth year female teenagers were 1.97 times more likely to have an inappropriate behavior to prevent teenage pregnancy compared to the first year (Adj. OR=1.97, 95% CI=1.12-3.44). The female teenagers who stayed with friend/ boyfriend/ alone tended to have an inappropriate behavior to prevent teenage pregnancy 1.57 times than those staying with families (Adj. OR=1.57, 95% CI=1.04-2.36). The female teenagers who had previous sexual intercourse were 3.64 times more likely to have an inappropriate behavior to prevent teenage pregnancy than those who did not (Adj. OR=3.64, 95% CI=2.36-5.58). When the score of self-efficacy to prevent teenage pregnancy increased one point, female teenagers were less likely to have an inappropriate behavior to prevent pregnancy (Adj. OR=0.97, 95% CI=0.95-0.99).

This study results lead to suggest that providing useful information for planning activities to increase self-efficacy and social support among female teenagers in universities will prevent unwanted teenage pregnancy.

Keywords: self-efficacy, social support, unintended pregnancy, adolescence, university students

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การรับรู้ความสามารถของตนเองและแรงสนับสนุนทางสังคมเพื่อการป้องกันการตั้งครรภ์วัยรุ่นในมหาวิทยาลัย ประเทศไทย

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บทคัดย่อ

เสาวนีย์ ทองนพคุณ ฉัตรประภา ศิริรัตน์ สาวิตรี วิษณุโยธิน เมรีรัตน์ มั่นวงศ์ และ ศิวานิตย์ ทองคำดี การรับรู้ความสามารถของตนเองและแรงสนับสนุนทางสังคมเพื่อการป้องกันการตั้งครรภ์วัยรุ่นในมหาวิทยาลัยประเทศไทย ว. สาธารณสุขและการพัฒนา 2562;17(1):47-59

วัยรุ่นหญิงที่มีการรับรู้ความสามารถของตนเองและแรงสนับสนุนทางสังคมต่ำอาจนำไปสู่การตั้งครรภ์ในวัยรุ่นได้ การศึกษาในครั้งนี้มีวัตถุประสงค์เพื่อศึกษาปัจจัยที่มีความสัมพันธ์กับการป้องกันการตั้งครรภ์วัยรุ่นในมหาวิทยาลัยประเทศไทย การศึกษาภาคตัดขวางในครั้งนี้เก็บข้อมูลในช่วงเดือนมกราคม ถึงมิถุนายน พ.ศ. 2561 การสุ่มตัวอย่างแบบหลายขั้นตอนทำให้ได้กลุ่มตัวอย่างวัยรุ่นหญิง จำนวน 438 ราย จาก 18 คณะในมหาวิทยาลัย กลุ่มตัวอย่างเป็นนักศึกษาหญิงที่กำลังศึกษาในระดับปริญญาตรี ชั้นปีที่ 1-4 ที่ไม่กำลังตั้งครรภ์ เครื่องมือที่ใช้คือแบบสอบถาม ประกอบด้วย ข้อมูลส่วนบุคคล การรับรู้ความสามารถของตนเองในการป้องกันการตั้งครรภ์ แรงสนับสนุนทางสังคมเพื่อการป้องกันการตั้งครรภ์ อิทธิพลทางสังคม และพฤติกรรมการป้องกันตนเองจากการตั้งครรภ์ วิเคราะห์ข้อมูลโดยใช้สถิติพรรณนา และวิเคราะห์หาความสัมพันธ์โดยใช้การถดถอยโลจิสติกพหุคูณ

