EFFECTS OF THE "SEX MUST SAFE" PROGRAM ON HEALTH LITERACY INTENTION AND PRACTICE REGARDING CONDOM AND EMERGENCY CONTRACEPTIVE PILL USES AMONG FEMALE UNIVERSITY STUDENTS IN CHON BURI PROVINCE, THAILAND

Miss Saowanee Thongnopakun

A Dissertation Submitted in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy Program in Public Health
College of Public Health Sciences
Chulalongkorn University
Academic Year 2017

ผลของโปรแกรม "เรื่องเพศ ต้องปลอดภัย" ต่อความฉลาดทางสุขภาพ ความตั้งใจ และการปฏิบัติในการใช้ถุงยางอนามัยและยาคุมกำเนิดฉุกเฉินของนิสิตนักศึกษาหญิงในมหาวิทยาลัย จังหวัดชลบุรี ประเทศไทย

นางสาวเสาวนีย์ ทองนพคุณ

วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาสาธารณสุขศาสตรดุษฎีบัณฑิต
สาขาวิชาสาธารณสุขศาสตร์
วิทยาลัยวิทยาศาสตร์สาธารณสุข จุฬาลงกรณ์มหาวิทยาลัย
ปีการศึกษา 2560

Thesis Title	EFFECTS OF THE "SEX MUST SAFE" PROGRAM ON HEALTH LITERACY INTENTION AND PRACTICE REGARDING CONDOM AND EMERGENCY CONTRACEPTIVE PILL USES AMONG FEMALE UNIVERSITY STUDENTS IN CHON BURI PROVINCE, THAILAND
By	Miss Saowanee Thongnopakun
Field of Study	Public Health
Thesis Advisor	Tepanata Pumpaibool, Ph.D.

Accepted by the College of Public Health Sciences, Chulalongkorn University in Partial Fulfillment of the Requirements for the Doctoral Degree

.....Dean of the College of Public Health Sciences
(Professor Sathirakorn Pongpanich, Ph.D.)

THESIS COMMITTEE

.....Chairman
(Professor Surasak Taneepanichskul, M.D., M.Med)

.....Thesis Advisor
(Tepanata Pumpaibool, Ph.D.)

.....Examiner
(Associate Professor Ratana Somrongthong, Ph.D.)

.....Examiner
(Alessio Panza, M.D., M.Com.H, DTMH)

.....External Examiner
(Associate Professor Aimutcha Wattanaburanon, Ed.D)

เสาวนีย์ ทองนพคุณ : ผลของโปรแกรม "เรื่องเพศ ต้องปลอดภัย" ต่อความฉลาดทางสุขภาพ ความตั้งใจ และการปฏิบัติในการใช้ถุงยางอนามัยและยาคุมกำเนิดฉุกเฉินของนิสิตนักศึกษาหญิงในมหาวิทยาลัย จังหวัดชลบุรี ประเทศไทย (EFFECTS OF THE "SEX MUST SAFE" PROGRAM ON HEALTH LITERACY INTENTION AND PRACTICE REGARDING CONDOM AND EMERGENCY CONTRACEPTIVE PILL USES AMONG FEMALE UNIVERSITY STUDENTS IN CHON BURI PROVINCE, THAILAND) อ.ที่ปรึกษาวิทยานิพนธ์หลัก: ดร.เทพนาฏ พุ่มไพบูลย์, 286 หน้า.

การตั้งครรภ์ไม่พึงประสงค์จะพบในนิสิตนักศึกษาที่มีความฉลาดทางสุขภาพในเรื่องการป้องกันการตั้งครรภ์ไม่เพียงพอ การศึกษาครั้งนี้มีวัตถุประสงค์เพื่อวิเคราะห์สถานการณ์ของความฉลาดทางสุขภาพต่อการคุมกำเนิดของนิสิตนักศึกษาหญิง และเพื่อศึกษาผลของโปรแกรม “เรื่องเพศ ต้องปลอดภัย” ต่อความฉลาดทางสุขภาพ ความตั้งใจ และการปฏิบัติในการใช้ถุงยางอนามัยและยาคุมกำเนิดฉุกเฉินของนิสิตนักศึกษาหญิงในมหาวิทยาลัย จังหวัดชลบุรี ประเทศไทย โดยขั้นตอนแรกเป็นการวิจัยเชิงพรรณนาที่ศึกษาแบบภาคตัดขวาง เก็บข้อมูลระหว่างเดือนกุมภาพันธ์ถึงเดือนพฤษภาคม 2560 เครื่องมือที่ใช้ในการศึกษาวิจัยครั้งนี้ คือ แบบสอบถามที่กลุ่มตัวอย่างตอบด้วยตนเอง ซึ่งพัฒนามาจากกระทรวงสาธารณสุขตามแนวคิดความฉลาดทางสุขภาพ โดยเก็บข้อมูลในนิสิตนักศึกษา จำนวน 418 คน และวิเคราะห์ข้อมูลโดยใช้สถิติพรรณนา ส่วนขั้นตอนที่สองเป็นการวิจัยแบบกึ่งทดลอง โดยใช้การสุ่มแบบหลายขั้นตอน โดยทำการเก็บข้อมูลจากนิสิตนักศึกษา จำนวน 73 คน (กลุ่มทดลอง 36 คน และกลุ่มควบคุม 37 คน) ระหว่างเดือนกันยายน พ.ศ. 2560 ถึงเดือนมกราคม พ.ศ. 2561 กลุ่มทดลองเข้าร่วมโปรแกรม “เรื่องเพศ ต้องปลอดภัย” จำนวน 8 สัปดาห์ และติดตามในสัปดาห์ที่ 20 และใช้แบบสอบถามที่กลุ่มตัวอย่างตอบด้วยตนเอง การวิเคราะห์ข้อมูลโดยใช้สถิติพรรณนา การทดสอบไคสแคว์ การทดสอบของฟิชเชอร์ การทดสอบความแตกต่างระหว่างค่าเฉลี่ยของประชากร 2 กลุ่มที่มีความสัมพันธ์กัน การทดสอบความแตกต่างระหว่างค่าเฉลี่ย ของประชากร 2 กลุ่มที่เป็นอิสระต่อกัน การทดสอบของแมน-วิทนีย์ และการทดสอบตัวแบบเชิงคณิตศาสตร์

ผลการวิจัยพบว่า นิสิตนักศึกษาส่วนใหญ่มีความฉลาดทางสุขภาพไม่เพียงพอ (78.2%) โดยเฉพาะในเรื่องการเข้าถึงข้อมูลสุขภาพและบริการสุขภาพ ความรู้ ความเข้าใจทางสุขภาพ และการสื่อสารเพื่อเพิ่มความเชี่ยวชาญ ข้อมูลที่ได้จึงนำมาพัฒนาโปรแกรม “เรื่องเพศ ต้องป้องกัน” ซึ่งผลการศึกษาของโปรแกรม พบว่า ความแตกต่างของค่าเฉลี่ยของคะแนนความฉลาดสุขภาพของกลุ่มทดลองมีค่าสูงกว่าในกลุ่มควบคุมอย่างมีนัยสำคัญทางสถิติ (p-value = 0.002, 95% confidence interval [CI]: 3.43–15.47) สำหรับความแตกต่างของค่าเฉลี่ยคะแนนของความตั้งใจในการใช้ถุงยางอนามัยและยาเม็ดคุมกำเนิดฉุกเฉินของทั้งสองกลุ่มไม่มีนัยสำคัญทางสถิติ (p-value = 0.111, 95% CI = -2.22–2.15) คะแนนการปฏิบัติจะวิเคราะห์เฉพาะนิสิตนักศึกษาที่เคยมีประสบการณ์การมีเพศสัมพันธ์ซึ่งพบว่า ความแตกต่างของคะแนนเฉลี่ยของทั้งสองกลุ่มมีความแตกต่างอย่างมีนัยสำคัญทางสถิติ (p-value = 0.004, 95% CI: 0.27– 1.45) การทดลองในครั้งนี้ส่งผลให้มีการเพิ่มขึ้นของความฉลาดทางสุขภาพและการปฏิบัติในนิสิตนักศึกษาหญิง ผลของการศึกษาครั้งนี้เป็นการนำเสนอโปรแกรมรูปแบบใหม่ในการป้องกันการตั้งครรภ์ที่ไม่พึงประสงค์

สาขาวิชา สาธารณสุขศาสตร์ ลายมือชื่อนิสิต .....

ปีการศึกษา 2560 ลายมือชื่อ อ.ที่ปรึกษาหลัก .....

5879170253 : MAJOR PUBLIC HEALTH
KEYWORDS: SEX MUST SAFE PROGRAM / HEALTH LITERACY / INTENTION / PRACTICE / CONDOM AND EMERGENCY CONTRACEPTIVE PILL USES / UNINTENDED PREGNANCY / FEMALE UNIVERSITY STUDENTS / PEER-LED SEX EDUCATOR

SAOWANEE THONGNOPAKUN: EFFECTS OF THE "SEX MUST SAFE" PROGRAM ON HEALTH LITERACY INTENTION AND PRACTICE REGARDING CONDOM AND EMERGENCY CONTRACEPTIVE PILL USES AMONG FEMALE UNIVERSITY STUDENTS IN CHON BURI PROVINCE, THAILAND. ADVISOR: TEPANATA PUMPAIBOOL, Ph.D., 286 pp.

Unintended pregnancies are found in university students with insufficient health literacy on preventing pregnancy. Thus, the objective of the current two-phase study was to analyze the situation of health literacy concerning contraception among female university students and to evaluate the effects of the “Sex Must Safe” program on health literacy intention and practice regarding condom and emergency contraceptive pill uses among female university students in Chon Buri province, Thailand.

A cross-sectional study design was used in phase 1. Data was collected between February and May 2017. A self-administered questionnaire, developed by the Ministry of Public Health based on evolving concept of health literacy, was used to collect data from 418 university students. Descriptive statistical analysis was used for the data analysis. A quasi-experimental study design was used in phase 2. Multistage sampling was conducted to collect data from 73 selected university students (36 intervention group and 37 comparison group) between September 2017 and January 2018. The intervention group participated in an 8 week “Sex Must Safe” program and follow up period at week 20. Once again, a self-administered questionnaire was used. Descriptive statistics, the chi-square test, Fisher’s exact test, paired samples *t*-test, independent samples *t*-test, Mann-Whitney U test, and generalized estimating equations were used for the data analysis.

The results showed that majority of the students did not have sufficient knowledge related to health (78.2%), mainly knowledge on health and health services, knowledge and understanding about health and communicating to improve expertise. The data collected were used to improve the ‘Sex Must Safe’ program. Whereas, the results indicated the health literacy mean scores of the intervention group were found significantly higher than the control group (*p*-value = 0.002, 95% confidence interval [CI]: 3.43–15.47) following the intervention, a mean difference between the two groups for intentions regarding condom and emergency contraceptive pill use was not statistically significant (*p*-value = 0.111, 95% CI = -2.22–2.15). Analysis of the practice scores was only conducted on university students who had sexual intercourse. The reported mean difference, is in favor of the intervention group, which was statistically significant (*p*-value = 0.004, 95% CI = 0.27– 1.45). The intervention was demonstrated to increase health literacy and practice among the female university students. The finding of this study would be able to offer a new practical program to prevent unintended pregnancy.

.

Field of Study: Public Health Student's Signature .....

Academic Year: 2017 Advisor's Signature .....

ACKNOWLEDGEMENTS

Foremost, I would like to express my sincere gratitude to my advisor, Dr. Tepanata Pumpaibool, for her continuous support of my Ph.D. study and research, and for her patience, motivation, enthusiasm, and immense knowledge. Her guidance helped me throughout my research process and the writing of this thesis. I cannot imagine having a better advisor and mentor for my Ph.D. studies.

In addition to my advisor, I would like to thank the other members of my thesis committee: Prof. Surasak Taneepanichskul, Assoc. Prof. Aim-utcha Wattanaburanon, Assoc. Prof. Ratana Somrongthong, and Dr. Alessio Panza, for their encouragement, insightful comments, and suggestions.

I gratefully acknowledge financial support from the 90th Anniversary of the Chulalongkorn Fund (Ratchadaphiseksomphot Endowment Fund) and extend my great appreciation for my research assistances, including the materials and supplies for the Handbook of Adolescence and Youth on the Prevention of Unwanted Pregnancy, and for providing compensation for participants. I wish to thank the faculty of Public Health at Burapha University for funding this study.

My sincere thanks also go to all the participants, research assistants, and the university that allowed me to conduct this research.

Last but not least, I want to thank my family for supporting me spiritually throughout my life and for their continuous encouragement during my years of studying and then researching and writing this dissertation. This accomplishment would not have been possible without them. Thank you.

CONTENTS

Page
THAI ABSTRACT iv
ENGLISH ABSTRACT v
ACKNOWLEDGEMENTS vi
CONTENTS vii
LIST OF TABLE ix
LIST OF FIGURES xi
CHAPTER I INTRODUCTION 1
1.1 Background and rationale 1
1.2 Study objectives 5
1.3 Research question 6
1.4 Hypothesis 6
1.5 Conceptual framework 6
1.6 Operational definition 9
CHAPTER II LITERATURE REVIEW 12
2.1 Adolescent and development 13
2.2 Concept of contraceptive 14
2.3 Unintended pregnancy 25
2.4 Act for prevention and solution of the adolescent pregnancy problem in Thailand, B.E. 2016 26
2.5 Concept and theories related to this study 28
2.6 Research related to this study 40
CHAPTER III RESEARCH METHODOLOGY 47
3.1 Research Design 47
3.2 Study Period 48
3.3 Study Area 48
3.4 Study Population and Sample 49
3.5 Study procedure 57
3.6 Validity and Reliability 76

Page

3.7 Data analysis 77
3.8 Ethical Consideration 78
CHAPTER IV RESEARCH RESULTS 80
4.1 Phase 1: Situation analysis of health literacy to use contraceptive among female university students in Chon Buri province, Thailand. 80
4.2 Phase 2: Determining the effect of the “Sex Must Safe” program on health literacy intention and practice regarding condom and emergency contraceptive pill uses among female university students in Chon Buri province, Thailand 104
CHAPTER V DISCUSSION, CONCLUSION, AND RECOMMENDATIONS 118
5.1 Discussion 118
5.2 Conclusion, limitations, and recommendations 126
REFERENCES 129
APPENDIX 145
Appendix A 146
Appendix B 163
Appendix C 187
Appendix D 198
APPENDIX E 216
APPENDIX F 231
APPENDIX G 234
VITA 286

LIST OF TABLE

Page

Table 2.1 Modern methods of contraception 18
Table 2.2 Traditional methods of contraception 20
Table 3.1 Number of the study population and sample based on the faculties of 55
Table 3.2 Number of the study population and sample based on the faculties of 56
Table 3.3 Activity period 62
Table 3.4 Health literacy scoring for positive and negative statements 69
Table 3.5 Behavior to prevent unintended pregnancy scoring for positive and negative statements 70
Table 3.6 Attitude scoring for positive and negative statements 72
Table 3.7 Perceived self-efficacies and expectation scoring for positive and negative statements 73
Table 3.8 Social and environmental scoring for positive and negative statements 74
Table 3.9 Health literacy scoring for positive and negative statements 75
Table 3.10 Intention scoring for positive and negative statements 76
Table 3.11 Practice scores for positive and negative statements 77
Table 4.1 Numbers and Percentages for the Participants' Socio demographic 82
Table 4.2 Numbers and Percentages for the Participants' Sexual Activities 83
Table 4.3 Numbers and Percentages for the access to health information and health 86
Table 4.4 Level of access to health information and health services to prevent 88
Table 4.5 Numbers and Percentages for the cognitive health to prevent unintended 89
Table 4.6 Level of cognitive health to prevent unintended pregnancy 91
Table 4.7 Numbers and Percentages for the communication skills in enhancing skills 92
Table 4.8 Level of communication skills in enhancing skills to prevent unintended 93
Table 4. 9 Numbers and Percentages for the decision-making skills in choosing appropriate practice to prevent unintended pregnancy 94

Table 4.10 Level of decision-making skills in choosing appropriate practice to prevent unintended pregnancy 95

Table 4.11 Numbers and Percentages for the self-management to prevent unintended 96

Table 4.12 Level of self-management to prevent unintended pregnancy 97

Table 4.13 Numbers and Percentages for the media and information literacy to prevent unintended pregnancy 98

Table 4.14 Level of media and information literacy to prevent unintended pregnancy 99

Table 4.15 Level of health literacy to prevent unintended pregnancy 100

Table 4.16 Numbers and Percentages of Behavior to Prevent Unintended Pregnancy 101

Table 4.17 Numbers and Percentages of Behavior to Prevent Unintended Pregnancy 103

Table 4.18 Demographic characteristics of intervention group and comparison group 106

Table 4.19 Comparison of health literacy scores in the intervention and comparison group before and after the intervention, as well as at the 3-month follow up after implementation of the “Sex Must Safe” program. 110

Table 4.20 Comparison of intention scores in the intervention and comparison group 112

Table 4.21 Comparison of the practice scores in the intervention and comparison .. 114

Table 4.22 Comparison of the health literacy scores between the intervention and comparison group before and after the intervention, as well as at the 3-month follow up after implementation of the “Sex Must Safe” program 116

Table 4.23 Comparison of the intention scores between the intervention and comparison group before and after the intervention, as well as at the 3-month follow up after implementation of the “Sex Must Safe” program 117

Table 4.24 Comparison of practice scores between the intervention and comparison group before and after intervention, as well as 3 months follow-up after implementation of the “Sex Must Safe” program in female university students who had sexual intercourse 118

LIST OF FIGURES

Page
Figure 1.1 Conceptual framework 7
Figure 2.1 The development and the reinforcement of the self-efficacy learning by Bandura 40
Figure 3.1 Research design of phase 2.....48
Figure 3.2 The location of Chon Buri province.....50
Figure 3.3 Flow diagram of sampling procedure in Phase 1 52
Figure 3.4 The location of university A and university B 53
Figure 3.5 Flow diagram of sampling procedure (Phase 2).....57
Figure 3.6 Handbook of “Sex Must Safe” 61
Figure 4. 1 Means of health literacy in use of condoms and emergency contraceptive.....110
Figure 4.2 Means of intention toward condom and emergency contraceptive pill use.....112
Figure 4.3 Means of practice for condoms and emergency contraceptive pill use…115

CHAPTER I
INTRODUCTION

This study was designed to evaluate the effects of the "Sex Must Safe" program on health literacy intention and practice regarding condom and emergency contraceptive pill uses among female university students in Chon Buri province, Thailand. Background and rationale, objectives, research questions, conceptual framework, operational definition, approach and expected outcomes are included in this chapter.

1.1 Background and rationale

Youth is one of the developmental phases of the human life cycle between childhood and maturity period (Assembly 2011). Youth has to undergo various changes in terms of physical, cognitive, emotional, and sexual development (Huberman 2015). This is important for maturity preparation (Lloyd 2007). World Health Organization (WHO) defined "adolescent" as an individual whose age is between 10 to19 years old. WHO describes "youth" as people with ages between 15 to 24 years old and "young people" as persons with ages between 10 to 24 years old (Goodburn and Ross 1995). However, this study focuses on university students who have ages between 18 to 24 years old. Youth interested in and curious at the same time about body changing, opposite sex and sex-related issues (Fonseca and Greydanus 2007) which, become risk factors of premarital sexual behavior, adolescent pregnancy, abortion, sexually transmitted diseases (STDs) and Acquired Immunodeficiency Syndrome (AIDS) (Stanger-Hall and Hall 2011).

Unintended pregnancy among youth is a worldwide problem in both developed and developing countries (Organization 2015). Unintended pregnancy is often related to individual characteristics, knowledge, attitude, practice, and age at first sexual intercourse (Richter and Mlambo 2005). Misconceptions of sex and discontinuation of contraception have been a cause of global adolescent pregnancy (Ziyane and Ehlers 2006). Consequently, adolescent pregnancy significantly affects maternal and child health, for instance, higher rates of depression, school dropout, economic problem, preterm birth, and low birth weight (Organization 2014).

In 2014, the estimated number of global unintended pregnancy between 15 to 19 years of age was 16 million. Of those numbers, 1 million pregnancies had age less than 15 years old. Statistics indicate that the average global birth rate among 15 to 19 year old was 49 per 1,000 adolescent (worldwide range was 1 to 299 per 1,000 adolescent), which the highest was sub-Saharan Africa. Also, 95% of this birth rate occurred in low and middle-income countries. It was observed that the worldwide teenage pregnancy rate has not decreased until now (Organization 2015). However, the birth rate in the USA was presented the highest birth rate among the developed countries.

It's declining trend from 61.8 births per 1,000 adolescent females in 1991 to 24.2 births per 1,000 adolescent females in 2014. (Hamilton, Martin et al. 2015).

The estimated number of Thai youth was 10.2 million in 2012, which is 15% of the total population (Cappa, Wardlaw et al. 2012). In 2016, the number of adolescent females aged 15 to 19 years old was 2,262,832. The birth rate of adolescent females at this age was 44.8 cases per 1,000 youths (Bureau of Reproductive Health, 2016), which increased from 31.1 cases per 1,000 youths in 2000 (Sukrat 2014). However, the birth rate of adolescent females in Thailand was higher than the average birth rate of adolescent females in Asia - Pacific regions (Williamson 2013).

According to Abortion Surveillance in Thailand report 2013, two – third of youth had their first sexual intercourse at 17 years old and more than half of them did not use contraception. Of total abortion numbers, 29.0 % of abortions were between the ages of 15 - 19 years old and 31.5% occurred between the age of 20 - 24 years old (Bureau of Reproductive Health 2014). The youth who had an abortion were more likely to be in confusion, frustration, extreme anxiety suffered by young others (UNFPA Thailand, 2014). According to the findings in 2011, 53% of abortions are adolescents, and 30% are students (Thai health 2013).Pregnancy is caused by many factors, including individual, family and social factors. The main factors of individual consist of knowledge, attitudes, and beliefs about sex issues. Example of other factors was access to contraceptive, family relationship, unappreciated parenting, sexual abuse by family member or coercion, socioeconomic status, pressure from peers who have had sex and social deterioration (Langille 2007).

At present, the combination of increased adolescent pregnancy and decreasing contraception use in Thailand are serious issues. While Thailand demonstrated great success in increasing contraceptive prevalence from 1969 to 2006, progress stalled from 2006 to 2009. Contraceptive prevalence decreased by 2.5 percentage points (from 81.1 percent in 2006 to 78.6 percent in 2011) according to the UNICEF, high pregnancy and low contraception are caused by many factors, including the female adolescent's lack of sex and contraception education (especially, where and how to use and access condoms and birth control pills), lack of negotiating power that influenced their ability to demand the use of contraception, the censorship of condom marketing and unregulated information about reproductive health on the internet may be decreasing contraceptive use or encouraging improper birth control methods, drugs and alcohol, differences in ethnic cultural norms and others between medical professionals and clientele, and physiological changes. As a whole, this could point to greater rates of adolescents having sexual intercourse and using improper or no contraceptives, leading to pregnancy (UNICEF 2015).

Quoted from the study entitled dispensing of emergency hormonal contraceptive pills, pregnancy test kits, and pharmacy services for sexually transmitted infections by drug stores in Chon Buri province, is a survey from 2009 to 2010 from 634 pharmacies (70%) in Chon Buri province, the sale of emergency contraceptive pills has reached by 16,870 boxes per month, and the sale of the pregnancy test kit has reached 6,943 boxes per month. Pharmacies located near the educational institutions have shown higher sales according to statistical significance ($p < 0.05$). From the above information, emergency contraceptive pills are used excessively, especially from the pharmacies near entertainment area and the pharmacies near the educational institution. The sale is increased during the weekend and during public holidays (Osiri and Phoolcharoen 2012).

According to the administration of emergency contraceptive pills, if taken emergency contraceptive pills within 24 hours after having sex, the effectiveness of the pill to prevent pregnancy is only 85%. In addition a prevalent side effect from the use of emergency contraceptive pills are nausea, vomiting, stomach pain, chest pain, sporadic bleeding while having the period, premature period or delayed period. Furthermore, the side effects resulted from higher hormones in the body such as the

abnormality in the oval, endometrial disorder as well as the risk to ectopic pregnancy equivalent to 2% etc. Hence, the user should not use emergency contraceptive pills for more than 4 pills a month or 2 packages per month (Dilokpattanamongkol P 2016).

According to the study on the use of emergency contraceptive pills during the past year, its trend has shown that the misuse of emergency contraceptive pills has increased; especially the excessive use of emergency contraceptive pills resulted from unclear information marked on the package so that the users have misconception on emergency contraceptive pill which is used to prevent pregnancy in case of “emergency only”. Some teenagers used the emergency contraceptive pills every day, and have unprotected sex on purpose while taking emergency contraceptive pills to prevent pregnancy which is inappropriate (Padpai S 2010).

Therefore, sex education is important for youth. Sex education can improve social skills resulting in decrease unintended pregnancy and STDs (Kay, Jones et al. 2010). In Thailand, undergraduate students should take the sexual education course which focuses on body parts, sexual development, dating relationship, STD and HIV/AIDS, pregnancy prevention and related sexual activities. In fact, the sex education in Thailand is taught only on biological parts because of the limitation of Thai culture. Sex is still considered as "dirty issue", the society and parents tend to ignore or avoid to discuss about this openly (Kay, Jones et al. 2010).

Report of sexual behaviors among youth in Eastern regional university of Thailand showed that 34.1% of youth lived in dormitory both inside and outside of the university, 61.5% had sexual intercourse, 70.1% had boyfriend/girlfriend and 76.0% used condom during sexual intercourse (Thongnopakun, Maharachpong et al. 2016). In Chon Buri province, Ministry of Public health, reported that there were 3,286 childbirths in 2015, which the birth rate of age between 15 to 19 years old was 66.3 cases per 1,000 youths. This number was the first highest in Thailand (Bureau of Reproductive Health Ministry of Public Health, 2015). Moreover, Muang, Sriracha, Banglamung district were the top three districts which had the highest rate of teenage childbearing (Ministry of Social Development and Human Security 2014).

Overall the “Sex Must Safe” program needs to be created in order to enhance preventive sexual risk behavior by using condom and emergency contraceptive pills appropriately and correctly. It can be seen that university students

have high sexual risk behavior and low contraceptive use which led to the problem of unintended pregnancy. In this study, focus the is on female university students because it has affected maternal and child health for instance the higher rates of depression, school dropout, economic problem, preterm birth, and low birth weight. However, there were few studies using a health literacy and self-efficacy theory to improve the appropriate condom and emergency contraceptive pill use among university students. Therefore, this study aims to develop the "Sex Must Safe" program based on health literacy and self-efficacy theory and evaluate the effects of the program on health literacy, intention and practice regarding condom and emergency contraceptive pill uses among female university students in Chon Buri province, Thailand.

1.2 Study objectives

1.2.1 General objective

To evaluate the effects of the "Sex Must Safe" program on health literacy intention and practice regarding condom and emergency contraceptive pill uses among female university students in Chon Buri province, Thailand.

1.2.2 Specific objectives

1.2.2.1 To determine the health literacy of female university students on contraceptive use (Phase 1).

1.2.2.2 To determine the effects of the "Sex Must Safe" program on health literacy intention and practice regarding condom and emergency contraceptive pill uses among female university students. (Phase 2);

1) To compare a) health literacy, b) intention, and c) practice scores on condoms and emergency contraceptive pills use before and after intervention and also a 3- month follow up of the comparison and the intervention groups.

2) To compare a) health literacy, b) intention, and c) practice scores on condoms and emergency contraceptive pills use before and after intervention and also a 3- month follow up between the comparison and the intervention groups.

1.3 Research question

Is the “Sex Must Safe” program able to improve the health literacy, intention, and practice regarding condom and emergency contraceptive pill uses among female university students?

1.4 Hypothesis

1.4.1 The post-test and follow up mean scores on health literacy, intention, and practice regarding condom and emergency contraceptive pill uses are higher than baseline in the intervention group.

1.4.2 After the intervention, health literacy, intention, and practice on condom and emergency contraceptive pills mean scores of the intervention group are higher than those of the comparison group.

1.5 Conceptual framework

This concept of the study aims to evaluate the effects of “Sex Must Safe” program to health literacy, intention, and practice on condom and emergency contraceptive pill uses by comparing experimental group and comparison group before and after intervention and also a 3 month follow up of the universities students. The conceptual framework is shown in Figure 1.1

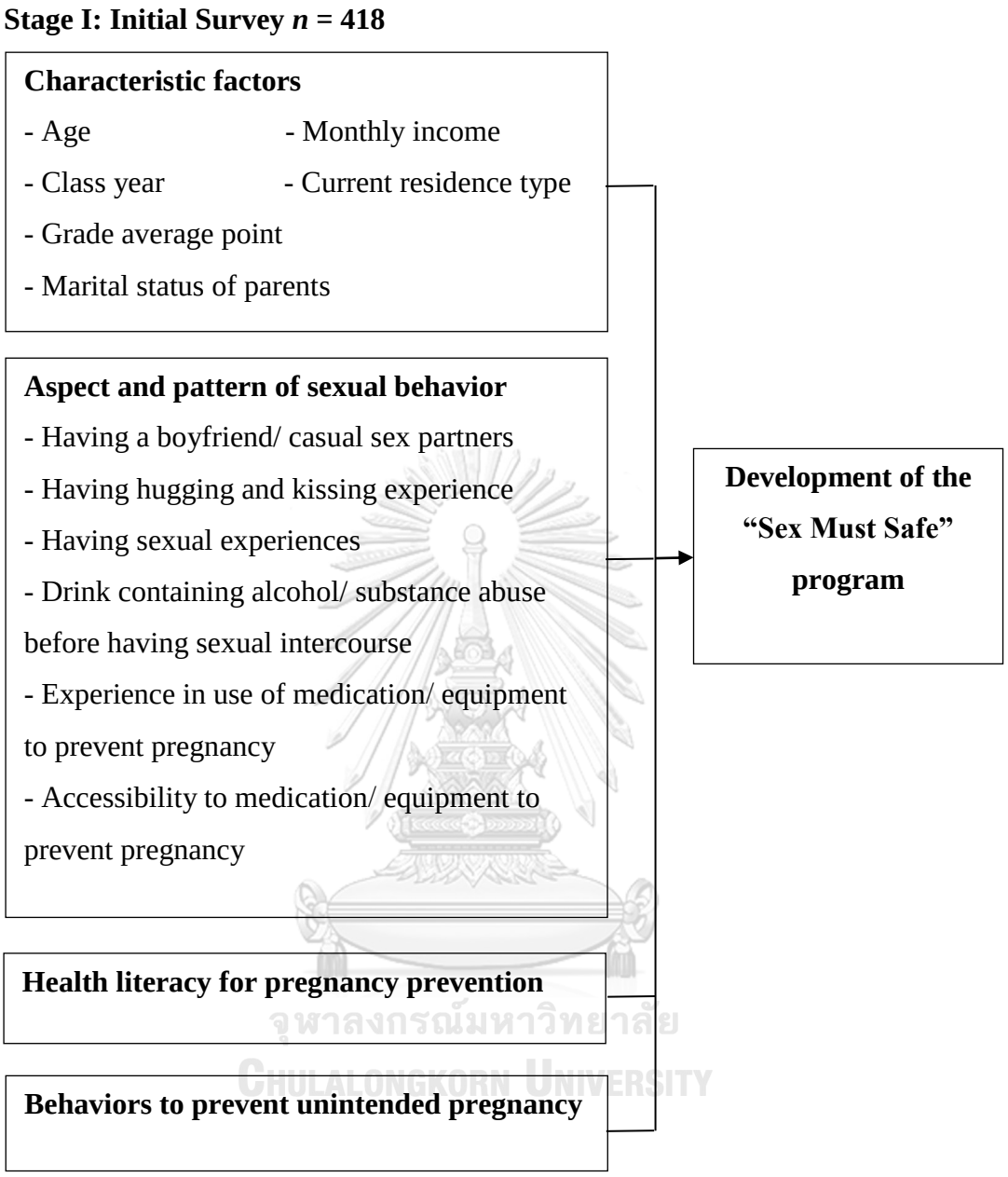


Figure 1.1 Conceptual framework

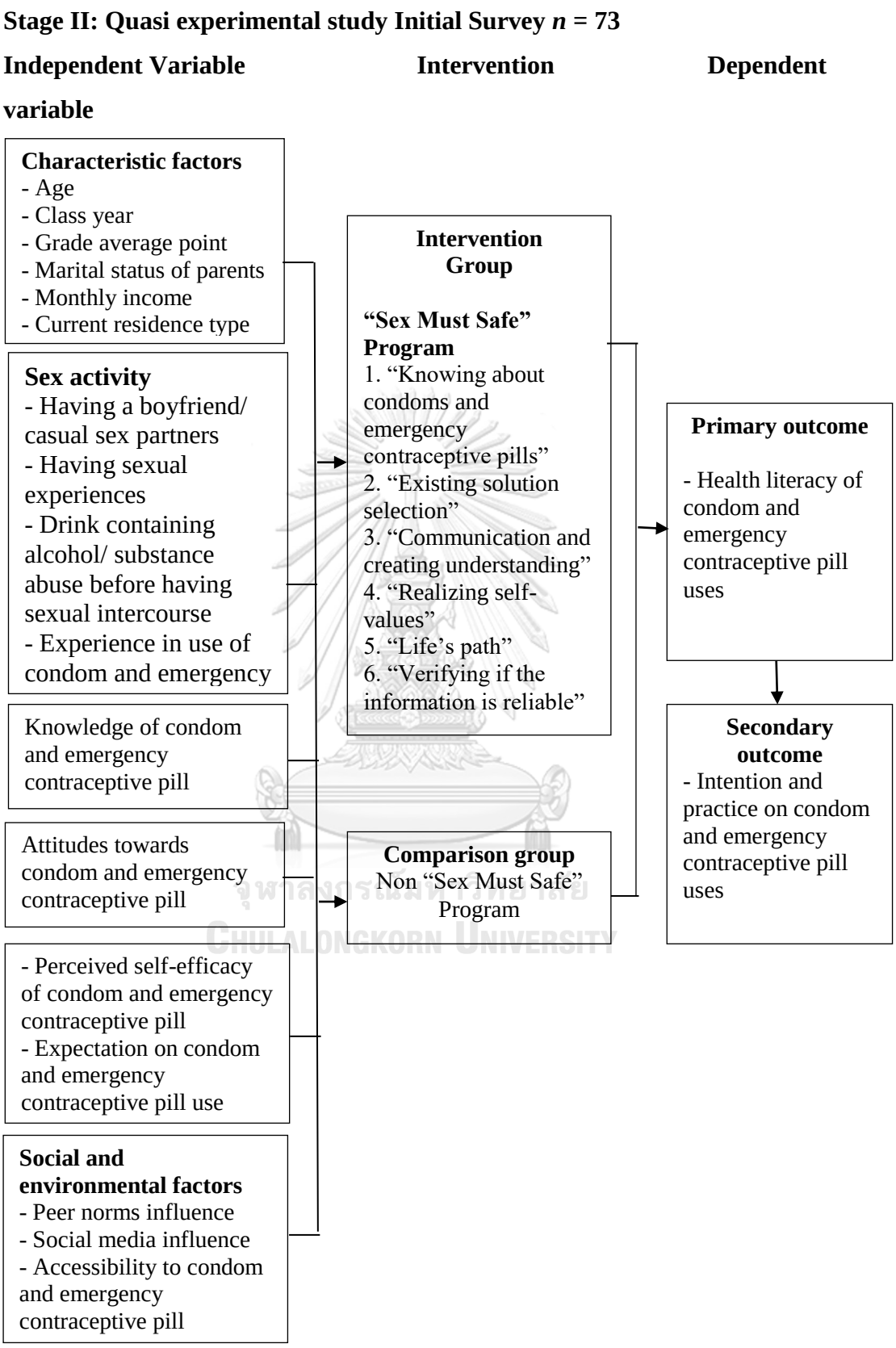


Figure 1.1 Conceptual framework (continuous)

1.6 Operational definition

"Sex Must Safe" program: refers to the sex education program which comprises of 1) mastery experience, 2) vicarious experience, 3) verbal persuasion, and 4) emotional arousal components related to health literacy and self-efficacy concepts in order to provide proper practice for condom and emergency contraceptive pill uses.

Intention on condom and emergency contraceptive pills: refers to the willingness of female university students to use condom and emergency contraceptive pills whenever they have sexual intercourse.

Practice on condom and emergency contraceptive pills refers to the willingness of female university students who had sexual intercourse to use condom and emergency contraceptive pills during sexual intercourse.

Health literacy of condom and emergency contraceptive pills use: refers to the cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand and use information in ways which promote condom and emergency contraceptive pills use. The health literacy is divided into 6 components as follows;

1. Access to health information and health service to use condom and emergency contraceptive pills. This component is composed of sources of information selection, information inquiry from the experts, information acquisition problems, choosing reliable source, acquiring information and verifying information from reliable source.

2. Cognitive health regarding the use of condom and emergency contraceptive pills which means knowledge, memory, understanding, analysis or systematic comparison on the use of condom and emergency contraceptive pills.

3. Communication skills to enhance the competence to use the condom and emergency contraceptive pills which means the skills in listening, speaking, reading and writing. The development of these skills would enable communication which can facilitate better understanding and persuasion for others to practice using condom and emergency contraceptive pills.

4. Decision skills in choosing appropriate practice in using condom and emergency contraceptive pills which means the ability to express declination or the ability to avoid the situation which can lead to unprotected sex (without using condom

and emergency contraceptive pills by using reasoning and the analysis on the advantages and the disadvantages, consequences resulted from their actions. In addition, this skill includes the skill to convince others to comply to use condom and emergency contraceptive pills to prevent pregnancy.

5. Self-management for health condition for using condom and emergency contraceptive pills means the ability to set up a goal and plan to use condom and emergency contraceptive by achieving this planned goal including the ability to revise their own practices. This skill includes the awareness of changes and the ability to cope with the consequences.

6. Media and information literacy for the use of condom and emergency contraceptive pills means the ability to evaluate acquired information, to verify the accuracy, the reliability of the data which has been presented, the comparison to channel media selection, the message evaluation from the media before making a decision related to the use of condom and emergency contraceptive pills.

Knowledge of condom and emergency contraceptive pills: refers to an understanding of basic knowledge and using condom and emergency contraceptive pills correctly.

Attitudes towards condom and emergency contraceptive pills: refers to the rationale and motivational beliefs, feelings, values and disposition which effects the attitudes to use condom and emergency contraceptive pills of female university students.

Peer norms influence: refers to perceived forces of friends which lead to the use or not use of condom and emergency contraceptive pills.

Social media influence: refers to the perceived influence of media online such as website, mobile technologies, magazines, social blogs, photographs, pictures, video and etc., regarding condom and emergency contraceptive pills.

Accessibility to condom and emergency contraceptive pills: refers to the capability of female university students to access, buy and use condom and emergency contraceptive pills at all times, which is divided into ease of access, convenient to use, and to be at reasonable price.

Unintended pregnancy: refers to pregnancies that are mistimed, unplanned or unintended at the time of conception.

Sexual Intercourse: refers to sexual activity between two persons that involves inserting the penis into the vagina.

Experience in using condom and emergency contraceptive pills: refers to the experience in using condom and emergency contraceptive pills by female university student respondents.

Female university students: refers to undergraduate Thai female university students who are studying both full time and part-time.

Class year: refers to the first year to the fourth year of undergraduate students.

Grade average point: refers to the cumulative grade-point average of the respondents at the last semester of participating.

Marital status of parents: refers to living together, widowed, and divorced/ separated.

Having a boyfriend/ casual sex partners: refers to having or never having boyfriend/ casual sex partners.

Sexual experiences: refers to having or never having vaginal sex.

CHAPTER II
LITERATURE REVIEW

The purpose of this study is to evaluate the effects of the “Sex Must Safe” program on health literacy intention and practice regarding condom and emergency contraceptive pill uses among female university students in Chon Buri province, Thailand. The reviewed literature of the study has been organized as follows:

2.1 Adolescent and development

2.2 Concept of contraceptive

2.2.1 Definitions of contraceptive

2.2.2 Situation of contraception use

2.2.3 Contraceptive methods

2.2.4 Concept of condom

2.2.5 Concept of emergency contraceptive pills

2.3 Unintended pregnancy

2.3.1 Definitions of unintended pregnancy

2.3.2 Situation of unintended pregnancy and contraception

2.4 Act for prevention and solution of the adolescent pregnancy problem in Thailand, B.E. 2016

2.5 Concept and theories related to this study

2.5.1 Health Education

2.5.2 Health Literacy

2.5.3 Bandura’s Social Learning Theory

2.6 Research related to this study

2.1 Adolescent and development

2.1.1 Definitions of adolescent

WHO defined “adolescent” as the period in lifespan growth and development from childhood to maturity period, from ages 10 to19 years old. “Youth” a person with ages between 15 to 24 years old and “young people” as persons with ages 10 to 24 years old [4]. The adolescent period rapidly changes in four dimensions: 1) physical 2) cognitive 3) emotional and 4) social development [25]. However, this study focuses on female university students who study in Chon Buri province, age between 18 to 24 years old.

2.1.2 Adolescent development

1) Physical development

Adolescent is one of the critical periods in the life span [26]. There are two major changes; firstly general adolescent has developments like increase of weight and height. Secondly, the sexual organ is composed of primary and secondary development. Primary sexual organ consists of penis and vagina development. Secondary sexual organ development contains the aspects of menstruation, pubic hair, breast, hips expansion, voice, testis, and shoulder [27].

2) Cognitive development

Adolescent is the crucial period for development of formal logical operations including abstract thinking (thinking about possibilities), the ability to reason from known principles (form own new ideas or questions), the ability to consider many points of view according to varying criteria (compare or debate ideas or opinions), and the ability to think about the process of thinking. So adolescents need to develop their cognition, cognitive development refers to the development of the ability to think and reason.

During adolescent, complex thinking processes are used to focus on less self - centered concepts as well as personal decision-making, including the following:

2.1) Adolescent has increased thoughts about more global concepts such as justice, history, politics, and patriotism.

2.2) Adolescent often develops idealistic views on specific topics or concerns.

2.3) Adolescent may debate and develop intolerance opposing views.

2.4) Adolescent begins to focus their thinking on making career decisions.

2.5) Adolescent begins to focus their thinking on emerging role in adult society [28].

3) Emotional development

A realistic and logical sense of identity in the context of relating to others and learning to manage stress and emotions involved in emotional development among adolescent [29]. This is an imperative proces about life - long issues for everyone. To be mature, the adolescent goes through many vulnerable emotional stages, they openly express those emotions and has unstable emotions, and they learn from the reaction feedback after their actions [30].

4) Social development

Adolescent needs to have their identity and to be accepted therefore social development is an essential part of this period. They need good relationships and trust from family members, friends, and other adults. Moreover, they want to gain a sense of social network, attachment to school, ability to navigate in multiple cultural contexts, and commitment to civic engagement [31].

2.2 Concept of contraceptive

2.2.1 Definitions of contraceptive

Contraceptive or birth control is the prevention of conception through the use of many devices, agents, sexual practices, chemicals, drugs, and surgical procedures. However, the purpose of contraceptive is to prevent a woman from unwanted pregnancy [32, 33].