ผลการศึกษาพบว่ากลุ่มตัวอย่างเกือบครึ่งหนึ่งเคยมีเพศสัมพันธ์ ขณะที่มีการรับรู้ความสามารถของตนเองในการป้องกันการตั้งครรภ์ในระดับต่ำ และมีพฤติกรรมการป้องกันตนเองจากการตั้งครรภ์ไม่เหมาะสม ครึ่งหนึ่งของกลุ่มตัวอย่างมีแรงสนับสนุนทางสังคมเพื่อการป้องกันการตั้งครรภ์ในระดับสูง การวิเคราะห์ความสัมพันธ์ พบว่า วัยรุ่นหญิงที่กำลังศึกษาในชั้นปีที่ 4 มีพฤติกรรมป้องกันการตั้งครรภ์ไม่เหมาะสม 1.97 เท่า เมื่อเทียบกับวัยรุ่นที่กำลังศึกษาในชั้นปีที่ 1 (Adj. OR=1.97, 95% CI=1.12-3.44) วัยรุ่นหญิงที่พักอาศัยกับเพื่อน แฟน หรือพักอาศัยลำพัง มีพฤติกรรมป้องกันการตั้งครรภ์ไม่เหมาะสม 1.57 เท่า เมื่อเทียบกับวัยรุ่นหญิงที่พักอาศัยกับครอบครัว (Adj. OR=1.57, 95%CI=1.04-2.36) วัยรุ่นหญิงที่เคยมีเพศสัมพันธ์มีพฤติกรรมป้องกันการตั้งครรภ์ไม่เหมาะสม 3.64 เท่า เมื่อเทียบกับวัยรุ่นหญิงที่ไม่เคยมีเพศสัมพันธ์ (Adj. OR=3.64, 95%CI=2.36-5.58) เมื่อคะแนนการรับรู้ความสามารถของตนเองในการป้องกันการตั้งครรภ์เพิ่มขึ้น 1 คะแนน วัยรุ่นหญิงมีความเสี่ยงต่อการมีพฤติกรรมป้องกันการตั้งครรภ์ไม่เหมาะสมลดลง (Adj. OR=0.97, 95%CI=0.95-0.99)

ผลจากการศึกษาครั้งนี้สามารถนำไปเป็นแนวทางในการวางแผนและจัดกิจกรรมเพื่อเพิ่มการรับรู้ความสามารถของตนเองและแรงสนับสนุนทางสังคมเพื่อการป้องกันการตั้งครรภ์วัยรุ่นในมหาวิทยาลัย

คำสำคัญ: การรับรู้ความสามารถของตนเอง แรงสนับสนุนทางสังคม การตั้งครรภ์ไม่พร้อม วัยรุ่น นักศึกษาในมหาวิทยาลัย

Introduction

The percentages of teenage pregnancies are worldwide increasing, especially in Thailand[1-2]. In 2013, about 16 million female teenage aged 15-19 year gave 11% of total worldwide births[3]. In 2016, the birth rate of Thai female teenage aged 15–19 years was 44.8 births per 1,000 youths in Thailand, which was higher than the average birth rate of Asia-Pacific region[4-5]. The Ministry of Public Health, Thailand reported that the highest birth rate among female teenage aged 15–19 in Thailand was in Chon Buri province, which was 66.3 per 1,000[6]. Chon Buri is a tourism and industrial province of East of Thailand[7]. Many studies in this province revealed that there were many sexual risk behaviors among female teenagers such as nightlife, co-inhabiting, early sexual intercourse, and etc. resulting in teenage pregnancy[8-10]. In USA, almost all female teenagers did not use contraception because they were unaware of teenage pregnancy[11]. A study of Chon Buri, Thailand in 2018 was found that only 30.9% of teenage used contraceptive during their sexual intercourse and 4.7% always used coitus interruptus[9]. Also, lack of knowledge about reproductive health and contraceptive use with modern lifestyles has been contributed to a high prevalence of teenage pregnancy[12]. Teenage pregnancy was affect to maternal and child health, this risk twice of maternal death in teenage pregnancy comparing with adult pregnancy reference. Moreover, it leads to higher degree of stigma, depression, school dropout, economic problems, and high risk of having complication during delivering[13]. Thus, there is a need to increase pregnancy prevention behaviors among teenagers.

There was a little research on preventing of teenage pregnancy in university based on using self-efficacy and social support theories. Integrated both intrapersonal health behavior theory and interpersonal health behavior theory will explore benefit to design new intervention program to prevent teenage pregnancy. Therefore, this study aimed at examining factors (self-efficacy and social support) associated with preventing teenage pregnancy in universities, Thailand.

Methods

Study design

The cross-sectional study design was conducted and the data were collected during January to June 2018 in two selected universities in Chon Buri, Thailand. The two universities are situated in an area known for industry and tourism in the eastern part of the country.