Contraception or the pregnancy prevention is the prevention to avoid pregnancy by various mechanisms such as ovulation prevention, the prevention to stop the conceived oval and the sperm to procreate and the prevention to stop the fetus to develop in the uterus [34].

Contraception refers to one of the methods to prevent procreation or to prevent the development of the fetus which has been procreated or the destruction of the fetus which has been procreated and have been implanted to the uterus [35].

For this study, the definition of the contraception is the procreation prevention or the prevention of procreated fetus to be implanted on the uterus or the destruction of the conceived oval to be implanted on the uterus to avoid pregnancy.

2.2.2 Situation of contraception use

Global Situation

In many parts of the world, contraceptive use has significantly increased especially in Asia and Latin America. However, it is still not common in sub-Saharan Africa. According to the survey, the use of modern contraceptive has slightly increased from 54% in 1990 to 57.4% in 2015. Besides, the proportion of women aged 15-49 years-old has been increased from 2008 – 2015. In Africa, the proportion has been increased from 23.6% to 28.5%. In Asia, the proportion has been increased from 60.9% to 61.8%. In Latin America and the Caribbean, the percentage is static at 66.7%. Men do not share the responsibility of using contraception. An only relatively small subset of the mentioned prevalence rates are contributed by men as the most up-to-date contraceptive methods assigned to men and are limited to male condoms and sterilization (vasectomy) [36].

Thailand Situation

In Thailand, the social norms enforced by parents, schools and other guardians have prohibited “the premature cohabitation”. This concept has discouraged the teenagers to have a sexual relationship during their schooling age [14]. However, from the report from the behavioral monitoring on the HIV infection among grade 11^{th} students in Thailand between 2009 - 2014 by the division of epidemiology, department of disease control, in 2014, 24.2% of male students have had sex. The average age of having the first sexual experience is 15.3 years old. The percentage of using condoms during their first sex is 65.2%. 20.7% of male students have had sex at the age below 15 years old. 18.9% of female students have had sex. The average age of having the first sexual experience for female students is 15.4 years old. The percentage of using condoms during their first sex is 64.2%. 14.2% of female students have had sex at the age below 15 years old. By comparing with the data collected from 2013, the data, from male students, has shown that the latest use of condoms has been increased when they have had sex with a sexual partner or with a girlfriend. By contrast, the number has been decreased when they have had sex with female

prostitutes or when they have had same-sex relationship. This figure has maybe resulted from the campaign to sensitize the unprepared pregnancy among teenagers. This campaign has equipped the teenagers with the awareness. Consequently, the use of condoms with the sexual counterparts has increased**,** without having to worry about getting pregnant, the use of condoms with female prostitutes and same-sex sexual partners, on the other hand, has decreased. For female students, the latest information has shown the increasing trend of using condoms with sexual partners/ boyfriends or with other men [37].

From the study entitled "Factors Related to the Sexual Health Behaviors among Youth in Universities Located in the Eastern Region", the study has found that 61.5% of youth have revealed that they have had sex. Among this number, 59.8% did not use condoms during their first sexual encounter. Regarding the youth's sexual behavior, the study has found that only 24% has abstained themselves not to have sex during their schooling years. In terms of self-prevention, 23.7% of the youth did not use condoms every time they have sexual intercourse. More than 14.8% have had anal sex with their sexual counterparts, and 46.2% have had oral sex with their sexual counterparts. 73.1% of the youth had negotiated with their sexual counterparts to use condoms every time they have sexual intercourse. Regarding contraception, 25.9% of youth have counted the date to prevent pregnancy (7 days before and 7 days after), 24.7% have emergency contraceptive pills every time after having sexual intercourse [23].

Regarding the situations of the emergency contraceptive pills sold by the pharmacy, currently, there is the mobilization to allow individuals who have been sexually harassed or individuals who have failed to protect themselves while having sex to be able to buy emergency contraceptive pills at the pharmacy because the access to the emergency contraceptive pills can reduce pregnancy-related protects as well as abortion. Meanwhile, the use of the emergency contraceptive pills has reflected unsafe sex phenomenon and has risks to getting sexually transmitted diseases including HIV [38]. Quoted from the study entitled "Dispensing of Emergency Hormonal Contraceptive Pills, Pregnancy Test Kits, and Pharmacy Services for Sexually Transmitted Infections by Drug Stores in Chon Buri Province" is a survey from 2009 to 2010 from 634 Pharmacies (70%) in Chonburi province, the

sale of emergency contraceptive pills has reached 16,870 boxes per month, and the sale of the pregnancy test kit has reached 6,943 boxes per month. Pharmacy located near the educational institutions have shown higher sales according to statistical significance ($p < 0.05$). From the above information, emergency contraceptive pills are used excessively, especially from the pharmacy near entertainment area and the pharmacy near the educational institution. The sale is increased during the weekends and during public holidays [19]. Moreover, according to the study on the use of emergency during the past year, the trend has shown that the misuse of contraceptive pills has increased; especially the emergency contraceptive pills resulted from unclear information marked on the package of the contraceptive pills box so that the users are confused with the objectives of the emergency contraceptive pills. The indication does not mention that the emergency contraceptive pills are used in emergency cases only. Some teenagers have misunderstood and used the emergency contraceptive pills every day, and have unprotected sex on purpose while taking emergency contraceptive pills to prevent pregnancy which is inappropriate [21].

2.2.3 Contraceptive methods

There are various contraceptive methods, choosing the contraceptive methods, personal taste varies according to the individual, sexual partner, group of people or the policy regulated by particular countries. For instance, condoms are popular among Japanese as they can prevent pregnancy and sexually transmitted disease. In India, women condoms are more popular because Indian people believe that contraceptive pills will cause obesity etc. However, factors which contribute to efficient contraception are knowledge, understanding, and discipline on contraceptive practices [39].

WHO has divided the contraceptive methods into 2 methods accordingly 1) modern methods 2) traditional methods [40].

Table 2.1 Modern methods of contraception

Method	Description
1. Combined oral contraceptives (COCs) or “the pill”	Contains two hormones (estrogen and progestogen)
2. Progestogen-only pills (POPs) or "the minipill"	Contains only progestogen hormone, not estrogen
3. Implants	Small, flexible rods or capsules placed under the skin of the upper arm; contains progestogen hormone only
4. Progestogen only injectables	Injected into the muscle or under the skin every 2 or 3 months, depending on product
5. Monthly injectables or combined injectable contraceptives (CIC)	Injected monthly into the muscle, contains estrogen and progestogen
6. Combined contraceptive patch and combined contraceptive vaginal ring (CVR)	Continuously releases 2 hormones – a progestin and an estrogen- directly through the skin (patch) or from the ring.
7. Intrauterine device (IUD): copper containing	Small flexible plastic device containing copper sleeves or wire that is inserted into the uterus
8. Intrauterine device (IUD) levonorgestrel	A T-shaped plastic device inserted into the uterus that steadily releases small amounts of levonorgestrel each day
9. Male condoms	Sheaths or coverings that fit over a man's erect penis
10. Female condoms	Sheaths, or linings, that fit loosely inside a woman's vagina, made of thin, transparent, soft plastic film

Table 2.1 Modern methods of contraception (continuous)

Method	Description
11. Male sterilization (vasectomy)	Permanent contraception to block or cut the vas deferens tubes that carry sperm from the testicles
12. Female sterilization (tubal ligation)	Permanent contraception to block or cut the fallopian tubes
13. Lactational amenorrhea method (LAM)	Temporary contraception for new mothers whose monthly bleeding has not returned; requires exclusive or full breastfeeding day and night of an infant less than 6 months old
14. Emergency contraception pills (ulipristal acetate 30 mg or levonorgestrel 1.5 mg)	Pills taken to prevent pregnancy up to 5 days after unprotected sex
15. Standard Days Method or SDM	Women track their fertile periods (usually days 8 to 19 of each 26 to 32 day cycle) using cycle beads or other aids
16. Basal Body Temperature (BBT) Method	Women takes her body temperature at the same time each morning before getting out of bed observing for an increase of 0.2 to 0.5 degrees celsius.
17. Two Day Method	Womn track their fertile periods by observing presence of cervical mucus (if any type color or consistency)
18. Sympto-Thermal Method	Women track their fertile periods by observing changes in the cervical mucus (clear texture), body temperature (slight increase) and consistency of the cervix (softening).

Table 2.2 Traditional methods of contraception

Method	Description
1. Calendar method or rhythm method	Women monitor their pattern of menstrual cycle over 6 months, subtracts 18 from the shortest
2. Withdrawal (coitus interruptus)	Man withdraws his penis from his partner's vagina, and ejaculates outside the vagina, keeping semen away from her external genitalia

For this study, the researcher has limited the scope of the study to modern methods only because the previous studies have shown that condoms are popular among the teenagers who already had sexual encounters [37]. Meanwhile, the previous studies also show that the teenagers do not use condoms every time they had sexual intercourse, especially during their first sexual encounter. In addition, almost one-fourth of the teenagers had taken the emergency contraceptive pills after they had sex [23]. The Bureau of Reproductive Health, Ministry of Public Health has recommended condoms and contraceptive pills as the suitable contraceptive methods for teenagers [35]. For this reason, this study is focusing on the program management which promotes the use of condoms among teenagers so that they will use the condoms every time they have sex. Knowledge, understanding as well as skills are provided. In case that the misuse of condom occurs, the teenagers will be able to handle the situation correctly by taking the correct dose of emergency contraceptive pills. This awareness also includes the sexually transmitted disease prevention and unprepared pregnancy.

2.2.4 Concept of condom

Male condom is a sheath worn over the penis while having the sexual intercourse to prevent pregnancy or to prevent sexually transmitted diseases [36].

Condom is the equipment to cover the male penis during the sexual intercourse by blocking the semen to penetrate the vagina during ejaculation. It is also

the effective equipment to prevent sexually transmitted diseases and HIV infection [35].

Type of Condoms

Currently, there are 3 types of condoms available for sale

1. Natural membrane condom is made from material taken from caecum part of the lamb intestine. The thickness is approximately 0.5 millimeter. It is soft but not flexible. It can prevent pregnancy but it cannot prevent sexually transmitted diseases. Currently, it is no longer popular.

2. Latex condom is produced from the natural rubber. These condoms are high quality, slim and stick. There are many types such as rounded tip, bulb tip, lubricated condom, spermicide condom etc. This type of condom can prevent both pregnancy and sexually transmitted diseases.

3. Plastic condom is the condom made from polyurethane. This new condom is thinner and stronger than the latex condom. Like the rubber condom, this type of condom can prevent both pregnancy and sexually transmitted diseases.

Regarding the efficiency of condom, the criteria of the reliable and good quality condom is that it must be in a condition which will not break, leak orsoak. The condom has to be used correctly and regularly. Apart from birth control, condoms can prevent sexually transmitted diseases and HIV infection.

Benefits of the use of condoms

1. To prevent birth control. In cases that the condom is good quality or of high standard and they are used correctly, they can prevent pregnancy efficiently.

2. Convenient to carry

3. Condoms can be easily accessed. Condoms are affordable and available at every convenient stores and pharmacy. Free condoms are also given with at costs at any Ministry of Public Health's Healthcare establishment.

4. Currently, many condom brands have developed condom flavors, textures, colors to enhance sexual sensation including condom which prolongs ejaculation or orgasm so that users can have longer pleasure.

5. Unlike contraceptive pills or other contraceptive methods, there is no side effect from using condoms. If the users want to have a baby, they can stop using condoms and they can get pregnant normally.

6. Condoms can prevent sexually transmitted diseases and HIV

Disadvantages of the use of condom

1. Condoms have to be used for each sexual intercourse

2. Condoms disrupts the continuity of sexual sensation as the condoms have to be used while the penis is erected.

3. During the intercourse, condoms reduce sexual pleasure and the sexual intimacy as it reduces the feeling of being touched.

4. In some cases, the allergy resulted from the chemical on the condom's layer has been reported. The allergy is found in both men and women.

5. Inappropriate size of the condoms can lead to condom damage or loose condoms may slip off.

2.2.5 Concept of emergency contraceptive pills

Emergency contraception means pregnancy prevention after having unprotected sex and the protection has failed such as the condom was slipped off or the contraceptive injection was forgotten etc. [41].

Emergency contraception pill or contraceptive medication used after having sex is the contraceptive medication which consists of high dose of estrogen or progesterone hormones. The mechanism to prevent the pregnancy is to postpone ovulation period or to prevent the fetus to be developed. The emergency contraceptive pill is taken in cases that the regular contraceptive pill was forgotten or during unexpected incidents such as rape, condom leakage, condom slippage, broken condom or having unprotected sex etc. For the most efficient result, the emergency contraceptive pills must be taken immediately after sexual intercourse or within 72 hours. At present, there are 5 methods of emergency contraception as follows:

1. The use of mixed hormones type emergency contraceptive pills or Yuzpe Regimen. This pill was the synthesis of estrogen and progestin. Two pills have to be taken immediately or within 72 hours after having sex. Also, 12 hours later, another 2 pills must be taken. The pills are available at most of the pharmacy. The commercial name is known as Eugynon etc. The possibility of getting pregnant is between 0.4 - 3.2% and there is a high level of side effects (50 - 70%) [42].

2. The use of contraceptive pills produced by single hormone or Levonorgestrel Regimen comprising high doses of progestrogen such as 750

milligrams of levonorgestrel. One pill has to be taken immediately or within 72 hours after having sex, 12 hours later, another pill has to be taken. The commercial names are known as Madonna and Postinor etc. The use of levonorgestrel has shown lesser side effects compared to Yuzpe (15% had nausea and 30% reported that they had irregular period) [43]. This pill is more efficient as the possibility to be pregnant is as low as 0.4- 1.1%. Therefore, this pill is very popular. [44].

3. The use of Mifepristone or RU 486. The pill is taken by mouth and it can stop ovulation and stop the function of Corpusluteum which disturbs the implantation and the development of the fetus. The side effect is also lesser than Yuzpe (40% have nausea). The postponement of the period is more efficient [45]. Even though the user has taken a smaller dose of 25-50 milligram, the pregnancy prevention is still effective [46].

4. The use of the Intrauterine device. The contraceptive mechanism of this device is to prevent the sperm to procreate with the oval and prevent the fetus implantation which has been fertilized inside the uterus. The device should be used within 5 days after having sex because if there is a pregnancy, it would cause an abortion. The use of the intra uterine device is highly effective. The percentage of being pregnant is 0.1% [47].

5. Menstrual Regulation is the vacuum of the fertilized egg or the extraction of the newly implanted fetus by the use of vacuum force which should be conducted before the next period or within 2 weeks after having sex [47].

Indication of the emergency contraceptive pills

The indication of the emergency contraceptive has indicated that it is used for pregnancy prevention in case of “emergency only”. The definition of emergency is as follows;

1. A woman who has been sexually assaulted or had sex without consent, or had unintended sex.

2. A sexual relationship without contraceptive equipment.

3. A sexual relationship between a married couple that used contraceptive equipment but by mistake, had an emergency incident such as miscounting the dates, condom leakage, broken condom, intrauterine slipped off,

forgetting to inject contraceptive medication or forgetting to take contraceptive for more than 3 days.

Administration of emergency contraceptive

In Thailand, the emergency contraceptive products are available in the package. Each package, contain 2 pills, each pill, contain high dose of levonorgestrel at the amount of 750 micrograms. The appropriate use of this medication is to take the first pill as early as possible (after having unprotected sex) or within 72 hours. The second pill has to be taken 12 hours later. If there is vomiting, the pill must be taken again within 2 hours. The pill cannot be taken more than 4 pills a month or 2 packages per month.

If taken within 72 hours after having sex followed by the second pill, the effectiveness of the pill to prevent pregnancy will be 75%. If taken within 24 hours after having sex, the effectiveness of the pill to prevent pregnancy will be 85%. Therefore, the first pill has to be taken as early as possible.

In addition, 2 pills of emergency contraceptive pills can also be taken at the same time. The effectiveness and the safety are not different from taking 1 pill twice. In the United State of America, it is more popular to take 2 pills at once. Therefore, the dose of the medication is double. The size of the Levonorgestrel is 1.5 milligrams. One-time use is more convenient for the users. However, higher dose can cause nausea and vomiting for taking more than 1 pill twice in some cases [20].

Emergency contraceptive pills's side effect

Prevalent side effects from the use of emergency contraceptive pills is usually not serious such as nausea, vomiting, stomach pain, chest pain, sporadic bleeding while having period, premature period or period delayed. These side effects do not require treatment. There is no harm in using emergency contraceptive pills for a short period of time.

On the other hand, to use the emergency contraceptive pills for an extended period of time can lessen the efficiency of the medication compared to the regular contraceptive pills. Furthermore, it can cause side effects resulting from higher hormones in the body such as the abnormality in the oval, endometrial disorder as well as the risk to ectopic pregnancy equivalent to 2% etc. Hence, the user should

not use emergency contraceptive pills more than 4 pills a month or 2 packages per month [20].

2.3 Unintended pregnancy

2.3.1 Definitions of unintended pregnancy

Unintended pregnancy among adolescent is a worldwide problem in both developed and developing countries [7]. Finer gave meaning to unintended pregnancy, as woman not wanting to be pregnant. Since she isn't ready to be a mother or doesn't want a child or when the pregnant woman doesn't want to continue the motherhood until delivery[48].

2.3.2 Situation of unintended pregnancy and contraception

Global Situation

In 2014, the estimated number of global unintended pregnancy between age 15 to 19 was 16 million. Some 1 million pregnancies had age less than 15 years old. Statistics indicates that the average global birth rate among 15 to 19 years old was 49 per 1,000 adolescent (world wide range was 1 to 299 per 1,000 adolescent), which the highest was sub-Saharan Africa. Also, 95% of this birth rate occurred in low and middle income countries. It was observed that, the worldwide teenage pregnancy rate has not decreased until now [7].

Globally unintended pregnancy rate of 15-44 years old in 2012 was 53 in 1,000 per woman. The rate in Africa was 80 unintended pregnancies per 1,000 reproductive women, which was the highest rate [49]. Adolescent pregnancy significantly affected maternal and child health for instance, higher rates of depression, school dropout, economic problem, preterm birth, and low birth weight [10].

Asia Situation

The unintended pregnancy rate in Asia was 46 per 1000 reproductive women [49]. According to the findings in 2012, half of all unintended pregnancies had abortion, 38% had unplanned births and 13% had preterm labor. Of those abortions, 54% occurred in developed countries and 49% occurred in developing countries [49]. Moreover, many thousands of women in developing countries get complication from unsafe abortion and die [49]. Adolescent pregnancy led many

negative results, such as low birth weights, infant mortality, maternal emotional problems, school dropouts, lack of employment opportunities, etc. [50]. In addition, 3 million female youths between 15 – 19 years old undergo unsafe abortions [7].

Thailand Situation

The estimated number of youth was 10.2 million, which is 15% of total Thai population [14]. In 2014, the number of young female ages between 15 to 19 years old was 2,342,738. The birth rate of young female at this age was 47.9 cases per 1000 youths [51], which increased from 31.1 cases per 1000 youths in 2000 [13]. Moreover, the birth rate of youth in Thailand was higher than the average birth rate of youth in Asia - Pacific regions [14].

Thailand abortion situation

According to 'Abortion Surveillance in Thailand Report in 2013', two – third of youth had the first sexual intercourse at 17 years old and more than half of them did not use contraception. 29.0 % of abortions were in age 15-19 years old and 31.5% occurred in age 20-24 years old [15]. The youths who had abortion were more likely to be confused, frustrated; and suffer extreme anxiety [14]. According to the findings in 2011, 53% of abortions are adolescents, and 30% are students [16].

2.4 Act for prevention and solution of the adolescent pregnancy problem in Thailand, B.E. 2016

His Majesty King Bhumibol Adulyadej is graciously pleased to proclaim that whereas it is expedient to have a law on prevention and solution of the adolescent pregnancy problem; be it, therefore, enacted by the King, by and with the advice and consent of the National Legislative Assembly, as follows:

Section 5. An adolescent has the right to make a decision by himself and has the right to get information and knowledge, right to access reproductive health service, right to have confidentiality and privacy, and right to access social welfare provision, that are equal and non-discriminative, and is entitled to any other rights for the purpose of this Act accurately, completely and adequately.

Section 6. An educational establishment shall undertake the prevention and solution of the adolescent pregnancy problem as follows:

(1) To provide teaching and learning on sexuality studies this is appropriate to the age of pupils or students;

(2) To recruit and develop teaching personnel to be capable of providing sexuality studies and counseling on the prevention and solution of adolescent pregnancy problem to pupils or students;

(3) To establish a system of supervision, assistant and protection for pregnant pupils or students to receive education in a suitable and continuous manner, including establishing a referral system to ensure the receipt of an appropriate reproductive health service and social welfare provision.

The prescription of the categories of educational establishments and undertaking of the educational establishments in each category shall be in accordance with the rules, procedures and conditions as prescribed in the Ministerial Regulation.

Section 7. A service establishment shall undertake the prevention and solution of the adolescent pregnancy problem as follows:

(1) To accurately, completely and adequately provide information and knowledge on the prevention and solution of adolescent pregnancy problem to adolescent recipients of service;

(2) To provide counseling and reproductive health services which are up to the standard and consistent with the rights under section 5, to adolescent recipients of service, including establishing a referral system to ensure the receipt of appropriate social welfare provision.

The prescription of the categories of service establishments and undertaking of the service establishments in each category shall be in accordance with the rules, procedures and conditions as prescribed in the Ministerial Regulation.

Section 8. A business establishment shall undertake the prevention and solution of the adolescent pregnancy problem as follows:

(1) To accurately, completely and adequately provide information and knowledge on the prevention and solution of adolescent pregnancy problem to adolescent employees;

(2) To provide or support adolescent employees with an access to counseling and reproductive health services, including establishing a referral system to ensure the receipt of appropriate social welfare provision;

The prescription of the categories of business establishments and undertaking of the service establishments in each category shall be in accordance with the rules, procedures and conditions as prescribed in the Ministerial Regulation.

Section 9. There shall be social welfare provision relating to prevention and solution of the adolescent pregnancy problem as follows:

(1) To promote and support children and youth councils at the level of province and district to establish the children and youth networks in the areas to be the leaders in preventing, resolving, and monitoring the problem of adolescent pregnancy;

(2) To promote and support the relevant state agencies and private organizations to coordinate, monitor, and assist pregnant adolescents and their families;

(3) To provide vocational training in accordance with interests and proficiencies to pregnant adolescents, who intend to receive the training, prior and after childbirth, and to coordinate to procure suitable employment;

(4) To provide alternative families in the case where adolescents are unable to raise the children themselves;

(5) To provide other social welfare to promote the prevention and solution of adolescent pregnancy problem.

The undertakings under paragraph one shall be in accordance with the rules, procedures and conditions as prescribed in the Ministerial Regulation.

Section 10. The local administration shall have the powers and duties to undertake to ensure that adolescents in its local administrative area have the rights under section 5.

For the purpose of the undertaking under paragraph one, the local administration shall have the powers to prescribe local ordinances in accordance with the rules, procedures and conditions as prescribed in the Ministerial Regulation.

2.5 Concept and theories related to this study

2.5.1 Health Education

Health education (H.ed.) are behavior and social sciences as one of the core dimensions of public health [52]. Health education refers to any combination of learning experiences designed to facilitate voluntary actions conducive to health" for prevention and health promotion [53]. WHO gave meaning of health education as "consciously constructed opportunities for learning involving some form of communication designed to improve health literacy, knowledge, and developing life skills, which are conducive to individual and community health" [54]. Health educators employ a core set of competencies. Also, there are many settings and audiences for health education such as schools, universities, health departments, communities, worksites, and international organizations. The major areas of health education practice, such as assessing, planning, implementing, managing, and evaluating health education or health promotion programs, services, and interventions [52].

2.5.2 Health Literacy

1) Definition of Health Literacy

In 1974, the term "Health literacy" had been used for the first time during the Health Education seminar.

World Health Organization has defined health literacy accordingly "Health literacy represents the cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand and use information in ways which promote and maintain good health" [55]

The Ad Hoc Committee on Health Literacy for the Council on Scientific Affairs of the American Medical Association: AMA has given its definition as "the overall skills including the basic capacity to read messages and basic calculation for maintaining health practices" [56].

The Center for Health Care Strategies Inc. has defined health literacy as "the ability to read, to make an understanding and adjust practices after acquiring information on maintaining" [57].

The Institute of Medicine or IOM has defined Health literacy as "the level of an individual's ability in managing and understanding health information and basic

health service which is essential for making decision". The IOM has clarified that the level of health literacy is based on individual's skills to handle the health situation. In addition, health care and educational system has an influence on health literacy. Social and cultural factors at home, at work and in the community also has to be taken into consideration [58].

Zarcadoolas C., Pleasant A. & Greer D.S., has given its definition as "individual's comprehensive skills covering an ability to assess health information and the ability to apply the acquired concept to minimize the health risk and improve the quality of life" [59].

Nutbeam has given the definition of the health literacy as the intellectual and social skills which leads to individual's motivation and competence to access, understand and be able to utilize the information to promote and maintain their health continuously [60].

As quoted in Pleasant A. & Kuruvilla S., Kickbusch & Maag has given the definition as "Daily-life Health Decision-making ability and the ability to search for health information for the purpose of self-care" [61].

Pleasant A. & Kuruvilla S. has given the definition of the health literacy as "the ability to search, understand, analyze, and utilize the health information in order to make the right decision. Health literacy also minimizes the health inequality" [61].

Ishikawa H. et al. has given the definition of health literacy as "an individual's ability to access, understand, and utilize health information in order to make the right decision on health" [62].

Health Systems Research Institute has explained that the health literacy is the knowledge achievement, personal skill and confidence to elevate self's health care as well as that of the community by adjusting the livelihood and living condition [63].

Nutbeam has explained that the health literacy is individual's social and analysis competence which determines the motivation and the ability to access, understand, evaluate and utilize information according to their own needs to promote and maintain one's good health. Health literacy also increases knowledge and understanding of the health factors. It also facilitates the attitude and behavior

adjustment for health promotion. Health literacy is one of the key factors for health promotion [64].

Rootman has defined that health literacy is the skills covering the inquiry necessity to evaluate and integrate health information from diverse contexts. It also requires verbal skills regarding health and the culture of the health system [65].

Amornwiwat S. has conceptualized health literacy as "health literacy is the wellness literacy" which is learned through the life time learning cycle including learning to learn or learning to understand, learning to do or learning to practice, learning to live together or participation or cooperation with others, and learning to be or having the intellect to making sense of the surrounding environment and having essential mental power to behave responsibly [66].

Chin et al. has interpreted 2 different terminologies which lead to the health outcome accordingly; health knowledge and health literacy is related to each other. Health knowledge is crucial to facilitate health literacy. For instance, if individual has health knowledge, he or she will have health literacy [67].

Edwards, Wood, Davies & Edwards has mentioned that health literacy has been transferred from those who have accumulated the health literacy and gained the ability to manage their own health condition, and can access updated information and service. Health literacy also means the counseling with health experts and negotiation to receive proper treatment. The competence varies as some people may have good knowledge and skill while the other may put less effort to search for information and prefer having communication through counseling [68].

Health Education division has defined the health literacy as the competence and skills to access knowledge, understanding for analysis and evaluate practices and self-management including the ability to provide personal health guidance to the family and community [69].

Benjamas Suramitmaitree has given the definition of health literacy as the competence and skills to access information, understand the analyzed contents in order to evaluate practices which enables self-management. Health literacy is also the ability to provide guidance, to maintain good health, regarding personal health of family and community [70].

Tipwong A. and Numpoon J. has defined health literacy as the knowledge, understanding, and social skills which indicates motivation and personal competence to comprehend and utilize information to achieve the goal of having good health. Health literacy is also the knowledge development, the understanding of the context, the attitude adjustment and the motivation and self-control to healthy behavior [71].

Therefore, it can be summarized that the health literacy is the mental process and the social skills for critical thinking which leads to motivation and personal competence to understand, evaluate, utilize the information in searching and obtaining health care information. It is also the ability to provide guidance for personal health to family and community.

2) Components of the Health Literacy

Lee, Shoou-Yih D., Arozullah, Ahsan M., & Cho, Thai and international academic and organizations have divided the components of health literacy accordingly; Young Ik. has divided the component of the health literacy into 4 parts;

1) Knowledge of disease and self - care

2) Health risk behavior

3) Preventive care and physician visits

4) Compliance with medications

Individual's low level of health literacy will lead to the lack of health knowledge, unhealthy behaviors, inability to protect oneself from diseases, unaware of the necessity to visit the doctor including not complying with the doctor's instruction. These factors are delaying the appropriate self-care practices, deteriorating the health condition, and increasing the number of emergency service usage and treatment from the hospitals [72].

Paasche - Orlow & Wolf has theorized the concept entitled "Integrated Model of Health Literacy" which divided the health literacy component into 3 parts [73];

1) Access and utilization of health care

2) Provider - patient interaction

3) Self - care the indication of the health literacy is determined from related factors such as education, ethnicity, gender, age, profession, income, culture,

language and social support. It is also determined by the physical factors such as the visibility and hearing ability etc. All components have significant influences for individual who receive the health service. The successful interactive dialogue with the health service providers will enable achievable self-care.

Nutbeam has divided the component of health literacy from the concept of “Conceptual model of health literacy as a risk” into 6 parts [60];

1) Access
2) Cognitive
3) Communication skill
4) Self - management
5) Media literacy
6) Decision skill

This concept is developed from the different issues in clinical care and public health which reflects "Risk to diseases". In case that an individual possesses low level of health literacy, it would result in self-practice and health management. This concept is rooted from the research on adult literacy and health promotion which prioritizes the skill and competence development which allows individuals to gain control of their health as well as adjust the factors which improve the population’s health outcome; health control and risk factor to health adjustment.

Von Wagner et al. has defined it as the ability to rely on literacy and numeracy skills when they are required to solve problems. This conceptual framework is developed from the social cognition models. The social cognition models explain that the health literacy has a foundation of basic skills such as reading, calculation which is used to interpret necessary information for more advanced thinking level [74].

Rootman has divided the health literacy component into 2 parts;

1) General Literacy such as competence in reading, calculation, speaking, listening, comprehension negotiation and decision making.

2) Other literacy such as literacy in science, culture, computer and other media. This concept is rooted from the health literacy concept as well as the literacy on other fields such as general literacy including competence in reading, calculation, speaking, listening, comprehension, negotiation, criticism, decision

making. Other literacy include science, culture and media etc. Having low level or high level of literacy would result directly and indirectly in the health status and quality of life. The direct impact can be the compliance to the doctor's medication instruction, the self-practice in safety whereas indirect impact is the competence to read which may not give a direct effect. However, the factor which can cause health impact can be stress, working environment, income, service selection, lifestyle channel to increase and develop the health literacy are as follows;

1. Health communication or the communication through different channels to adjust their health behaviors.

2. Capacity development by providing education and training

3. Community development to empower the community and allow the community to have self-reliance according to the context of each community's livelihood.

4. Organizational development by developing and improving the environment of the settings such as residents, educational institutions and workplace etc.

5. Policy development by enforcing the policy, law and regulation into practices.

6. Combined approach are mentioned methods which can be used as an integration to create the health learning society [65].

Chin et al. has developed the concept of "Process-Knowledge Model of health literacy" by dividing the component of the health into 3 parts;

1) Processing capacity or factor which enhances the ability, such as the ability to memorize.

2) General knowledge or the ability to analyse and synthesize.

3) Specific health knowledge is the conceptual framework which explain the process of adult's health literacy [67].

Sorensen et al. has divided the health literacy component from the concept of the "Integrated model of health literacy" into 4 parts accordingly;

1) Access or the ability to search and acquire health-related information

2) Understand or the ability to understand health information

3) Appraise or the ability to explain, interpret, filter and evaluate acquired health information.

4) Apply or the ability to communicate and use the information for decision-making in one's own health care [75].

Kwanmuang Kaeo-dum-koeng et al. has divided the health literacy component into 6 parts;

1. Cognitive skill is the application of the knowledge and understanding on practices in the health context by contemplating, reasoning and verifying the credibility and the legitimacy of right and duties. This skill also applies the cultural assets to solve the problems and minimize the risk and improve the quality of life.

2. Access skill is the competence in listening, seeing, speaking, reading, writing, searching and deep calculating to find the linkage by using logical reasoning. This skill includes the consideration on social norms and regulations in order to obtain the most accurate health information.

3. Communication skill such as the campaign to promote health practices by using critical thinking, reasonable verification of the credibility, legitimacy and the social norms.

4. Decision skill is the logical thinking process from available alternative.

5. Self-management skill is the personal skill and strategy which will lead to direct success such as objectives, goal setting, decision making, planning, self-evaluation, self-development and other skills which can be translated into practices.

6. Media literacy is the knowledge and understanding and personal competence in thinking, understanding and critical analysis of the contents or the presentation. This skill includes the ability to interpret the connotation which may be hidden in the media. Media literary is also crucial for presentation evaluation [76].

Health education division has defined the aspect which is necessary to the development of health literacy into 6 components accordingly;

1. Access to health information and health service, and the ability to select health information, the ability to acquire information and use information inquisition tools to obtain accurate information, and the ability to verify information

from diverse source to ensure the reliable information to apply for the one's health care practices.

2. Cognitive health or having knowledge and the ability to memorize the health contents reflecting an understanding well enough for application/contents comparison for practices reasonably.

3. Health information communication skill or the competence to communication to acquire health knowledge by speaking, reading and writing which facilitates better understanding and persuasion for others to accept health-related information.

4. Decision skill in choosing appropriate practice to reject or avoid or choose particular practice which can bring the healthy result by using reasoning and the analysis of the advantages and the disadvantages to minimize the impact to oneself and others.

5. Self-management or the ability to set up goal and plan to achieve planned actions including the revision and the adjustment to have proper health behavior.

6. Media and information literacy or the ability to evaluate acquired information, to verify the accuracy, the reliability of the data which has been presented, the comparison to channel of media selection to minimize the risk as well as to evaluate the message evaluation from the media [69].

3) Level of Health Literacy

Health Literacy level, according to Nutbeam, is the highly acclaimed concept which has been translated into various applications. Nutbeam has divided the level of the health Literacy into 3 levels;

Level 1: Basic / Functional literacy is the fundamental health literacy such as the reading and writing ability to understand the health contents which is considered the basic skill. Reading and writing skills is essential to understand the health context such as the consent form, medical label, health care written information, understanding the layout of the information presentation, written and verbal information for the physician, nurses, pharmacists including other instructions such as medication intake, appointment etc.

Level 2: Communicative/ Interactive literacy or shared health literacy such as the competence in applying knowledge and communication to create participatory health care. This level is the cognitive literacy and the social skill which allows participation in terms of one's own self- health care such as the ability to make a question to the experts, the ability to express emotions and knowledge to others. The achievement of this level will enhance the health competence.

Level 3: Critical literacy is the competence to assess the existing health information in order to make the decision and select practices which can promote and maintain continual self-health care [60].

In this research on the effects of "Sex Must Safe" program to health literacy, intention, and practice on condom and emergency contraceptive pill uses among female universities students in Chon Buri province, Thailand applying health literacy and self-efficacy theory for promoting condom and emergency contraceptive pills among female university students, the concept of health literacy is applied from Nutbeam (2008) and Health Education division. The Health Literacy component is divided in 6 components as follows;

1. Access to health information and health service to promote the use of condom and emergency contraceptive pills. This component is comprised of source of information selection, information inquiry from the experts, information acquisition problem, how to choose the reliable source, how to acquire information and verify information from reliable source.

2. Cognitive health regarding the use of condom and emergency contraceptive pills means knowledge, memory, understanding, analysis or systematic comparison on the use of condom and emergency contraceptive pills

3. Communication skill to enhance the competence to use the condom and emergency contraceptive pills means skills in listening, speaking, reading and writing. The development of these skills would enable communication which can facilitate better understanding and persuasion for others in terms of the use of condom and emergency contraceptive pills.

4. Decision skill in choosing appropriate practice in using condom and emergency contraceptive pills means the ability to express declination or the ability to avoid the situation which can lead to unprotected sex (without using condom and

emergency contraceptive pills by using reasoning and the analysis on the advantages and the disadvantages, consequences resulted from their actions. In addition, this skill includes the skill to convince others to comply to use the condom and emergency contraceptive pills to prevent pregnancy.

5. Self-management for health condition for using condom and emergency contraceptive pills means the ability to set up goal and plan to use condom and emergency contraceptive by achieving this planned goal including the ability to revise their own practices. This skill includes the awareness on changes and the ability to cope with the consequences.

6. Media and information literacy for the use of condom and emergency contraceptive pills means the ability to evaluate acquired information, to verify the accuracy, the reliability of the data which has been presented, the comparison to channel of media selection, the message evaluation from the media before making the decision related to the use of condom and emergency contraceptive pills [60, 69].

This study has divided the level of health literacy into 3 levels; basic/ functional literacy, communicative/ interactive literacy, and critical literacy.

2.5.3 Bandura's Social Learning Theory

Albert Bandura developed self-efficacy theoretical concept within Social Learning Theory. In his concept, Bandura believed that a person's behavior has reciprocal determinism between three factors, namely interpersonal factor (P), behavior condition (B), and environment condition (E). These three conditions affected and were affected by one another and were related to each other systematically. The influence of each condition depended largely on environment factor. Bandura believed that self-efficacy of an individual personal belief could be managed and constructed. Such belief would direct personal thoughts, feelings and motivations of a person in a certain level [77]. Bandura and Cervone also emphasized on the importance of personal characteristics of a person [78]. Persons with high self-efficacy would have more confidence in oneself than those who have low self-efficacy [79].

Therefore, self-efficacy was defined as believing in capability of oneself to do such thing with desired expected outcome. Self-efficacy of individual comprised four categories:

(1) Believing that one could manage and solve problems successfully.

(2) Observing and learning from other people.

(3) Having self-motivation, such as “I can do it”, “I am confident” or receiving motivation provided by others, such as “You can do it”, “I believe you can do it”.

(4) Having reinforcing stimulus in all levels, both in processes and patterns.

Bandura has proposed 4 patterns for the development and the enforcement of the perceived self-efficacy methods accordingly;

1) Mastery experiences refer to when an individual has expressed any behavior, and that behavior brings success,that behavior will enhance the self-efficacy. Bandura believes that this method is the most efficient method in establishing the perceived efficacy. Therefore, the practice to gain the skills to perform the particular action is required.

2) Vicarious experiences refer to when individual has seen the model which is similar to his own success and that model has shown similar satisfactory consequence, the individual will develop the concept that if he imitates the model's behavior, he will receive the similar success or consequences.

3) Verbal persuasion refers to individual who has heard from others that “you can do it”. This message will stimulate the individual to increase their confidence. However, the persuasion alone is not sufficient to build the self-confidence regarding the ability. This strategy should be used in combination with enabling the individual to taste the experience of success.

4) Emotional arousal refers to the emotional arousal that has an effect on perceived self-efficacy. If the emotion is negatively aroused such as being threatened, having anxiety, having stress or fear, individual would express negative behavior which causes failure. This will decrease the perceived self-efficacy. By contrast, the positive emotional arousal such as the creation of happy and amiable atmosphere would build and increase the sense of self-confidence as shown in figure 2.1

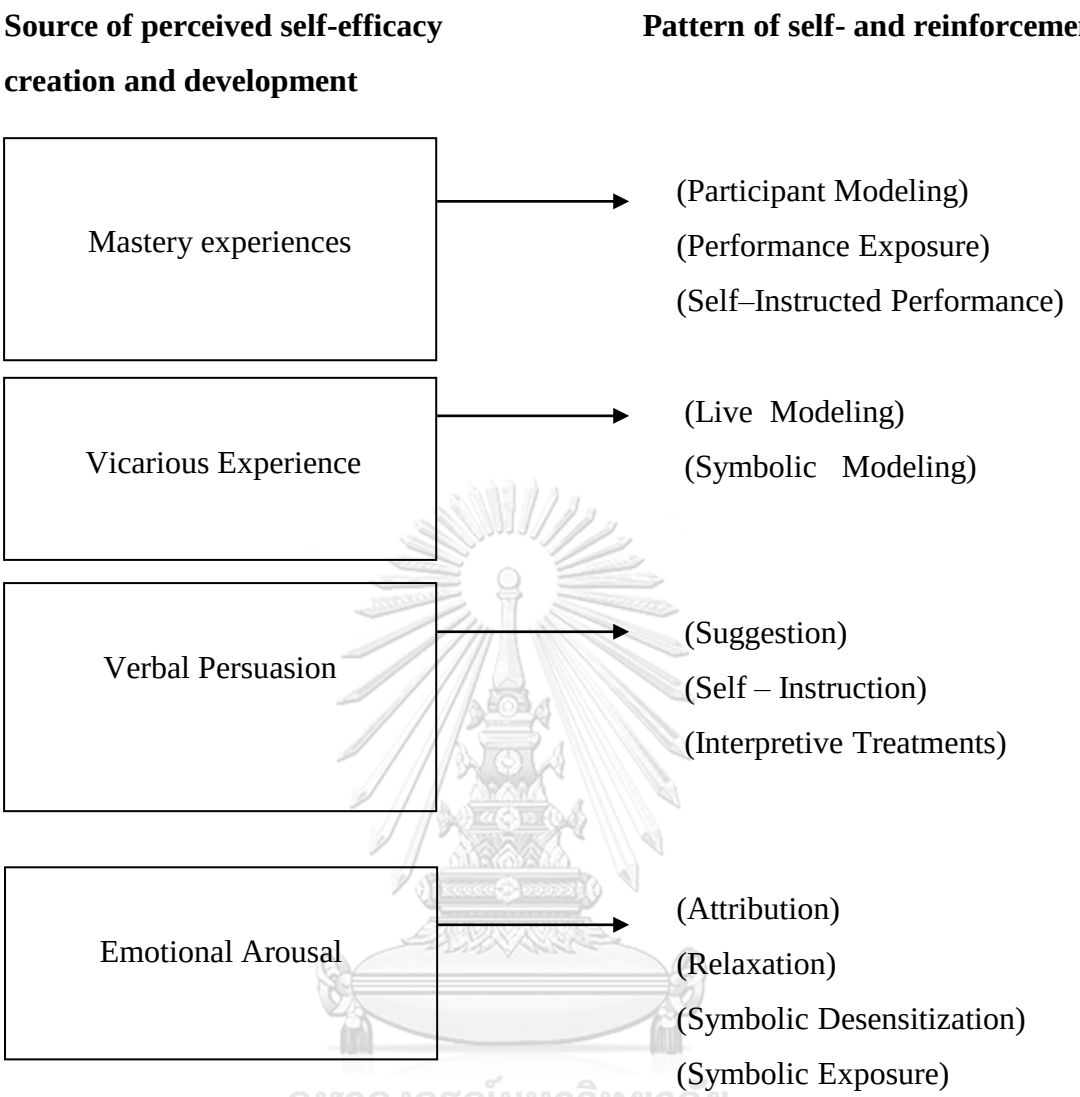


Figure 2.1 The development and the reinforcement of the self-efficacy learning by Bandura

Self-efficacy influences and affects the behavior and expectation of an individual to reach their goal. A person with high self-efficacy would be able to do as he/she believed and expected. However, if the other factor of a person were too high or too low, he/she would not be likely to express his/ her behavior. Therefore, self-efficacy has been a very important factor to predict whether the person can change behavior and can follow instructions.