Sampling technique

The sample size was calculated using Krejcie and Morgan's formula[14] at a confidence interval (CI) of 95%. The minimum sample size was 380 female teenagers, to prevent of missing data 15% was added; thus, 438 female teenagers were recruited by proportional to size from all faculties of two universities. The sampling process presenting in Figure 1 used the multistage technique, comprising the four following stages: 1) separate university into 2 groups: a) government universities b) non - government universities 2) each group of universities was simple random sampling: one university from four government universities and one university from two non - government universities. 3) all faculties from both

universities were recruited; and 4) a classroom was simple random from each faculty. If the number of female teenage participants exceed, drawing lots was used to exclude from a classroom. If the number of female teenage participants was not enough, another classroom was simple random recruited with a drawing lots technique until met the number of proportional to size in each faculty.

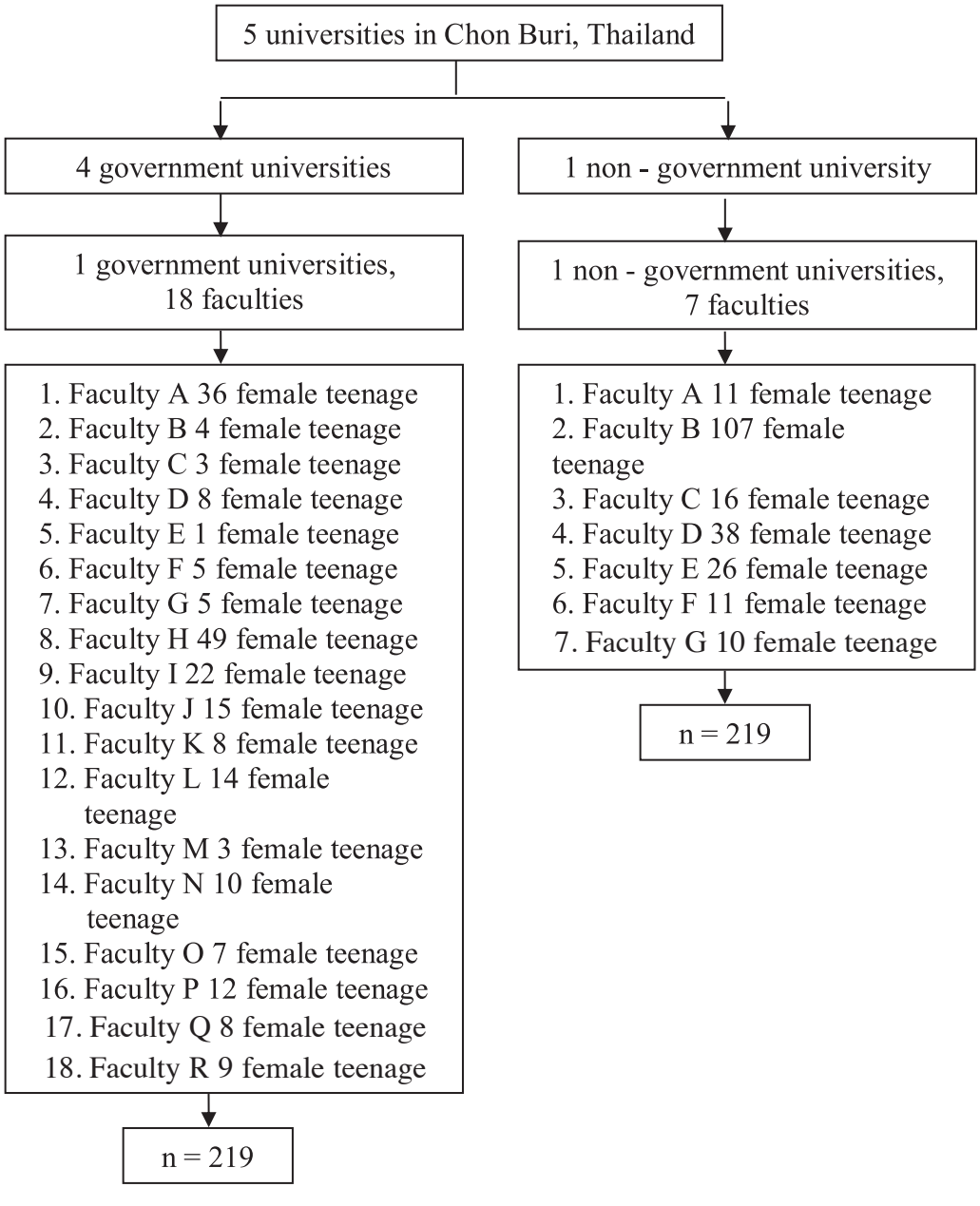

Figure 1 Flow diagram of sampling procedure

Instruments

The self-administered questionnaire was specifically designed as a tool for this study, except the preventing the teenage pregnancy portion, which was adapted from the scale for unwanted pregnancy prevention among Thai female adolescents[15] and self-efficacy to prevent teenage pregnancy was adapted from the scale for development and validation of a condom self-efficacy scale for college students[16]. The questionnaire was composed of 88 questions divided into five parts, as follows: 1) sociodemographic characteristics (20 questions; ie, age, faculty, grade point average, parents' marital status, parents' relationship, current residence type, average income per month, having a boyfriend, hugging experience, and kissing experience, having sexual experiences, etc); 2) self-efficacy to prevent teenage pregnancy (17 questions); 3) social support to prevent teenage pregnancy (24 questions); 4) social influence (12 questions); and 4) behavior to prevent teenage pregnancy (15 questions). A 5-point Likert scale was used for parts two to five of the questionnaire. The questionnaire was validated by three experts in the area of public health and adolescent behavior; content validity was tested, and corrected; the items-objective congruence (IOC) index was used to obtain validity from three experts, which was 0.88. The reliability of the questionnaire, a pilot study was conducted with a sample of 30 students who had similar characteristics to the respondents. The Cronbach's alpha coefficients of overall questionnaire was 0.91 and 0.87 for self-efficacy to prevent teenage pregnancy, 0.90 for social support to prevent teenage pregnancy 0.93 for social influence, and 0.83 behavior to prevent teenage pregnancy.

Ethical consideration

Ethical approval was obtained from the Burapha University Ethics Review Committee for Human Research Subjects (Certified code: Hu 029-2560). Study objectives and data collection procedures were fully explained to the female teenage prior to their participation, and they signed informed consent forms to indicate their willingness to participate. Code names were used to protect participants' privacy, and data were kept confidential.

Data analysis

Data analysis was carried out using IBM-SPSS version 22 (university licensed). Descriptive statistics were used to describe frequency of all variables. Multiple logistic regression analysis was employed to evaluate independent variables that were associated with behavior to prevent teenage pregnancy, which was a dichotomous variable in this study; inappropriate behavior to prevent teenage pregnancy was coded as 1, and appropriate behavior was coded as 0. If p-value ≤ 0.05, the association was statistically significant.

Results

Total, 438 female teenagers in their first to fourth year of undergraduate studies were enrolled in the study. Half of the respondents was study in first and second year. Third-fourth had a grade point average higher than 2.5. One-third reported that their parents were separated. In addition, third-fifth lived with friend, boyfriend and alone. Nearly two-fourth did not have a boyfriend, while nearly one-seventh have boyfriend and stay with boyfriend. Furthermore, nearly half had sexual intercourse, as shown in Table 1. Nearly half

Table 1 Numbers and Percentages of the participants by sociodemographic characteristics and sexual behavior

Sociodemographic characteristics	Number	Percent
Year of study		
First year	134	30.6
Second year	111	25.4
Third year	96	21.9
Fourth year	97	22.1
Grade average point		
< 2.50	111	25.4
≥ 2.51	327	74.6
Parent marital status		
Married	277	63.2
Separated	161	36.8
Current residence types		
Staying with family	185	42.2
Staying with Staying with friend/ boyfriend/ alone	253	57.8
Having a boyfriend		
No	213	48.6
Yes, but not stay together	159	36.3
Yes, but stay together	66	15.1
Previous sexual intercourse in vaginal		
No	200	54.3
Yes	238	45.7

Table 2 Numbers and Percentages of the participants by self-efficacy, social support and behavior to prevent the teenage pregnancy

Variables	Number	Percent
Self-efficacy	**Median = 67.0**	**IQR=13**
Poor (< 66 score)	218	49.8
High (≥ 67 score)	220	50.2
Social support	**Median = 82.0**	**IQR=18**
Poor (< 81 score)	214	48.9
High (≥ 82 score)	224	51.1
Behavior to preventing the teenage pregnancy	**Median = 65.0**	**IQR=6**
Inappropriate (< 65 score)	213	48.6
Appropriate (≥ 65 score)	225	51.4

had poor self-efficacy to prevent teenage pregnancy. Half of the respondents had high social support to prevent teenage pregnancy. Finally, nearly half had inappropriate behavior to prevent teenage pregnancy as shown in Table 2. Table 3 illustrates the simple logistic regression results of predictors for preventing teenage pregnancy. There were two significant predictors as being in fourth year of study and having previous sexual intercourse. The fourth year female teenagers were risk to have an inappropriate behavior to prevent teenage pregnancy 2.14 times when compared to the first year. Likewise, female teenagers who had history of vaginal sexual intercourse tend to have inappropriate behavior to prevent teenage pregnancy 3.03 times compared to those who did not have.