2.6 Research related to this study

Our attempt to gather previous studies that are specifically devoted to the relationship between functional literacy and actual use of contraceptives revealed that such a study has yet to be conducted. However, Parker et al. did a systematic review to explore the link between literacy and contraception and found 46 previous studies containing relevant information [79]. Among these studies, 19 were related to literacy and health, nine to adult literacy, eleven examined literacy and contraception, and seven looked at literacy and family planning. More than one-third of English-speaking and 62% of Spanish-speaking patients had inadequate or marginal functional health literacy, according to a study conducted at two urban public hospitals [79]. In addition, studies conducted by health educators have demonstrated that information for many types of contraceptives is frequently above the patient's reading level [80].

Thongkhao conducted a descriptive survey to determine knowledge, attitudes, and use of emergency contraceptive pills among vocational students in Phatthalung, Thailand [47]. Three-fourths of the participants had knowledge of the pills. In comparison with their female counterparts, men demonstrated a higher level of knowledge of the pills. A large number of participants (70%) understood the indication; however, 40% of the respondents answered the regimen question incorrectly [47]. Regarding side effects, 70% of the participants were not aware of them [47]. The questionnaire's mean score fell into the low-level knowledge category, though private university students scored higher than those in public universities [47].

Kiew-pilarp and Boonchai did a descriptive survey to determine the use of emergency contraceptive pills in Thai students [80]. Of respondents, 17.5% of the students indicated that they received information from friends, drugstores, and lovers and stated their reasons for using the pills as convenience, availability, and lack of other contraception methods [80]. Regarding their level of knowledge of emergency contraceptive pills, 55% demonstrated a moderate level [81].

Aimnoi et al. completed a descriptive survey to determine knowledge of emergency contraceptive pills among universities student in Bangkok. Three-fourths of the participants had some knowledge of emergency contraceptive pills, and the percentage of males with knowledge was higher than females. Almost 70% of the participants knew the indications, around 40% answered the treatment regimen

question incorrectly, and two-thirds of the participants were unaware of the side effects. The mean score of the questionnaire indicated low level knowledge. Moreover, it was found that private university students scored higher than those in government universities [82].

Kang and Moneyham did a cross-sectional descriptive study to determine the use of emergency contraceptive pills and condoms among single undergraduate students in college in South Korea [82]. From 1,046 participants who were sexually active, 76.3% had heard of emergency contraceptive pills and 13.2% had used them [82]. Due to lack of knowledge on emergency contraception, misconceptions about their safety persisted [82]. Regarding intentions to use emergency contraception and condoms, a more positive attitude resulted in greater use of both emergency contraception pills and condoms [82]. Significant gender differences were indicated on many variables [82]. Females had more concerns about the safety of emergency contraception pills than males; furthermore, females also had higher knowledge of emergency contraception pills, greater intention of using emergency contraception pills and condoms, and they showed a more positive attitude toward condoms than male students [83].

Sirikittikorn completed a descriptive survey to determine knowledge and attitudes of emergency contraceptive pills among undergraduate students in a college in Bangkok [84]. Most of the respondents in each gender had low level of knowledge on pregnancy contraceptive pills (52.5% in male, 52.7% in female).

Miller did a cross-sectional exploratory examination to determine the knowledge and attitudes toward emergency contraception among undergraduate college students in northeast Pennsylvania [84]. No significant differences between male and female attitudes regarding emergency contraception were found [84]. Several variables were found to be associated with feeling comfortable using emergency contraceptive pills, including previous knowledge of emergency contraception, having a higher perceived knowledge level of emergency contraception, or having taken a health course that discussed emergency contraception [84]. Emergency contraception was rated as a method of contraception, rather than abortion [85].

Meechai et al. conducted a descriptive survey to determine the knowledge, attitude, and behavior of emergency contraceptive use among students in Thailand [85]. Many of the students (45.45%) had received information about emergency contraception pills and 32.66% received the information when they were in class [85]. Most of these students (63.59%) had lower levels in terms of their emergency contraception knowledge score [85]. Among female students, 40 emergency contraception pill users (10.92%) had used emergency contraception pills in the past six months [86].

Thepa completed a descriptive survey to determine the factors related to the use of the emergency contraceptive pills among female adolescents aged between 16 to 18 years, who were vocational students in Bangkok [86]. The findings of the study revealed that a little more than half of the female adolescents had experienced penetrative sexual relationships (58.9%); some of them (28.7%) had taken emergency contraceptive pills [86]. Related factors for the use of the emergency contraceptive pills were age, education level, grade point average, and knowledge of emergency contraceptive pills [87].

EI-Ibiary and Youmans conducted a descriptive survey to determine health literacy and contraception in the United States [87]. To be able to read the instructions of condoms, a reading level of sixth to 12th grade is required, 9th to 10th grade for the spermicides, and 10th to 12th grade for emergency contraceptives [87]. The results were similar to studies conducted in the previous decade [88].

Sarmad, Akhtar, and Manzoor did a cross-sectional study to determine the relationship between female literacy and contraceptive use in Khushab, Pakistan, among married women [88]. Literacy played a crucial role for contraception, 88% of the women knew of at least one method of contraception, including 61% of women who could read, compared with 38.5% of those who couldn’t read [88]. Educated women and those that had completed a university degree reported higher use of contraception (66.6%), compared to women with lesser education [88]. For the average number of children, women who could read had lesser children (2.7), compared to women who could not read (4), thus leading to the conclusion that higher education completion was linked to higher use of contraceptives, which resulted in lesser number of children [89].

Melnick, Rdesinski, Creach, et al. did a randomized trial study to determine the influence of nurse home visits, including three months of contraceptives and contraceptive counseling, on perceived barriers to contraceptive use and contraceptive use self-efficacy among women [89]. The average age of participants was 24.7 years. Three-fourths of participants had household incomes under $25,000 [89]. During the 12 months of study, significant reductions were made in three perceived barriers to contraceptive access for both groups, as well as significant increases in two measures of contraceptive use self-efficacy [89]. Both genders had low level of knowledge of pregnancy and contraceptive pills (52.5% in male, 52.7% in female). For the level of knowledge on pregnancy and contraceptive pills, significant difference was found between monthly income and sexual experience [90].

Wei-Chen, Li, and Cook completed a cross-sectional, quantitative survey design to determine condom use and stages of change among college students in northern Taiwan [90]. The common reasons for not using condoms included trust in the sex partner (21.30%), sex partner did not like to use condoms (19.49%), and perception of low risk (18.77%) [90]. In this study, most sexually active students (52.4%) were in the earliest two stages of readiness to change (i.e., pre-contemplation, contemplation). Participants in the action/maintenance group were (a) 43.4% less likely to show a high knowledge score, (b) 4.08 times more likely to present high self-efficacy, and (c) 2.24 times more likely to be more religious than those in the contemplation/preparation group [91].

Jemmott and Jemmott examined whether use of social cognitive theory to create an AIDS prevention intervention would increase intentions to use condoms among 109 sexually active inner-city black female adolescents [92]. Their analyses revealed that the Ss scored higher in their intent to use condoms, AIDS knowledge, outcome expectancies regarding condom use (CU), and self-efficacy to use condoms after the intervention than before the intervention. Although increased self-efficacy and more favorable outcome expectancies regarding the effects of condoms on sexual enjoyment and sexual partner's support for CU were significantly related to increased CU intentions, increases in general AIDS knowledge and specific prevention-related beliefs were not [92].

Lindberg conducted a path analysis to determine the knowledge, self-efficacy, coping, and condom use among urban women [92]. He found that 33% of the informants had had sexual experiences, and 22% of them had used emergency contraceptive pills. Only 34% of the respondents had received information about emergency contraceptive pills, and mostly that information was learned from friends; the majority had low level of knowledge of emergency contraceptive pills [92]. Meanwhile, their level of attitude towards emergency contraceptive pills ranged from moderate to high. Compared to men, women had lower level of knowledge on the pill and its usage, and many reported using the pill incorrectly. In addition, nearly half of the participants did not have adequate knowledge of the possibility of pregnancy [93].

Sirirat, Pumpaibool, and Phupong did a cross-sectional study to determine the knowledge, attitude, and intention of preventing unwanted pregnancy among female undergraduate students in Bangkok [93]. The findings of the study revealed that 42.5% of respondents had a poor level of knowledge; 63.9% of them had a moderate attitude toward unwanted pregnancy, and 64.8% of them had a moderate level of intention to prevent unwanted pregnancy. A statistically significant correlation between knowledge and intention and attitude and intention were found in this study [94].

Krinara, Ketvatimart, and Maneechot conducted research to determine the effects of a nursing student-led unplanned pregnancy prevention program on knowledge, attitude, and intention to prevent unplanned pregnancy among early adolescents [94]. Before the training program, the students had a low level of knowledge, moderate level of attitude, and high level of unplanned pregnancy prevention intention. After finishing the program, the scores of knowledge and attitude were increased to a moderate level, whereas unplanned pregnancy prevention intention remained high. There were significant positive relationships among knowledge, attitude, and intention to prevent unplanned pregnancy at a moderate level [95].

Parwej et al. conducted a quasi-experiment of the reproductive health education intervention trials among adolescent girls [95]. Teachers, parents, and students overwhelmingly (88%, 95.5%, and 93%, respectively) favored reproductive health education programs [95]. Reproductive health knowledge scores improved

significantly after interventions in conventional education (27.28) and in a peer education group (20.77) in comparison to the controls (3.64) [95]. Post-test scores were not significantly different between the peer education group and the conventional education group (43.65 and 40.52 respectively) [96].

Vuttanont et al. did research to determine sex education needs in Thai teenagers [96]. Five important influences were noted on their sexual attitudes and behavior: ambiguous social roles leading to confused identity, heightened sexual awareness and curiosity, key gaps in knowledge and life skills, limited parental input, and impulsivity and risk-taking [96]. School-based sex education was found to be biologically focused and inconsistently delivered [97].

Chandra-Mouli, Lane, and Wong conducted a systematic review to determine best practices for adolescent sexual and reproductive health [97]. They concluded that unproductive approaches should be abandoned, proven approaches should be implemented with adequate fidelity to those factors that ensure effectiveness, and new approaches should be explored, to include greater attention to prevention science, engagement of the private sector, and expanding access to a wider range of contraceptive methods that respond to adolescents' needs [98].

Jennings, Howard, and Perotte conducted a quasi-experiment to determine the effects of a school-based sexual education program known as Teen PEP on peer educators [98]. Teen PEP peer educators (versus comparison students) reported significantly greater opportunities to practice sexual risk reduction skills and higher intentions to talk with friends, parents, and sex partners about sex and birth control, set boundaries with sex partners, and ask a partner to be tested for STIs, including HIV [98]. In addition, in the secondary analysis, Teen PEP peer educators had significantly higher scores on knowledge of sexual health issues and ability to refuse risky sexual situations [99].

From the research related to this study, it was found that, there were few studies using health literacy and self-efficacy theory to improve an appropriate condom and emergency contraceptive pill use among university students. Therefore, this study aims to develop the "Sex Must Safe" program based on health literacy and self-efficacy theory and evaluate effects of the program on health literacy, intention

and practice regarding condom and emergency contraceptive pill uses among female university students in Chon Buri province, Thailand.

CHAPTER III
RESEARCH METHODOLOGY

This chapter describes the research methodology in this study, which includes research design, study period, study area, study population and sample, study procedure, validity and reliability, data analysis and ethical consideration.

3.1 Research Design

This study has 2 designs which are cross-sectional study and quasi–experimental research as follows:

Phase 1: This phase used a cross-sectional study design, which aims at gathering a situation analysis of health literacy toward behaviors for preventing unintended pregnancy among female university students in Chon Buri province, Thailand. The result and recommendations from phase 1 were finding gap to serve as basis for developing “Sex Must Safe” program.

Phase 2: Intervention program phase used quasi – experimental research which was used to evaluate the effects of the “Sex Must Safe” program on health literacy intention and practice regarding condom and emergency contraceptive pill uses among female university students in Chon Buri province, Thailand. The intervention group received “Sex Must Safe” program. The comparison group did not received any program. The pattern of the study is presented in figure 3.1

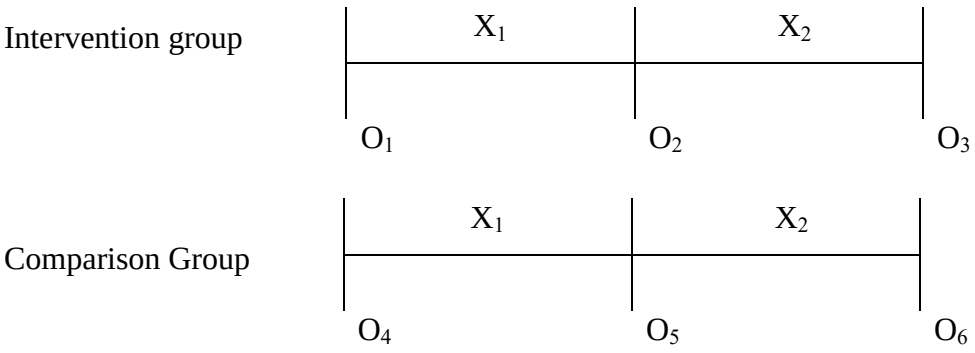


Figure 3.1 Research design of phase 2

O_1, O_4 refers to gathering data before implementing the program. The data included socio-demographic of the students, perceived self-efficacy of contraceptive

use, expectation on contraceptive use, peer norms influence, social media influence, accessibility to contraceptive, health literacy, intention, and practice on condom and emergency contraceptive pill use of the intervention group and the comparison group.

O_2, O_5 refers to gathering data after implementing the program. The data included perceived self-efficacy of contraceptive use, expectation on contraceptive use, peer norms influence, social media influence, accessibility to contraceptive, health literacy, intention, and practice on condom and emergency contraceptive pill use of the intervention group and the comparison group.

O_3, O_6 refers to gathering data after finishing the program for 12 weeks. The data included perceived self-efficacy of contraceptive use, expectation on contraceptive use, peer norms influence, social media influence, accessibility to contraceptive, health literacy, intention, and practice on condom and emergency contraceptive pill use of the intervention group and the comparison group.

X_1 refer to "Sex Must Safe" program intervention period for 8 weeks.

X_2 refer to follow up period at week 20 after finishing program.

3.2 Study Period

This study was conducted during the year 2017 to 2018 in two phases, as followed:

Phase 1: The survey was carried out from February to May, 2017.

Phase 2: The program was implemented from September, 2017 to January. 2018. This study was conducted during 20 weeks period. "Sex Must Safe" program was implemented for 8 weeks and then a program assessment was done at the end of the intervention and at 12 weeks after intervention.

3.3 Study Area

The study was conducted at two selected universities in Chon Buri province, Thailand which is located 40 kilometers away from Bangkok and near Pattaya city. Chon Buri province, is situated in an area known for industry and tourism which is at the eastern part of the country (Figure 3.2).

In Chon Buri province, Ministry of Public health, report had the highest rate of teenage childbearing in Thailand [100]. University students in Chon Buri province have a variety of risky behaviors and problems, particularly HIV/ AIDS, condom use, pregnancy, and contraceptive use [23]. Risk behaviors among this population group were thought to be deriving from many factors such as current cultural environment in the area, friend persuasion and the influence of broadcasting media [23].

Figure 3.2 The location of Chon Buri province
Source: https://www.google.co.th/maps/place/Chon+Buri/data, 2016

3.4 Study Population and Sample

Study population (Phase 1 and Phase 2): In Chon Buri province, there are 4 public universities (Burapha University, Kasetsart University in Sriracha campus, Thammasat University in Pattaya campus, and Rajamangala University of Technology Tawan-ok). In 2016, the total number of female university students registered in both regular and special program of these 4 universities in first – fourth year students were 28,707 (20,661 students of Burapha University; 6,036 students of Kasetsart University in Sriracha campus; 11 students of Thammasat University in Pattaya campus and 1,999 students of Rajamangala University of Technology Tawan-ok).

3.4.1 Phase 1: Situation analysis

This phase aimed to study the situation of female university students' health literacy toward behaviors for preventing unintended pregnancy among university students in Chon Buri province, Thailand. The sample size was calculated by using the formula of Krejcie and Morgan [101] at confidence interval 95%. The sample size was calculated using the following formula:

$$n = \frac{\chi^2 Np\,(1-p)}{d^2(N-1) + \chi^2 p\,(1-p)} \qquad \frac{\frac{t^2pq}{d^2}}{1+\frac{1}{N}\left[\frac{t^2pq}{d^2}-1\right]}$$

When: n = number of sample size

N = number of population

χ^2 = the table value of chi-square for 1 degree of freedom at the desired confidence level (1.96*1.96 = 3.841)

p = the population proportion (assumed to be 0.50 since this would provide the maximum sample size).

d = the degree of accuracy expressed as a proportion (0.05)

Sampling techniques: The number of sample size was 380 female university students. According to the experience of doing research in Chon Buri province, Thailand, the loss follow up rate was around 10%, and then the number of sample size was 418 female university students in 1^{st} – 4^{th} year study. The sampling process used the multistage technique, which comprised the three following stages: 1) one university was selected from four public universities; 2) The faculties of selected university were grouped into eight groups by the United Nations Educational, Scientific and Cultural Organization (UNESCO) criteria [102]: a) the Humanities and Social Science group, b) the Health Science group, c) the Business Administration group, d) the Education group, e) the Fine and applied arts group, f) the Engineering group, g) the Science and Technology group**,** and h) the Physical Science group; 3) the number of population were divided into eight groups faculties, the sample size was employed, 52 female students were recruited from each group of faculties except

two groups, 53 female students were recruited; 4) the classrooms of the selected faculty members were randomly selected; and 5) all students in the classrooms were recruited. If the number of students exceeded the study's parameters, students would draw lots to be excluded from the study. The flow chart of sampling technique was shown in figure 3.3.

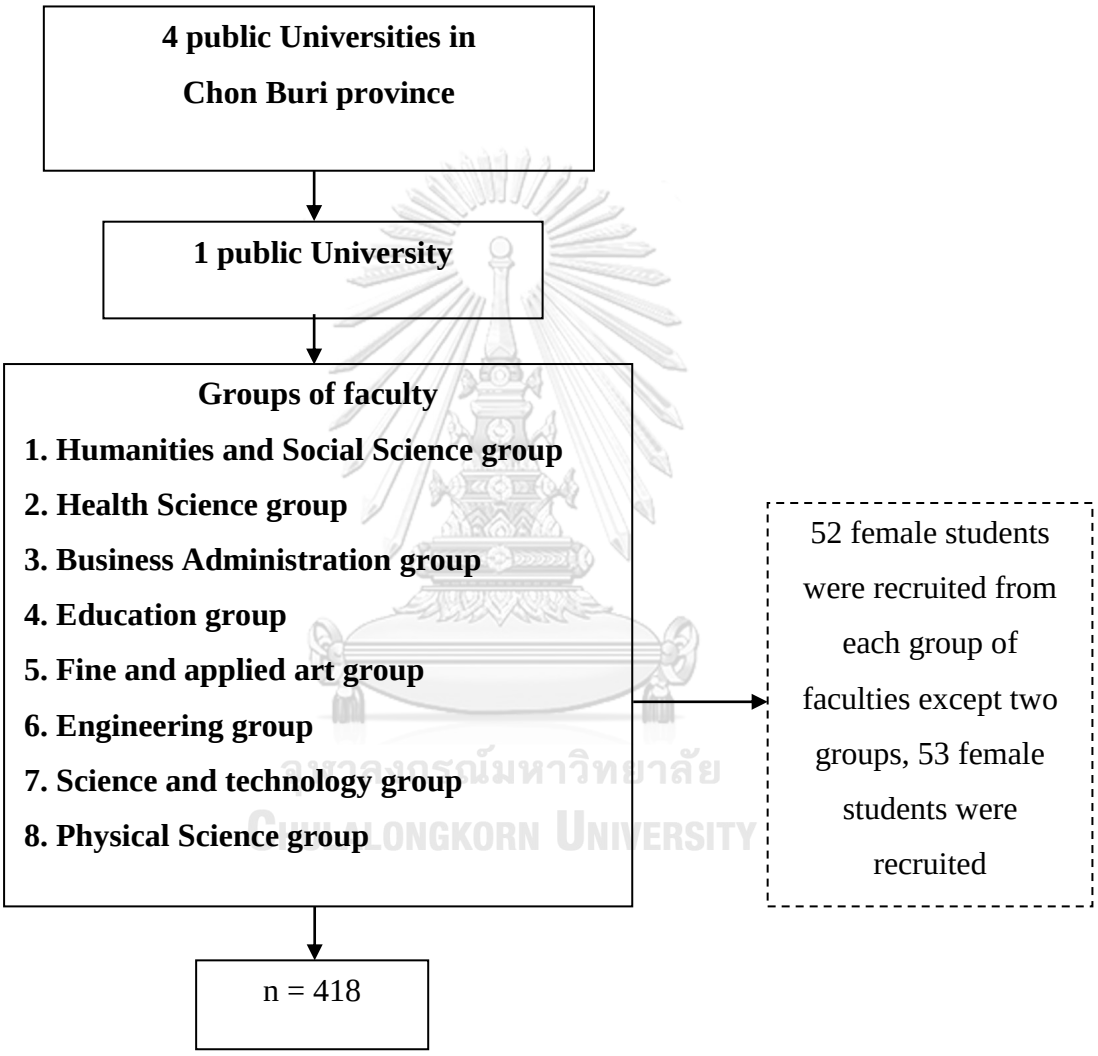


Figure 3.3 Flow diagram of sampling procedure in Phase 1

Inclusion criteria

1) Thai female university students in their first to fourth year, both full time and part time undergraduates

2) Agreed by providing written consent

Exclusion criteria

1) Have history of pregnancy or being pregnant

3.4.2 Phase 2: Quasi-experimental research

In this phase, two of the four government universities were purposively selected for the study based on their similar characteristics, i.e., their size, located in urban area, high rate of teenage childbearing. One university was randomly selected to be the intervention group while the another university was the comparison group. (Figure 3.4).

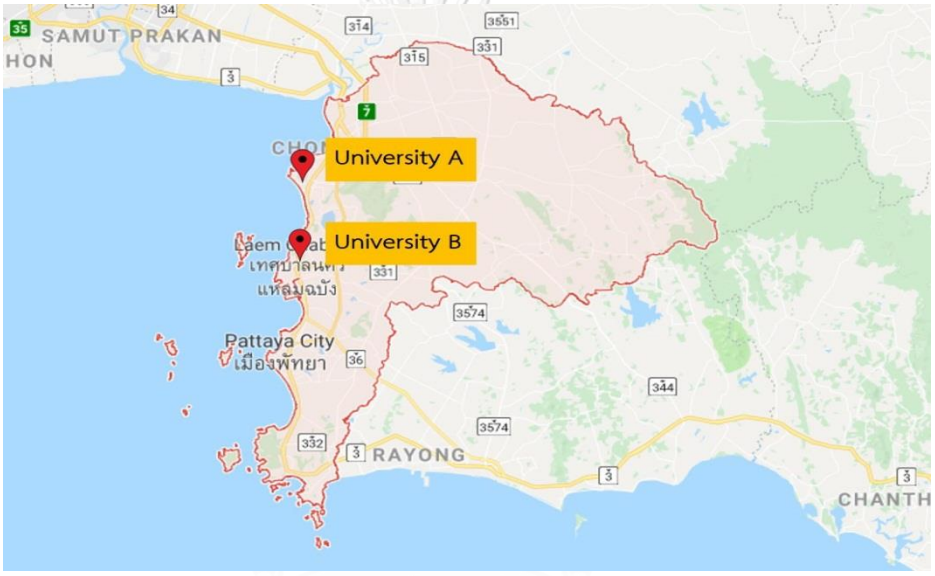


Figure 3.4 The location of university A and university B
Source: https://www.google.co.th/maps/place/Chon+Buri/data, 2016

The sample size was calculated by the formula of Chirawatkun A. [103]. The sample size was calculated using the following formula:

$$n = \frac{2[Z\alpha + Z\beta]\sigma^2}{\Delta^2}$$

When : σ = the standard deviation = 4.85

Z_α = 1.96 at α (alpha) = 0.05, Z_β = 0.84 at β = 0.2 (Power of the Test = 80%)

Δ = $\mu_1 - \mu_2$ = difference between means of intention to prevent

unplanned pregnancy among early adolescents before and after education [95] = 30.19 – 26.73= 3.46

$$n = \frac{2\,(1.96+0.84)^2 \times (4.85)^2}{(30.19 - 26.73)^2}$$

$$= 30.8 \text{ (+ 20\% attrition)*} = 36.9$$

$$= 37$$

The calculated sample size in each group was at least 37. There are 2 groups thus the total number is 74 participants.

* According to research in Muang district, Chon Buri province, Thailand, the loss follow up rate was around 20%.

Sampling techniques (Phase 2)

For the intervention university, there are 16 faculties divided into 3 groups; 1) Humanities and social science, 2) Health science, and 3) Science and technology while the comparison university has 5 faculties divided into 2 groups; 1) Humanities and social science, and 2) Science and technology. Thus, the students in the health science faculties in the intervention university were not recruited into the study. The stratified proportionate to size was employed to enroll the students from the selected faculties and also their class year as shown in table 3.1 and 3.2, respectively. Twenty-seven students from the humanities and social science faculties and ten students from the science and technology faculties were enrolled for both intervention and comparison universities. The sampling process was also shown in Figure 3.5

Table 3.1 Number of the study population and sample based on the faculties of University A (Intervention Group)

Faculty	**N = Total of female university students (17,547)**	***n* = Total of female university students sampling (37)**
Humanities and Social Science group	12,636*37/ 17,547	27
Science and technology group	4,911*37/ 17,547	10
Total	**17,547**	**37**

Source: http://www.buu.ac.th

In comparison group, stratifies proportional size was employed. University B composes of 5 faculties and 6,036 female students. The faculties were divided into 2 groups as follows, Humanities and Social Science (number of student = 4,387), and Science and technology (number of student = 1,649). Therefore, the sample of the Humanities and Social Science group is 25, and Science and technology group is 12, as the following table 3.2.

Before recruitment process, the advertisement posters were distributed to all selected faculties of both universities. The details of the poster are inclusion criteria, benefit, and details of the program.

Table 3.2 Number of the study population and sample based on the faculties of University B (Comparison group)

Faculty	**N = Total of female university students (6,036)**	***n* = Total of female university students sampling (37)**
Humanities and Social Science group	4,387*37/ 6,036	27
Science and technology group	1,649*37/ 6,036	10
Total	**6,036**	**37**

Source: https://reg4.src.ku.ac.th

The sampling process used is the multistage technique which consisted of the following three stages: (1) university A was selected as the intervention group and university B was selected as the comparison group, because of the high rate of teenage childbearing in Chon Buri province and due to universities A and B being located in the same urban area; (2) the participants were divided into two groups: humanities and social science students and science and technology students; and (3) the sample size in each group was at least 37 people that were willing to participate for twenty weeks. The stratified proportional size of study year was employed, as shown in figure 3.5

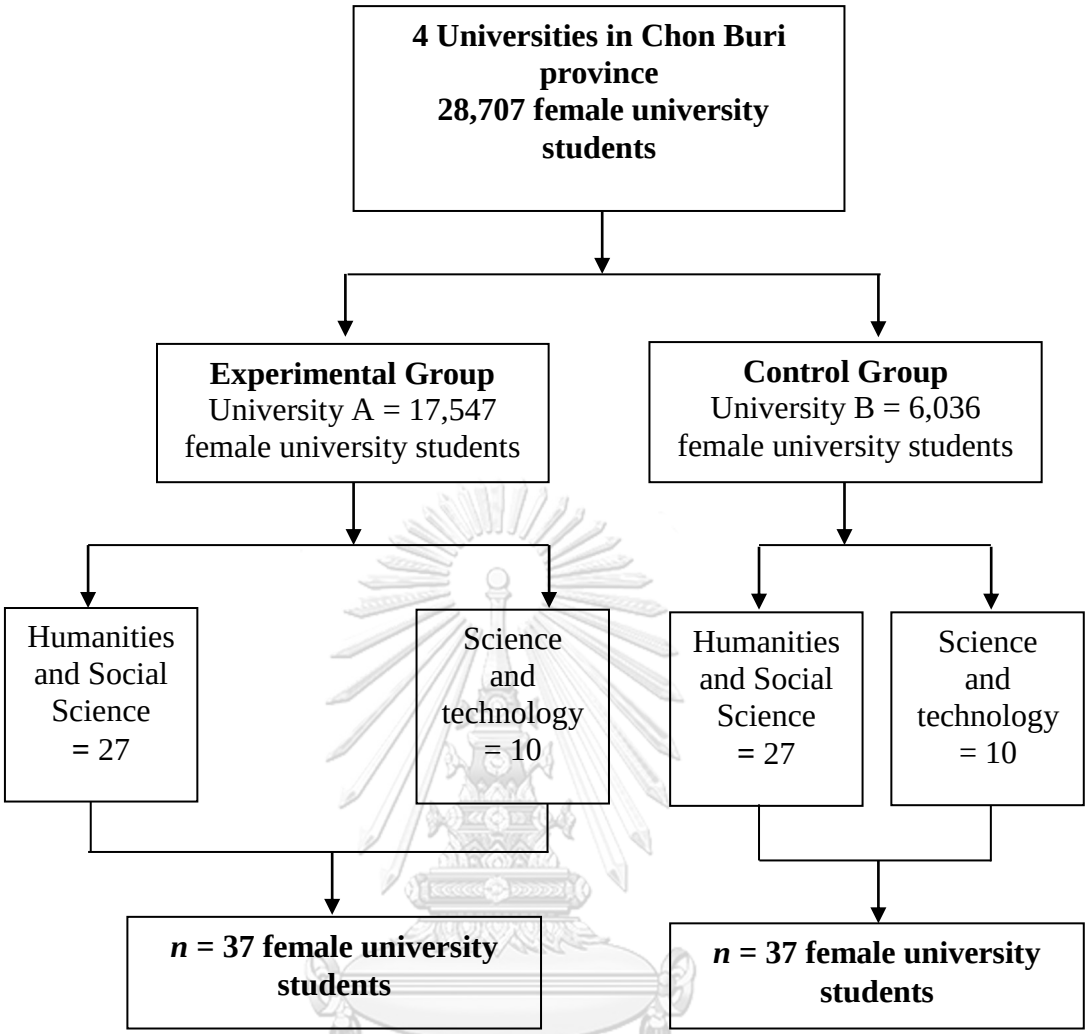


Figure 3.5 Flow diagram of sampling procedure (Phase 2)

Inclusion criteria

1) Thai female university students in their first to fourth year that were both full time and part time undergraduates

2) Agreed by providing written consent

3) Willing to participate for 20 weeks

4) Had a boyfriend on the date they signed the consent form for the study

Exclusion criteria

1) Students who are planning to leave the University for study, internship, or work within 20 weeks

2) Had history of pregnancy or being pregnant

In order to control contamination of participant, 1) quasi-experimental study was used as a design. Two of four government universities were purposively selected for the study based on their similarity in characteristics, i.e., their size, located in urban area, high rate of teenage childbearing. University A was randomly selected to be the intervention group while University B was the comparison group. 2) University A which located 16 kilometers far from University B. 3) this study did not give printing materials or electronic materials of education contents to study participants but applied methods such as lectures, group discussions, edutainment, brainstorming, live modeling, and role-playing.

3.5 Study procedure

This study consisted of 2 phases; Phase 1: Situation analysis and Phase 2: Quasi-experimental research

3.5.1 Study procedure for phase 1: Situation analysis

The survey research in the first phase aimed to gather a situation analysis of health literacy toward behaviors for preventing unintended pregnancy among 418 female university students by using questionnaire.

3.5.2 Study procedure for phase 2: Quasi-experimental research

This study aims to evaluate the effects of "Sex Must Safe" program to health literacy, intention, and practice on condom and emergency contraceptive pill uses among university students in Chon Buri province, Thailand. Three trained research assistants will run the program. The training course takes 3 hours, 6 times a month by the researcher.

3.5.2.1 Research Assistant Training Course

The three research assistants (RA) were fourth-year students of the Public Health faculty who passed the evaluation for becoming researchers. They had been educated in the basic principles of prevention in their third-year course. The training course covered contraceptives, condoms and emergency contraceptive pills, health literacy and self-efficacy theory, teenage pregnancy, risk behavior, teaching skills communication skills, data collection skills, familiarization with the program, and related issues. The course ran one month before the recruitment process. After training, the researcher evaluated the performance of three assistants. The assistant

with the best performance would lead the teaching program while others would have responsibility for data collection in the intervention and comparison group.

3.5.2.2 Intervention training place

All students in the intervention group was appointed for training after enrollment. The “Sex Must Safe” program training was taken place in their university.

3.5.3 Research Instruments

The research instruments of this study were 2 instruments including experimental instrument and data collection instrument as follows:

3.5.3.1 Experimental instrument

The “Sex Must Safe” program is developed based on result and recommendations from phase 1. The program consists of eight activities and was carried out for eight weeks and applied methods such as lectures, group discussions, edutainment, brainstorming, live modeling, and role-playing. The activity period was two hours once a week on Thursday or Friday afternoons. The eight activities were as follows;

Activity 1: introduction to the program, informed consent, and pre-test in both the intervention and the comparison group.

Activity 2: “Knowing about condoms and emergency contraceptive pills” is the activity assigned to the female university students including: 1) physical and reproductive change among female teenagers, 2) knowledge, memorization, understanding of the condom and emergency contraceptive pill’s instruction and its interpretation, 3) knowing how to use condom and contraceptive pills according to the instruction marked on the package of the products, 4) systematic analysis and comparing the differences of the instruction marked on the package of the condom and contraceptive pill, and 5) life model of the use of condom and emergency contraceptive pills. These activities used lecture, group discussion, and live modeling technique.

Activity 3: “Existing solution selection” is the activity assigned to the female university students including: 1) source of information selection and online information inquiry to the health hotline, websites or from Public Health officers, and 2) verification of information regarding the use of condom and emergency contraceptive pills from diverse sources. This activity used edutainment,

brainstorming, and group discussion of participants' access to sources of information and selection and verification of information.

Activity 4: "Communication and creating understanding" is the activity assigned to the female university students including: 1) reading information/ news and textbooks. Moreover, the messages writing, listening to instruction as well as requesting assistance from others to read the messages relating to condom and emergency contraceptive pills, and 2) convince and persuade boyfriend or sexual partner to use condom. This activity used edutainment, role-playing, and group discussion of participants' communication skills, involving reading, writing, and listening to enhance their competence in using condoms and emergency contraceptive pills.

Activity 5: "Realizing self- values" is the activity assigned to the female university students including: 1) rationale and motivational beliefs, feelings, values and disposition which has an effect on the intention to use condom and emergency contraceptive pills, and 2) skills in declining/ avoiding situations which could lead to unprotected sex, or having sex without condom and emergency contraceptive pills by using logical reasoning and analysis on benefits, consequences and impacts. Users can convince others to accept the use of condom and emergency contraceptive pills to prevent pregnancy. This activity used edutainment, role-playing, and group discussion of participants' decision-making skills for choosing appropriate practice in using condoms and emergency contraceptive pills.

Activity 6: "Life's path" is the activity assigned to the female university students including establishing goals and plans for self-practice in using condom and emergency contraceptive pills. Users can achieve the anticipated plan, review their self-practices, be aware of changes and how to manage the consequences. This activity used role-playing and group discussion of participants' self-management for health conditions in using condoms and emergency contraceptive pills.

Activity 7: "Verifying if the information is reliable" is the activity assigned to the female university students including capacity building activity in evaluating information acquired from the media, recheck the accuracy and reliability of the source representing the media by comparing the method of channel of information selection, and assessing information from the message before making

decision to use the condom and emergency contraceptive pills. This activity used brainstorming and group discussion about media and information literacy for the use of condoms and emergency contraceptive pills.

Activity 8: Follow up phase was post - test in both of intervention and comparison group. After the post – test, the intervention and comparison group will receive “handbook of adolescent and youth on preventive of unwanted pregnancy” from researcher, as shown in figure 3.6.

Figure 3.6 Handbook of “Sex Must Safe”

Table 3.3 Activity period

Week	Concept and Theory	Method	Session topic	Intervention group	Comparison group
1			- Information of study - Informed consent	**Pre-test**	**Pre-test**
2-3	- Cognitive Health regarding the use of condom and emergency contraceptive pills -Vicarious experience	Lecture/ group discussion/ live modeling	- Physical and reproductive change among female teenagers. - The situation of teenage pregnancy - Knowledge, memorization, understanding of condom and ECPs's instruction and its interpretation - Knowing how to use condom and ECPs according to the instruction marked on the package of the products and practice to use condom and ECPs.	"Knowing about condoms and emergency contraceptive pills"	-

Table 3.3 Activity period (continuous)

Week	Concept and Theory	Method	Session topic	Intervention group	Comparison group
			- Systematic analysis and compare the differences of the instruction marked on the package of the condom and ECPs. - Life model of the use of condom and ECPs		
4	- Access to health information and health service to promote the use of condom and emergency contraceptive pills -Mastery experience	Edutainment/ brain storm/ Group discussion	- Source of information selection and online information inquiry to the Health hotline, websites or from Public Health officers. - Verification of information regarding the use of condom	"Existing solution selection"	-

Table 3.3 Activity period (continuous)

Week	Concept and Theory	Method	Session topic	Intervention group	Comparison group
			and emergency contraceptive pills from diverse sources		
5	-Communi-cation skill to enhance the competence to use the condom and emergency contraceptive pills -Verbal persuasion	Edutainment/ role play/ group discussion	- Reading information/news and textbooks. Messages writing, listening to instruction as well as requesting assistance from others to read the messages relating to condom and emergency contraceptive pills. -Convince and persuade boyfriend and sexual partner to use condom and emergency contraceptive pills.	"Communi-cation and creating understanding"	-

Table 3.3 Activity period (continuous)

Week	Concept and Theory	Method	Session topic	Intervention group	Comparison group
6	-Decision skill in choosing appropriate practice in using condom and emergency contraceptive pills -Decision skill	Edutainment/ role play/ group discussion	- Rationale and motivational beliefs, feelings, values and disposition which has an effect on the intention to use condom and emergency contraceptive pills. - Skills in declining / avoiding situations which could lead to unprotected sex, or having sex without condom and emergency contraceptive pills by using logical reasoning and analysis on benefits, consequences and impacts.	"Realizing self- values"	-

Table 3.3 Activity period (continuous)

Week	Concept and Theory	Method	Session topic	Intervention group	Comparison group
			Users can convince others to accept the use of condom and emergency contraceptive pills to prevent pregnancy.		
7	- Self-management for health condition for using condom and emergency contraceptive pills -Vicarious experience	Role play/ group discussion	- Establishing goals and plans for self-practice in using condom and emergency contraceptive pills. Users can achieve the anticipated plan, review of self-practices, be aware of changes and how to manage the consequences.	"Life's path"	-

Table 3.3 Activity period (continuous)

Week	Concept and Theory	Method	Session topic	Intervention group	Comparison group
8	-Media and information literacy for the use of condom and emergency contraceptive pill -Emotional arousal	Edutainment/ brain storm/ Group discussion	- Capacity building activity in evaluating information acquired from the media, recheck the accuracy and reliability of the source representing the media by comparing the method of channel of information selection, and assessing information from the message before making decision to use condom and emergency contraceptive pills.	"Verifying if the information is reliable"	-

Table 3.3 Activity period (continuous)

Week	Concept and Theory	Method	Session topic	Intervention group	Comparison group
8				**immediate assessment**	**immediate assessment**
20	Follow up		- The intervention and comparison group will receive handbook of adolescent and youth on prevention of unwanted pregnancy"	**Post-test**	**Post-test**

3.5.3.2 Data collection instrument

The questionnaires were used as tools for data collection as follows:

Phase 1: The self-administered questionnaire was specifically designed as a tool for this study. The questionnaire consists of 4 parts, as follows:

Part 1: Characteristics factors (10 questions)

There were 10 questions in this part. The questionnaire included characteristics factors, i.e., age, grade point average, parents' marital status, parents' relationship, current residence type, and average income per month.

Part 2 Aspect and pattern of sexual behavior (15 questions)

There were 15 questions in this part. The questionnaire included pattern of sexual behavior for example, those related to having a boyfriend, hugging and kissing experiences and sexual experiences.

Part 3 Health literacy for pregnancy prevention (35 questions)

Health literacy for pregnancy prevention questions were adapted from the health literacy scale for unwanted pregnancy prevention among Thai female

adolescents created by the Ministry of Public Health [104] and supported by the evolving concept of health literacy of Nutbeam [60]. There were 35 questions in this part. The questions included 1) access to health information and health services to prevent unintended pregnancy, 2) cognitive health to prevent unintended pregnancy, 3) communication skills in enhancing skills to prevent unintended pregnancy, 4) decision-making skills in choosing appropriate practice to prevent unintended pregnancy, 5) self-management to prevent unintended pregnancy, and 6) media and information literacy to prevent unintended pregnancy, which included both positive and negative statements. The four categories Likert's scale consisted of strongly agree, agree, disagree, strongly disagree was used for responding each statement and the scoring is shown in Table 3.4.

Table 3.4 Health literacy scoring for positive and negative statements

Positive Statement		**Negative Statement**	
choice	**score**	**choice**	**score**
Strongly agree	3	Strongly agree	0
Agree	2	Agree	1
Disagree	1	Disagree	2
Strongly Disagree	0	Strongly Disagree	3

The score from each item was summed up to classify by the level of health literacy based on health literacy scale for unwanted pregnancy prevention among Thai female adolescents created by the Ministry of Public Health [104]. The total score of female university students' health literacy was classified into 3 levels including;

Poor 35-62 points (< 60%)

Moderate 63-83 points (60-79%)

High sufficiency 84-105 points (≥ 80%)

Part 4 Behavior to prevent unintended pregnancy (18 questions)

Behavior to prevent unintended pregnancy questions were adapted from the health literacy scale for unwanted pregnancy prevention among Thai female adolescents created by the Ministry of Public Health [104]. There are 18 questions

included avoiding a risky situation leading to a sexual intercourse, skills to avoid a risky situation leading to sexual intercourse, and skills to prevent pregnancy, which contains both positive and negative statements. The five categories Likert's scale was used for responsding to each statement and the scoring was shown in Table 3.5.

Table 3.5 Behavior to prevent unintended pregnancy scoring for positive and negative statements

Positive Statement		**Negative Statement**	
choice	**score**	**choice**	**score**
Every time	4	Every time	0
Often	3	Often	1
Sometimes	2	Sometimes	2
Seldom	1	Seldom	3
Never	0	Never	4

The score from each item was summed up to classify by the level of behavior to prevent unintended pregnancy based on health literacy scale for unwanted pregnancy prevention among Thai female adolescents created by the Ministry of Public Health [104]. The total score of university students' behavior to prevent unintended pregnancy was classified into 3 levels which are;

Poor 18-42 points (< 60%)

Moderate 43-57 points (60-79%)

High sufficiency 58-72 points (≥ 80%)

Phase 2: Self-administered questionnaire was used to collect data for pre-test, post-test, and follow-up. The self-administered questionnaire was developed based on the information in the situation analysis. The questionnaire consists of 9 parts and total questions were 121.