Multiple logistic regression results are shown in Table 4. Factors statistically significantly associated with preventing the teenage pregnancy were the year of study, current residence types, previous sexual intercourse in vaginal and score of self-efficacy to prevent teenage pregnancy. The fourth year female teenagers were 1.97 times more likely to have an inappropriate behavior to prevent teenage pregnancy compared to the first year (Adj. OR=1.97, 95% CI=1.12-3.44). The female teenagers who stayed with friend/ boyfriend/ alone tended to have an inappropriate behavior to prevent teenage pregnancy 1.57 times than those staying with families (Adj. OR=1.57, 95% CI=1.04-2.36). The female teenagers who had previous sexual intercourse were 3.64 times more likely to have an inappropriate behavior to prevent teenage pregnancy than those who did not (Adj. OR=3.64, 95% CI=2.36-5.58). When the score of self-efficacy to prevent teenage pregnancy increased one point, female teenagers were less likely to have

Table 3 Simple logistic regression of predictors for behavior to preventing teenage pregnancy

Predictors	Behavior to prevent teenage pregnancy		Crude OR	95% CI
	Inappropriate	Appropriate		
Year of study				
First year	55 (41.0)	79 (59.0)	1	
Second year	52 (46. 8)	59 (53.2)	1.27	0.76-2.10
Third year	48 (50.0)	48 (50.0)	1.44	0.85-2.43
Fourth year	58 (59.8)	39 (40.2)	2.14	1.26-3.64*
Current residence types				
Staying with friend/ boyfriend/	130 (51.4)	123 (48.6)	1.30	0.88-1.90
alone Staying with family	83 (44.9)	102 (55.1)	1	
Previous sexual intercourse in vaginal				
Yes	145 (60.9)	93 (39.1)	3.03	2.05-4.48*
No	68 (34.0)	132 (66.0)	1	
Score of self-efficacy to prevent teenage pregnancya	67 (12.0)	66 (13.0)	0.99	0.97-1.02

* Significant at p-value < 0.05

a median (IQR) is presented for each group of behavior to prevent teenage pregnancy

an inappropriate behavior to prevent pregnancy (Adj. OR=0.97, 95% CI=0.95-0.99).

Discussion

The study showed that half of the female teenage exhibited an inappropriate level of preventing the teenage pregnancy. Likewise, a study of the factors related to the sexual behaviors among youth in universities located in the eastern region of Thailand, revealed that about half of female teenage had an inappropriate level of unintended pregnancy prevention behaviors[8]. Whereas the study of the knowledge, attitudes, and intention to prevent unintended pregnancy among female teenage in Bangkok, Thailand, revealed that four-fifths of female university students had poor or moderate intentions

Table 4 Multiple logistic regression of predictors for behavior to prevent teenage pregnancy

Predictors	Adj. OR	95%CI for Adj. OR	p-value
Year of study			
First year	1		
Second year	1.13	0.66-1.92	0.657
Third year	1.16	0.66-2.02	0.609
Fourth year	1.97	1.12-3.44	0.018
Current residence types			
Staying with Staying with friend/ boyfriend/ alone	1.57	1.04-2.36	0.030
Staying with family	1		
Previous sexual intercourse in vaginal			
Yes	3.64	2.36-5.58	<0.001
No	1		
Score of self – efficacy to prevent teenage pregnancy	0.97	0.95-0.99	0.046

to prevent unintended pregnancy[2] Although half of female teenage in this study as well as a previous study in USA[17] exhibited an inappropriate level of teenage pregnancy prevention behaviors, a quarter of participants had a) body contact to express their love, b) intend to accept invitation to have a nightlife with a boyfriend c) intend to accept invitation to have a nightlife with friends d) live with a boyfriend. These factors influence sexual relationship leading to sexual intercourse and teenage pregnancy. Those will face with a higher degree of stigma, depression, school dropout, economic problems, and high risk of complication birth like a previous study[13].