Part 1 Socio demographic characteristics (7 questions)

There were 7 questions in this part. The questions included age, grade point average, parents' marital status, parents' relationship, current residence type, and average income per month.

Part 2 Sexual activity (15 questions)

There are 15 questions in this part. The questions included general information i.e., having a boyfriend/ temporary partners, having sexual experiences, drinks containing alcohol/ substance abuse before having sexual intercourse, and experience using condom and emergency contraceptive pills..

Part 3 Knowledge of condom and emergency contraceptive pills (12 questions)

Knowledge of condom and emergency contraceptive pills questions were adapted mainly from the following two sources: 1) *Use of Emergency Contraceptive Pills and Condoms by College Students: A Survey* [83], and 2) *Intention to Use Condoms among University Students in Nakhon Pathom Province, Thailand* [105]. The questions asked about the understanding on basic knowledge and how to use condom and emergency contraceptive pills correctly. Total scores of knowledge were 12 points that means, correct answer was scored 1 point, incorrect answer and not sure was scored 0 point. The range of score was 0-12 points. The total score of students' knowledge was classified into 3 levels according to bloom's cut off point [106].

Poor	0-6	points (< 60%)
Moderate	7-9	points (60-79%)
High	10-12	points (≥ 80%)

Part 4 Attitude towards condom and emergency contraceptive pills use (12 questions)

Attitude towards condom and emergency contraceptive pills use questions were adapted mainly from the following two sources: 1) *Asking Young People About Sexual and Reproductive Behaviors: Illustrative Questionnaire for Interview Surveys with Young People* [107], and 2) *Use of Emergency Contraceptive Pills and Condoms by College Students: A Survey* [83]. There were 12 questions which were used to access attitude towards condom and emergency contraceptive pills that included both positive and negative statements. The scale of the variable was divided using five categories Likert's scale which consisted of strongly agree, agree, not sure, disagree, and strongly disagree. The scoring is shown in Table 3.6.

Table 3.6 Attitude scoring for positive and negative statements

Positive Statement		**Negative Statement**	
choice	Score	choice	score
Strongly agree	5	Strongly agree	1
Agree	4	Agree	2
Not sure	3	Not sure	3
Disagree	2	Disagree	4
Strongly disagree	1	Strongly disagree	5

The score from each item was summed up, the range of score was 12-60 points. After that, the female university students' attitude score was classified into 3 levels by using Mean ± standard deviation (SD) (30.57 ± 4.22). The score less than and equal to Mean - SD referred to negative attitude. The score within Mean - SD and Mean + SD referred to moderate attitude. The score more than and equal to Mean + SD referred to positive attitude.

Negative attitude ≤ 27 points (≤ Mean - SD)

Moderate attitude 28-35 points (Mean ± SD)

Positive attitude ≥ 36 points (≥ Mean + SD)

Part 5 Perceived self-efficacies and expectation on condom and emergency contraceptive pills use (12 questions)

Perceived self-efficacies and expectation on condom and emergency contraceptive pills use questions were adapted mainly from the following two sources: 1) *Development and Validation of a Condom Self-efficacy Scale for College Students* [108], and 2) *Development of a Condom Use Self-efficacy Scale for Undergraduate Students* [109]. There were 12 questions which included both positive and negative statements. The scale of variable was divided using five categories Likert's scale which consists of strongly agree, agree, not sure, disagree, and strongly disagree. The scoring is shown in Table 3.7.

Table 3.7 Perceived self-efficacies and expectation scoring for positive and negative statements

Positive Statement		**Negative Statement**	
choice	score	choice	score
Strongly agree	4	Strongly agree	0
Agree	3	Agree	1
Not sure	2	Not sure	2
Disagree	1	Disagree	3
Strongly disagree	0	Strongly disagree	4

The score from each item was summed up, the range of score was 0-48 points. After that, the female university students' perceived self-efficacies and expectation score was classified into 3 levels by using Mean ± standard deviation (SD) (31.88 ± 5.46). The score less than and equal to Mean - SD referred to poor. The score within Mean - SD and Mean + SD referred to moderate. The score more than and equal to Mean + SD referred to high sufficiency.

Poor ≤ 27 points (≤ Mean - SD)

Moderate 28-32 points (Mean ± SD)

High sufficiency ≥ 33 points (≥ Mean + SD)

Part 6 Social and environmental factors (Peer Norms and social media influence, and accessibility to contraceptive (17 questions)

Social and environmental factors questions were adapted mainly from the following two sources: 1) *Use of emergency contraceptive pills and condoms by college students: A Survey* [83], and 2) *Intention to use condom among universities students in Nakhon Pathom province, Thailand* [110]. There were 17 questions in this part. The questions included peer norms influence, social media influence, and accessibility to condom and emergency contraceptive pills, which included both positive and negative statements. The scale of variable was divided using five categories Likert's scale which consists of extremely agree, agree, not sure, disagree, and extremely disagree. The scoring is shown in Table 3.8.

Table 3.8 Social and environmental scoring for positive and negative statements

Positive Statement		**Negative Statement**	
choice	**score**	**choice**	**score**
Strongly agree	5	Strongly agree	1
Agree	4	Agree	2
Not sure	3	Not sure	3
Disagree	2	Disagree	4
Strongly disagree	1	Strongly disagree	5

The score from each item was summed up to classify the level of social and environmental factors based on *Intention to use condom among universities students in Nakhon Pathom province, Thailand* [110]. The total score of female university students' behavior to prevent unintended pregnancy was classified into 3 levels including;

Poor 17-50 points (< 60%)

Moderate 51-67 points (60-79%)

High 68-85 points (≥ 80%)

Part 7 Health literacy on condom and emergency contraceptive pills use (38 questions)

Health literacy on condom and emergency contraceptive pills use questions were adapted mainly from the health literacy scale for unwanted pregnancy prevention among Thai female adolescents created by the Ministry of Public Health [104] and supported by the evolving concept of health literacy of Nutbeam [60]. There were 38 questions in this part. The questions included; 1) access to health information and health services to prevent unintended pregnancy, 2) cognitive health to prevent unintended pregnancy, 3) communication skills in enhancing skills to prevent unintended pregnancy, 4) decision-making skills in choosing appropriate practice to prevent unintended pregnancy, 5) self-management to prevent unintended pregnancy, and 6) media and information literacy to prevent unintended pregnancy, which include both positive and negative statements. The scale of variable is divided

using five categories Likert's scale which consists of extremely agree, quite agree, not sure, disagree. The scoring is shown in Table 3.9.

Table 3.9 Health literacy scoring for positive and negative statements

Positive Statement		**Negative Statement**	
choice	**score**	**choice**	**score**
Strongly agree	4	Extremely agree	0
Agree	3	Agree	1
Not sure	2	Not sure	2
Disagree	1	Disagree	3
Strongly disagree	0	Extremely disagree	4

The score from each item was summed up to classify the level of health literacy by health literacy scale for unwanted pregnancy prevention among Thai female adolescents created by the Ministry of Public Health [104]. The total score of female university students' health literacy was classified into 3 levels;

Poor 0-89 points (<60%)

Moderate 90-120 points (60-79%)

High 121-152 points (≥ 80%)

Part 8 Intention on condom and emergency contraceptive pills use (6 questions)

Intention on condom and emergency contraceptive pills use questions were adapted mainly from the following two sources: 1) *Predictors of AIDS-preventive behavioral intention among adult heterosexual at risk for HIV-infection: extending current models and measures* [111] and, 2) *Translate to Thai language from predictors of condom use among adolescent Thai vocational students* [112]. There were 6 questions that were used to access the intention on condom and emergency contraceptive pills use, which contains both positive and negative statements. The scale of variable was divided using five categories Likert's scale and the scoring is shown in Table 3.10.

Table 3.10 Intention scoring for positive and negative statements

Positive Statement		Negative Statement	
choice	**score**	**choice**	**score**
Very likely	4	Very likely	0
likely	3	likely	1
Neutral	2	Neutral	2
Unlikely	1	Unlikely	3
Very unlikely	0	Very unlikely	4

The score from each item was summed up and the range of score was 0-48 points. After that, the female university students' intention on condom and emergency contraceptive pills use score was classified into 3 levels by using Mean ± standard deviation (SD) (18.36 ± 3.97). The score less than and equal to Mean - SD is referred to as poor. The score within Mean - SD and Mean + SD is referred to as moderate. The score more than and equal to Mean + SD is referred to as high sufficiency.

Insufficiency ≤ 14 points (≤ Mean - SD)

Sufficiency 15-20 points (Mean ± SD)

High sufficiency ≥ 21 points (≥ Mean + SD)

Part 9 Practice for condom and emergency contraceptive pill use (2 items)

Practice for condom and emergency contraceptive pill use questions were adapted mainly from adolescent dual method use: relevant attitudes, normative beliefs and self-efficacy [113]. There were 2 questions used to access the practice on condom and emergency contraceptive pills. The scale of variable was divided using five categories Likert's scale and the scoring is s shown in Table 3.11.

Table 3.11 Practice scores for positive and negative statements

choice	score
Always	5
Very Often	4
Sometimes	3
Rarely	2
Never	1

The score from each item was summed up. After that, the female university students' practice for condom and emergency contraceptive pill use score was classified into 2 levels. The score less than 10 was referred to as inappropriate practice. The score more than 10 was referred to as appropriate practice because the female university students' practice must use condom and not use ECPs for preventing HIV/ AIDS and avoiding side effect from ECPs.

3.6 Validity and Reliability

3.6.1 Validity test of the instruments

The validity testing of the questionnaire was done by five experts in the area of public health and adolescent sexual behavior. In this step, content validity was tested, and then the questionnaire was corrected accordingly if the items-objective congruence (IOC) index of the question was less than 0.7. The IOC index of questionnaires in phase 1 and phase 2 were 0.72, and 0.78, respectively.

3.6.2 Reliability test of the instruments

After the questionnaire was revised, to test the reliability of the questionnaire, a pilot study was conducted with a sample of 30 students who had similar characteristics to the respondents. An internal consistency reliability and a Cronbach coefficient alpha were calculated and the results were shown as follows:

Phase 1: The Cronbach's alpha [114] for the health literacy of unintended pregnancy preventive behavior was 0.73, whereas that of behavior to prevent unintended pregnancy was 0.88; these results were considered acceptable.

Phase 2 : The Kuder-Richardson 20 (KR-20) [115] was 0.71 for knowledge of condoms and emergency contraceptive pills. The Cronbach's alpha [114] was 0.72 for attitudes toward condoms and emergency contraceptive pills, 0.71 for perceived self-efficacies and expectation on condom and emergency contraceptive pills use, 0.70 for social and environmental factors, 0.90 for health literacy on condom and emergency contraceptive pills use, and 0.71 for intentions regarding use of condoms and emergency contraceptive pills. These results were considered acceptable. This study was not to find reliability of the practice for condom and emergency contraceptive pill use because practice is a fact.

3.7 Data analysis

After collecting data through questionnaire and checking for completeness of the answers, the data analysis was carried out using SPSS version 22 (Chulalongkorn university licensed).

3.7.1 Descriptive analysis

The data was quantified as the frequency, percentage, mean, minimum, maximum, and standard deviation was used for analysis of socio demographic characteristics, sexual activity factors, knowledge of condoms and emergency contraceptive pills, attitudes toward the use of condoms and emergency contraceptive pills, perceived self-efficacy of contraceptive use, expectation on contraceptive use, social and environmental factors, health literacy for pregnancy prevention, and intention or practice with regards to the use of condoms and emergency contraceptive pills data.

3.7.2 Statistical analysis

Phase 2

1) Socio demographic differences between the intervention group and comparison group were tested using chi-square, Fisher exact tests.

2) Comparison health literacy, intention, and practice in the intervention group and comparison group at before, after, and follow-up 3 months after implementation of the program. Normality was tested for health literacy measured at baseline, week 8 and 20 by Shapiro-Wilk test statistic. Wilcoxon signed ranks test was used for comparing the score when the scores were non-normal

distribution by median (interquartile range, IQR), and *p*-value of total scores in each subscale. Paired samples t-test was used for comparing the score when the scores were normally distributed by mean (95% confident interval, 95% CI) and standard deviation of total scores in each subscale.

3) Comparison health literacy, intention, and practice between the intervention group and comparison group at before, after, and follow-up 3 months after implementation of the program. Normality was tested for health literacy measured at baseline, week 8 and 20 by Shapiro-Wilk test statistic. Man-Whitney test was used for comparing the score when the scores were non-normal distribution by median (interquartile range, IQR), and *p*-value of total scores in each subscale. Independent sample t-test was used for comparing the score when the scores were normally distributed by mean (95% confident interval, 95% CI) and standard deviation of total scores in each subscale. Generalized Estimating Equations (GEE) were used for analyzing the overall program between intervention group and comparison group because the GEE were used for analyzing repeated data and were used for irregularly-timed by used. This study used a Caucasian family for the normality outcome or igaussian family for non normal distribution and an identity link for the scale outcomes as link functions, and the working correlation matrix was selected to be unstructured. A mean difference with 95% confidence interval (95% CI) to assess the effects of the intervention.

Statistical significance was considered at p-value ≤ 0.05.

3.8 Ethical Consideration

3.8.1 Ethical approval was obtained from the Ethics Review Committee for Human Research Subjects, Burapha University (certified code: Hu 029-2560 in phase 1, and Hu 114-2560 in phase 2).

3.8.2 Informed consent and information sheets were provided for each target group.

3.8.3 The participants obtained information about the research objectives, methods and benefits prior to the questionnaires distribution. They were asked to

decide on whether to participate or not in the study and this ensured the right of self-determination and autonomy.

3.8.4 The participant was also informed about their rights to stop at any point of time while in the self-report questionnaires without any troubles brought back to them.

3.8.5 The code name was used to protect the subject privacy and the data was kept in confidential.

CHAPTER IV
RESEARCH RESULTS

The study was designed to evaluate the effects of the "Sex Must Safe" program on health literacy intention and practice regarding condom and emergency contraceptive pill uses among female university students in Chon Buri province, Thailand. This chapter presents the results obtained from the data analysis of this study. The results are presented in 2 parts, the first part is the results from phase 1: Situation analysis of health literacy towards behaviors for preventing unintended pregnancy among female university students and the second part is the results from phase 2: Intervention phase with the "Sex Must Safe" program on health literacy, intention, and practice regarding condom and ECPs uses among female university students. The results are presented in the following order:

4.1 Phase 1: Situation analysis of health literacy to use contraceptive among female university students in Chon Buri province, Thailand.

4.1.1 Initial survey

The survey questionnaires were distributed to 418 first to fourth year female university students from 16 faculties. All the questionnaires were completed and returned, and were all included in the analysis.

4.1.1.1 Socio demographic characteristics

The mean age of respondents was 20 years, with a standard deviation of 1.3 year. Seventy-two percent of the respondents had grade point averages higher than 2.5. Around 25% reported that their parents were separated, and the majority of respondents had a good relationship with their parents. Around 75% lived outside of university dormitories. Their average income was 7,348 baht per month. Sixty eight percent reported that their monthly allowance was adequate. The results are shown in Table 4.1.

Table 4.1 Numbers and Percentages for the Participants' Socio demographic Characteristics

Socio demographic characteristic	Number	Percentage
Total	**418**	**100**
Age		
≤ 20	247	59.1
> 20	171	40.9
$\bar{x}$ = 20.0, Standard deviation [SD] = 1.3, Min = 18, Max = 24		
Grade average point		
< 2.5	117	28.0
≥ 2.5	301	72.0
Parent marital status		
Married	310	74.2
Separated	35	8.4
Divorced	48	11.5
Widowed	25	5.9
Relationship with parents		
Good	393	94.0
Poor	25	6.0
Current residence type		
Dormitory outside the university	312	74.6
Dormitory in the university	106	25.4
Average income per month (baht)		
$\bar{x}$ = 7,348.8, SD = 3,482.7, Min = 2,000.0, Max = 30,000.0		
Monthly allowance		
Adequate, and enough for saving	78	18.7
Adequate	284	67.9
Inadequate	56	13.4

4.1.1.2 Sexual activity

Around 42% of the respondents had a lover and 4.8% stay together, the majority did not have temporary partners. Half of the respondents had hugging and kissing experience; 30.9% had experienced sexual intercourse, and all used contraception. In addition, 68.2% had coitus interruptus; 12.4% did not use a condom, and 24.0% used ECPs. Half of the respondents had consumed alcohol before having sex. The majority did not use substance before having sex. Half of the respondents chose by themselves to use condoms or contraceptive pills to prevent pregnancy and majority of them could easily get access to condoms and contraceptive pills. Seventy-seven percent of the respondents consulted their boyfriend and searched the internet for information on preventing pregnancy. The results are shown in Table 4.2.

Table 4.2 Numbers and Percentages for the Participants' Sexual Activities

Sexual activity	Number	Percentage
Total	**418**	**100**
Having a lover		
Yes	175	41.9
Yes, stay together	20	4.8
Yes, did not stay together	155	37.1
No	243	58.1
Having a temporary partners (Kik)		
Yes	8	1.9
No	410	98.1
Hugging and kissing experience		
Yes	232	55.5
No	186	44.5
Previous sexual intercourse (vaginal)		
Yes	129	30.9
No	289	69.1

Table 4.2 Numbers and Percentages for the Participants' Sexual Activities (continues)

Sexual activity	Number	Percentage
Total	**129**	**100**
Contraceptive method use		
Condom		
Yes	113	87.6
No	16	12.4
Coitus interruptus		
Yes	41	68.2
No	88	31.8
Oral contraceptive pills (21/ 28 pills)		
Yes	39	30.2
No	90	69.8
Emergency contraceptive pills		
Yes	31	24.0
No	98	76.0
Injectable contraceptives		
Yes	2	1.6
No	127	98.4
Person to provide medication/ equipment for preventing pregnancy		
Themselves	71	55.0
Boyfriend	56	43.4
Friends	2	1.6
Medication / equipment for preventing pregnancy is easily accessible		
Yes	121	93.8
No	8	6.2

Table 4.2 Numbers and Percentages for the Participants' Sexual Activity (continues)

Sexual activity	Number	Percentage
Total	**129**	**100**
Person to consult to prevent pregnancy		
Internet	50	38.8
Boyfriend	49	38.0
Friend	20	15.5
Others (parents, healthcare providers, and other)	10	7.7
Alcohol consumption before having sex		
Yes	70	54.3
No	59	45.7
Using substance before having sex		
Yes	5	3.9
No	124	96.1

4.1.1.3 Health literacy in use of condoms and ECPs

Health literacy in use of condoms and ECPs refer to the cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand and use information in ways which promote condom and emergency contraceptive pills use. The results could be divided into six parts, in the following orders;

1) Access to health information and health services to prevent unintended pregnancy

The items exploring respondents' access to health information and health services to prevent unintended pregnancy included 4 positive statements and 1 negative statement. As shown in Table 4.3, the total score was 15 points. Nearly half of the respondents answered *strongly agree* to the following two statements; 1) When you need to obtain information about preventing unintended pregnancy, you are able to search for accurate and up-to-date information from reliable sources (41.1%), 2) you have verified the accuracy of information about preventing unintended pregnancy

to confirm your own understanding (40.7%). Nearly half of the respondents answered *strongly disagree*, which was intended to be believed information about preventing unintended pregnancy even though it has not verified the reliability of the source (40.4%).

Table 4.3 Numbers and Percentages for the access to health information and health services to prevent unintended pregnancy

Access to health information and health services to prevent unintended pregnancy	**Level**			
	Strongly agree	**Agree**	**Disagree**	**Strongly Disagree**
1. If you wish to access information about preventing unintended pregnancy, you can select the appropriate source of information immediately.	140 (33.5)	221 (52.9)	53 (12.6)	4 (1.0)
2. You have been taught by experts about selecting reliable sources of information about preventing unintended pregnancy.	134 (32.1)	230 (55.0)	44 (10.5)	10 (2.4)
3. When you need to obtain information about preventing unintended pregnancy, you are able to search for accurate and up-to-date information from reliable sources.	172 (41.1)	193 (46.2)	43 (10.3)	10 (2.4)
4. You tend to believe information about preventing unintended pregnancy even though you have not verified the reliability of the source.*	13 (3.1)	51 (12.2)	185 (44.3)	169 (40.4)

*Represents negative statement

Table 4.3 Numbers and Percentages for the access to health information and health services to prevent unintended pregnancy (Continuous)

Access to health information and health services to prevent unintended pregnancy	Level			
	Strongly agree	**Agree**	**Disagree**	**Strongly Disagree**
5. You have verified the accuracy of information about preventing unintended pregnancy to confirm your own understanding.	170 (40.7)	203 (48.6)	41 (9.7)	4 (1.0)

*Represents negative statement

Level of access to health information and health services to prevent unintended pregnancy is summarized in Table 4.4. Scores for access to health information and health services to prevent unintended pregnancy range from 0 to 15, with a cut-off point based on the Ministry of Public Health's health literacy scale for unwanted pregnancy prevention among Thai female adolescents [104]. The scale classifies respondents into three groups ($\geq$ 80%, 60% - 79%, < 60%). The mean score was 9.69 (out of a possible 15 points).

As shown in Table 4.4, 21.5% of respondents lacked sufficient access to health information and health services to prevent unintended pregnancy; 58.6% of the respondents had moderate access to health information and health services to prevent unintended pregnancy, and 19.9% of respondents scored high sufficiency on access to health information and health services to prevent unintended pregnancy. The results indicated that these respondents have moderate access to health information and health services to prevent unintended pregnancy.