Furthermore, in this study, the multiple logistic regression analysis revealed that year of study, current residence type, previous sexual intercourse in vaginal, score of self – efficacy to prevent teenage pregnancy were significantly associated with preventing the teenage pregnancy among female teenage in universities. The results of this study showed a significant relationship between year of study and preventing the teenage pregnancy. It was found that the higher year of study they were the more inappropriate teenage pregnancy prevention behavior they did. Similarly, a previous study presented that age had significant relationship with preventing teenage pregnancy behavior. Insufficiency sexual education in Thailand might be one explanation of this occurrence. This effect sexual development of them. They might have sexual experience by themselves without appropriate guidance[18]. Likewise, a report of Thailand national statistical office showed

that the teenager who have higher age were more likely to have lower rate of using condom than the lower age group[19]. In contrast, one research indicating that older teenage had higher levels of intention to engage in sexual behavior[20]. Another study shown that the first year college students reported engaging in a wide variety of risky sexual behaviors, including inconsistent condom use, use of drugs or alcohol before sex, and having sex with multiple casual partners and they also had sexual intercourse with a partner in a reasonably permanent relationship since the beginning of freshmen year than with a partner in an infrequent relationship[21].

The results of this study showed a significant relationship between current residence type and preventing teenage pregnancy behaviors. Which was found that teenagers who lived with friend, boyfriend or alone were more likely to have inappropriate pregnancy prevention behaviors than the teenagers who lived with their family. This finding is consistent with a previous research indicating that living with family associated with the appropriates preventive sexual behaviors[22]. Teenager who live in the outside university had no parents to take care therefore they had higher sexual risk behaviors than those who live with their parents. More than that some of female teenagers live with their boyfriends. This condition was higher risk of teenage pregnancy than the above mentions[23]. Living with friends or boyfriend made them freely live their lives without advice from their parents[24]. Living like this resulted in sexual risk behaviors following by sexual intercourse, unintended pregnancy, abortion, sexual transmitted disease and etc[25].

The finding showed that students who had no sexual experience were likely to have more appropriated pregnancy prevention behaviors than those who had sexual experience. Likewise, a study of factors related to the sexual behaviors among youth in universities located in the eastern region of Thailand had a similar result to this study[8]. In addition, this was consistency with a study by Mitchell et al. indicated that adolescents who had never had sex reported higher levels of both refusal and avoidance self-efficacy[26].

The teenager who get the increase one points of self-efficacy scores they were more likely to exhibit appropriate unintended pregnancy prevention behavior 0.97 times than those who did not get the increase score. Similarly, previous research indicated that there was the positive relationship between sexual self-efficacy and the frequency of protection behaviors to prevent pregnancy[27]. This was similar to a study by Albert Bandura who proposed self-efficacy theory. According to Bandura, self-efficacy is the belief in one's own ability to successfully accomplish something that people will attempt things they believe they can accomplish[28]. Four principles of self-efficacy were as follows: 1) verbal persuasion; 2) vicarious experiences; 3) mastery experiences; and 4) emotional arousal[29]. Likewise, a study of Krugu et al. found that participants who aware of preventive pregnancy behaviors had strong self-efficacy to bargain or negotiate with their sexual partner of condom using[30]. In addition, women who feel confident in their abilities to communicate about sex are more likely to engage in healthier behaviors such as, refusing unwanted sex

and using condoms[31]. Previous study presented that non-pregnant adolescents had higher decision making skill and self-efficacy than pregnant adolescents[32]. And contraceptive self-efficacy has been linked to safer sex practices[33].

Conclusion

Female teenagers who study in fourth year, who stayed with friend/ boyfriend/ alone, who had previous sexual intercourse, and who had lower score of self-efficacy to prevent teenage pregnancy were a high risk group of teenage pregnancy.

Recommendations

Constructing collaborated programs based on promoting self-efficacy by involving all stakeholders needs to be considered at this point. Universities should reconsider and redesign sexuality educational programs for undergrad and refresher course or workshops for the higher year students. Public health professional should focus on preventing teenage pregnancy in female teenagers especially on the high risk group as shown in the result of this study. Further study should examine the relationship of self-efficacy and social support for preventing the teenage pregnancy in another context.

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