Table 4.4 Level of access to health information and health services to prevent unintended pregnancy

Access to health information and health services to prevent unintended pregnancy level	**Number (n = 418)**	**Percentage**
Poor (0-8 scores)	90	21.5
Moderate (9-11 scores)	245	58.6
High sufficiency (12-15 scores)	83	19.9
$\bar{x}$ = 9.69, *SD* = 1.827, *Min* = 4, *Max* = 15		

2) Cognitive health to prevent unintended pregnancy

The items exploring cognitive health to prevent unintended pregnancy included 7 positive statements and 3 negative statements. As shown in Table 4.5, the maximum score was 30 points. The respondents had incorrect understanding of the cognitive health to prevent unintended pregnancy which are 1) Coitus interruptus which is the most efficient method of preventing pregnancy (66.9%). 2) Counting the safe period (7 days before and 7 days after) is an efficient method of preventing pregnancy (60.5%). 3) Contraceptive medication can be purchased at a convenience store (34.7%). Moreover, it was found that respondents had strong level of understanding for the top three categories of cognitive health to prevent unintended pregnancy which are as follows 1) Procreation results from the combination of egg and sperm, leading eventually to pregnancy (96.9%). 2) While being alone with a friend of the opposite sex, women should refrain from intimacy, and men should respect women (94.3%). 3) Pregnancy prevention methods can be found on the internet (92.5%).

Table 4.5 Numbers and Percentages for the cognitive health to prevent unintended pregnancy

Cognitive health to prevent unintended pregnancy	Level			
	Strongly agree	**Agree**	**Disagree**	**Strongly Disagree**
1. Procreation results from the combination of egg and sperm, leading eventually to pregnancy.	318 (76.1)	87 (20.8)	13 (3.1)	0 (0.0)
2. Contraceptive medication can be purchased at a convenience store*	48 (11.5)	97 (23.2)	133 (31.8)	140 (33.5)
3. Alcoholic drink consumption exposes you to the risk of unprotected sex.	193 (46.2)	186 (44.5)	33 (7.9)	6 (1.4)
4. When a condom has slipped or broken during sexual intercourse, it is advisable to take the emergency contraceptive pill immediately to prevent pregnancy.	250 (59.8)	113 (27.0)	45 (10.8)	10 (2.4)
5. While being alone with a friend of the opposite sex, women should refrain from intimacy, and men should respect women.	319 (76.4)	75 (17.9)	23 (5.5)	1 (0.2)
6. Getting pregnant while attending university has an adverse effect on academic results	295 (70.6)	91 (21.8)	26 (6.2)	6 (1.4)
7. Pregnancy prevention methods can be found on the internet.	205 (49.0)	182 (43.5)	28 (6.7)	3 (0.8)

*Represents negative statement

Table 4.5 Numbers and Percentages for the cognitive health to prevent unintended pregnancy (continue)

Cognitive health to prevent unintended pregnancy	Level			
	Strongly agree	**Agree**	**Disagree**	**Strongly Disagree**
8. A condom is the best method of preventing pregnancy.	149 (35.6)	199 (47.6)	56 (13.4)	14 (3.4)
9. Coitus interruptus is the most efficient method of preventing pregnancy.*	159 (38.0)	121 (28.9)	99 (23.7)	39 (9.4)
10. Counting the safe period (7 days before and 7 days after) is an efficient method of preventing pregnancy.*	117 (28.0)	136 (32.5)	121 (28.9)	44 (10.6)

*Represents negative statement

As shown in Table 4.6, scores for cognitive health to prevent unintended pregnancy range from 0 to 30; the cut-off point is based on the Ministry of Public Health's health literacy scale for unwanted pregnancy prevention among Thai female adolescents [104]. The mean score was 22.27 (out of a possible 30 points).

As shown in Table 4.6, 8.3% of the respondents had insufficient cognitive health to prevent unintended pregnancy; 52.9% had moderate cognitive health to prevent unintended pregnancy, and 38.8% scored high sufficiency in this regard. These results indicate that these respondents are at a moderate level in cognitive health to prevent unintended pregnancy.

Table 4.6 Level of cognitive health to prevent unintended pregnancy

Cognitive health to prevent unintended pregnancy level	**Number (n = 418)**	**Percentage**
Poor (0-17scores)	35	8.3
Moderate (18-23scores)	221	52.9
High sufficiency (24-30 scores)	162	38.8
$\bar{x}$ = 22.27, *SD* = 3.475, *Min* = 11, *Max* = 30		

3) Communication skills for preventing unintended pregnancy

The items exploring respondents' communication skills for preventing unintended pregnancy included 4 positive statements and 1 negative statement. As shown in Table 4.7, the maximum score was 15 points. This study indicates that the respondents agreed that they did not have strong understanding of the communication skills for preventing unintended pregnancy (55.1%) were in the category as follows : You do not quite understand when reading material about preventing unintended pregnancy (55.1%). It was also found that the respondents had strong understanding regarding the communication skills for preventing unintended pregnancy which are 1) you can convince others of the significance of abstinence in preventing pregnancy (83.0%). 2) you speak openly with friends and try to make others understand about pregnancy prevention in relation to taking the contraceptive pill; use of condoms; avoid sexual intercourse -to prevent unintended pregnancy (76.6%). 3) You can convey information about preventing unintended pregnancy through speaking and writing to make others understand (73.9%).

Table 4.7 Numbers and Percentages for the communication skills in enhancing skills to prevent unintended pregnancy

Communication skills in enhancing skills to prevent unintended pregnancy	Level			
	Strongly agree	Agree	Disagree	Strongly Disagree
1. You do not quite understand when reading material about preventing unintended pregnancy.*	157 (37.6)	73 (17.5)	145 (34.7)	43 (10.2)
2. You speak openly with friends and try to make others understand about pregnancy prevention in relation to taking the contraceptive pill; use of condoms; avoid sexual intercourse for prevent unintended pregnancy.	139 (33.3)	181 (43.3)	61 (14.6)	37 (8.8)
3. You can convey information about preventing unintended pregnancy through speaking and writing to make others understand.	81 (19.4)	228 (54.5)	73 (17.5)	36 (8.6)
4. You can convince others to accept pregnancy prevention practice.	81 (19.4)	217 (51.9)	89 (21.3)	31 (7.4)
5. You can convince others of the significance of abstinence in preventing pregnancy	138 (33.0)	209 (50.0)	49 (11.7)	22 (5.3)

*Represents negative statement

Level of communication skills in enhancing skills to prevent unintended pregnancy is summarized in Table 4.8. The communication skills scores range from 0 to 15; the cut-off point is again based on the Ministry of Public Health's health literacy scale [104]. Mean communication skills score was 9.62 (out of a possible 15 points).

As shown in Table 4.8, 26.3% of respondents had insufficient communication skills in this regard; 47.4% had moderate communication skills, and 26.3% had high sufficiency. The results indicate that these respondents' communication skills are moderate for the stated purpose.

Table 4.8 Level of communication skills in enhancing skills to prevent unintended pregnancy

Communication skills in enhancing skills to prevent unintended pregnancy level	**Number (n = 418)**	**Percentage**
Poor (0-8 scores)	110	26.3
Moderate (9-11 scores)	198	47.4
High sufficiency (12-15 scores)	110	26.3
$\bar{x}$ = 9.62, *SD* = 2.685, *Min* = 2, *Max* = 15		

4) Decision-making skills in choosing appropriate practices to prevent unintended pregnancy

The items exploring respondents' decision-making skills in choosing appropriate practices to prevent unintended pregnancy included 3 positive statements and 2 negative statements. As shown in Table 4.9, the maximum score was 15 points.

The study showed that the respondents had unclear understanding in decision-making skills in choosing appropriate practices to prevent unintended pregnancy in the following categories 1) if friend of the opposite sex/ lover ask to hug/kiss your cheek, you would allow as you see it as a friendly act (79.9%). 2) when your boyfriend/lover asks you to have sex, you agree (73.2%). On the other hand, it was found that the decision-making skills in choosing appropriate practices to prevent unintended pregnancy that was strongly clear by the respondents was 1) if a friend of the opposite sex/ lover asked you to drink alcohol or any intoxicating drink, you would refuse, as it may lead to unprotected sex and pregnancy (71.8%). 2) If your boyfriend asked you out alone for a date, you would refuse and offer an explanation (68.2%). 3) If a friend of the opposite sex asked to stay overnight with you, you would refuse (53.1%).

Table 4. 9 Numbers and Percentages for the decision-making skills in choosing appropriate practice to prevent unintended pregnancy

Decision-making skills in choosing appropriate practice to prevent unintended pregnancy	Level			
	Strongly agree	**Agree**	**Disagree**	**Strongly Disagree**
1. When your boyfriend/lover asks you to have sex, you agree.*	193 (46.2)	113 (27.0)	81 (19.4)	31 (7.4)
2. If a friend of the opposite sex asked to stay overnight with you, you would refuse.	127 (30.4)	95 (22.7)	128 (30.6)	68 (16.3)
3. If your boyfriend asked you out alone for a date, you would refuse and offer an explanation.	151 (36.1)	134 (32.1)	99 (23.7)	34 (8.1)
4. If a friend of the opposite sex/ lover asked you to drink alcohol or any intoxicating drink, you would refuse, as it may lead to unprotected sex and pregnancy.	171 (40.9)	129 (30.9)	86 (20.6)	32 (7.6)
5. If friend of the opposite sex/ lover ask to hug/kiss your cheek, you would allow as you see it as a friendly act.*	268 (64.1)	66 (15.8)	55 (13.2)	29 (6.9)

*Represents negative statement

Level of decision-making skills in choosing appropriate practices to prevent unintended pregnancy is summarized in Table 4.10. Scores range from 0 to 15, with a cut-off point based on the Ministry of Public Health scale [104]. The mean score in this regard was 10.17 (out of a possible 15 points).

As shown in Table 4.10, 29.9% of the respondents lacked sufficient decision-making skills to choose appropriate practices for preventing unintended pregnancy; 34.7% had moderate skills in this regard, and 35.4% of respondents had

high sufficiency. The results show that respondents had high sufficiency of decision-making skills for this purpose.

Table 4.10 Level of decision-making skills in choosing appropriate practice to prevent unintended pregnancy

Decision-making skills in choosing appropriate practice to prevent unintended pregnancy	**Number (n = 418)**	**Percentage**
Poor (0-8 scores)	125	29.9
Moderate (9-11 scores)	145	34.7
High sufficiency (12-15 scores)	148	35.4
$\bar{x}$ = 10.17, *SD* = 2.933, *Min = 0*, *Max* = 15		

5) Self-management for preventing unintended pregnancy

The items exploring respondents' self-management for preventing unintended pregnancy includes 5 positive statements. As shown in Table 4.11, the maximum score was 15 points. The study shows that majority of the respondents had a strong understanding for self-management for preventing unintended pregnancy which are as follows 1) you have planned your lifestyle to prevent pregnancy (91.8%). 2) you can control and manage your sex drive to meet your goal to prevent pregnancy (91.2%). 3) you have reviewed your actions to meet your goal to prevent pregnancy (90.7%). 4) you have set your goal in terms of abstinence (89.9%). 5) you have adjusted your environment to control your sex drive (89.0%) respectively.

Table 4.11 Numbers and Percentages for the self-management to prevent unintended pregnancy

Self-management to prevent unintended pregnancy	Level			
	Strongly agree	**Agree**	**Disagree**	**Strongly Disagree**
1. You have planned your lifestyle to prevent pregnancy.	251 (60.0)	133 (31.8)	25 (6.0)	9 (2.2)
2. You have set your goal in terms of abstinence.	230 (55.0)	146 (34.9	36 (8.6)	6 (1.5)
3. You can control and manage your sex drive to meet your goal to prevent pregnancy.	226 (54.1)	155 (37.1)	31 (7.4)	6 (1.4)
4. You have reviewed your actions to meet your goal to prevent pregnancy.	221 (52.9)	158 (37.8)	34 (8.1)	5 (1.2)
5. You have adjusted your environment to control your sex drive.	215 (51.4)	157 (37.6)	41 (9.8)	5 (1.2)

Level of self-management to prevent unintended pregnancy is summarized in Table 4.12. Scores range from 0 to 15, with a cut-off point based on the Ministry of Public Health scale [104]. The mean score was 12.19 (out of a possible 15 points).

As shown in Table 4.12, 8.9% of the respondents lacked sufficient self-management to prevent unintended pregnancy; 30.6% of the respondents had a moderate level of self-management, and 60.5% had high sufficiency. The results show that respondents have high sufficiency of self-management for this purpose.

Table 4.12 Level of self-management to prevent unintended pregnancy

Self-management to prevent unintended pregnancy	**Number (n = 418)**	**Percentage**
Poor (0-8 scores)	37	8.9
Moderate (9-11 scores)	128	30.6
High sufficiency (12-15 scores)	253	60.5
$\bar{x}$ *= 12.19, SD* = 2.807, *Min = 0*, *Max* = 15		

6) Media and information literacy to prevent unintended pregnancy

The questions exploring respondents' media and information literacy to prevent unintended pregnancy included 5 positive statements. As shown in table 4.13, the maximum score was 15 points. Half of the respondents answered *strongly agree* to the following: you would consider the benefits and negative consequences before accepting information about prevent unintended pregnancy from the media (50.5%).

The study showed that majority of respondents had strong understanding for self-management for preventing unintended pregnancy in the following level as follows 1) you would consider the benefits and negative consequences before accepting information about preventing unintended pregnancy from the media (93.8%). 2) when you see an advertisement for beauty enhancement to attract the opposite sex, you would search for additional information to verify its accuracy before buying (90.5%). 3) you would evaluate messages received from the media regarding prevention of unintended pregnancy before transferring that information to others 90.4%). 4) you would analyze the content and accuracy of information received from the media before deciding to prevent unintended pregnancy (90.2%). 5) you have verified information and the accuracy of the pregnancy prevention product before buying (89.0%) respectively.

Table 4.13 Numbers and Percentages for the media and information literacy to prevent unintended pregnancy

Media and information literacy to prevent unintended pregnancy	Level			
	Strongly agree	**Agree**	**Disagree**	**Strongly Disagree**
1. You have verified information and the accuracy of the pregnancy prevention product before buying.	193 (46.2)	179 (42.8)	41 (9.8)	5 (1.2)
2. When you see an advertisement for beauty enhancement to attract the opposite sex, you would search for additional information to verify its accuracy before buying.	193 (46.2)	185 (44.3)	35 (8.4)	5 (1.1)
3. You would consider the benefits and negative consequences before accepting information about prevent unintended pregnancy from the media.	211 (50.5)	181 (43.3)	25 (6.0)	1 (0.2)
4. You would evaluate messages received from the media regarding prevention of unintended pregnancy before transferring that information to others.	181 (43.3)	197 (47.1)	38 (9.1)	2 (0.5)
5. You would analyze the content and accuracy of information received from the media before deciding to prevent unintended pregnancy.	197 (47.1)	180 (43.1)	38 (9.1)	3 (0.7)

Level of media and information literacy to prevent unintended pregnancy is summarized in Table 4.14. Scores range from 0 to 15, and the cut-off point is based on the Ministry of Public Health scale [104]. The mean score was 11.83 (out of a possible 15 points).

As shown in Table 4.14, 9.8% of respondents lacked sufficient media and information literacy to prevent unintended pregnancy; 38.0% had moderate media and information literacy in this regard, and 52.2% respondents had high sufficiency. The results show that respondents have high sufficiency of media and information literacy for this purpose.

Table 4.14 Level of media and information literacy to prevent unintended pregnancy

Media and information literacy to prevent unintended pregnancy level	**Number (n = 418)**	**Percentage**
Poor (0-8 scores)	41	9.8
Moderate (9-11 scores)	159	38.0
High sufficiency (12-15 scores)	218	52.2
$\bar{x}$ *= 11.83, SD* = 2.856, *Min = 0*, *Max* = 15		

7) Level of health literacy in use of condoms and ECPs

Level of health literacy to prevent unintended pregnancy is summarized in Table 4.12. Scores range from 0 to 105, and the cut-off point is based on the Ministry of Public Health scale [104]. The mean score was 75.77 (out of a possible 105 points).

As shown in Table 4.15, 9.1% of respondents lacked sufficient health literacy to prevent unintended pregnancy; 69.1% had moderate health literacy in this regard, and 21.8% respondents had high sufficiency. The results show that respondents have moderate level of health literacy to prevent unintended pregnancy.

Table 4.15 Level of health literacy to prevent unintended pregnancy

Level of health literacy on condom and emergency contraceptive pills use	Number (n = 418)	Percentage
Poor (0-62 scores)	38	9.1
Moderate (63-83 scores)	289	69.1
High sufficiency (84-105 scores)	91	21.8
$\bar{x}$ = *75.77, SD = 10.028*, *Min = 38*, *Max* = 100		

4.1.1.4 Behavior to Prevent Unintended Pregnancy

The questions exploring respondents' behavior to prevent unintended pregnancy included 10 positive statements and 8 negative statements. As shown in Table 4.16, the maximum score was 72 points.

More than three-fifths of the respondents' answered *every time* in relation to the following three statement. 1) you have met a friend of the opposite sex at a location unseen by others (75.1%). 2) Your friend of the opposite sex often asks you to look at books/magazines/cartoons/videos containing sexual content (74.4%). 3) you cohabit with a friend of the opposite sex (73.2%).

Half of the respondents answered *every time* in relation to the following two statement . 1) you can negotiate with your sex partner to use a condom (53.3%). 2) you have to ask your sex partner to use a condom before having sex (51.9%).

More than two-fifths of respondents answered *every time* in relation to the following three statements. 1) you will convince your girlfriend/boyfriend not to have sex while attending university (43.5%). 2) you have taken the emergency contraceptive pill after having sex (40.7%). 3) you request your sex partner to coitus interruptus to prevent pregnancy (40.4%).

More than one-third of respondents answered *every time* to the following three statements. 1) you allow friends of the opposite sex to hold your hand to express affection (33.3%). 2) you have hobbies to distract you from your sex drive (32.5%). 3) you have bought yourself medication or have equipments to prevent pregnancy (29.7%).

Table 4.16 Numbers and Percentages of Behavior to Prevent Unintended Pregnancy

Behavior to Prevent Unintended Pregnancy	Level				
	Every time	Often	Some times	Seldom	Never
1. If your friend of the opposite sex asks you to the entertainment place, you will accept the invitation*	122 (29.2)	108 (25.8)	123 (29.4)	47 (11.2)	18 (4.3)
2. When you are alone with your friend of the opposite sex you will not consume alcoholic drink	106 (25.4)	69 (16.5)	108 (25.8)	81 (19.4)	54 (12.9)
3. Your friend of the opposite sex often asks you to look at books/magazines/cartoons/videos containing sexual content.*	311 (74.4)	38 (9.1)	46 (11.0)	19 (4.5)	4 (1.0)
4. You have met a friend of the opposite sex at a location unseen by others.*	314 (75.1)	41 (9.8)	39 (9.3)	19 (4.5)	5 (1.2)
5. You cohabit with a friend of the opposite sex. *	306 (73.2)	41 (9.8)	33 (7.9)	25 (6.0)	13 (3.1)
6. You wear unprovocative clothes when interacting with the opposite sex	103 (24.6)	139 (33.3)	107 (25.6)	43 (10.3)	26 (6.2)
7. You can reject the request to have sex	285 (68.2)	74 (17.7)	38 (9.1)	12 (2.9)	9 (2.2)
8. You allow friends of the opposite sex to hold your hand to express affection.*	139 (33.3)	82 (19.6)	109 (26.1)	67 (16.0)	21 (5.0)

*Represent negative statement

Table 4.16 Numbers and Percentages of Behavior to Prevent Unintended Pregnancy (continues)

Behavior to Prevent Unintended Pregnancy	Level				
	Every time	Often	Some times	Seldom	Never
9. You have hobbies to distract you from your sex drive.	136 (32.5)	124 (29.7)	67 (16.0)	34 (8.1)	57 (13.6)
10. You can negotiate with your sex partner to use a condom.	223 (53.3)	79 (18.9)	39 (9.3)	11 (2.6)	66 (15.8)
11. When you are sexually aroused, you would masturbate	47 (11.2)	21 (5.0)	57 (13.6)	40 (9.6)	253 (60.5)
12. You will convince your girlfriend/boyfriend not to have sex while attending university.	182 (43.5)	59 (14.1)	70 (16.7)	31 (7.4)	76 (18.2)
13. You have to ask your sex partner to use a condom before having sex.	217 (51.9)	78 (18.7)	38 (9.1)	18 (4.3)	67 (16.0)
14. You have taken the emergency contraceptive pill after having sex. *	170 (40.7)	44 (10.5)	62 (14.8)	37 (8.9)	105 (25.1)
15. You have bought yourself medication or have equipments to prevent pregnancy.	124 (29.7)	53 (12.7)	67 (16.0)	27 (6.5)	147 (35.2)
16. You request your sex partner to coitus interruptus to prevent pregnancy. *	169 (40.4)	24 (5.7)	63 (15.1)	68 (16.3)	94 (22.5)
17. You prevent pregnancy by counting the date (7 days before and 7 days after)*	197 (47.1)	20 (4.8)	61 (14.6)	58 (13.9)	82 (19.6)

*Represent negative statement

Table 4.16 Numbers and Percentages of Behavior to Prevent Unintended Pregnancy (continues)

Behavior to Prevent Unintended Pregnancy	Level				
	Every time	Often	Some times	Seldom	Never
18. When you have problem regarding the use of contraceptive pill, you usually seek consultation from your parents	105 (25.1)	45 (10.8)	58 (13.9)	26 (6.2)	184 (44.0)

*Represent negative statement

Level of behavior to prevent unintended pregnancy is summarized in Table 4.17. Scores range from 0 to 72, and the cut-off point is based on the Ministry of Public Health scale [104]. The mean score was 46.59 (out of a possible 72 points).

As shown in Table 4.17, the behavior of 32.1% of respondents was insufficient to prevent unintended pregnancy; 58.6% moderate behavior, and 9.3% high sufficiency behavior. The results show that respondents' behavior was moderate to prevent unintended pregnancy.

Table 4.17 Numbers and Percentages of Behavior to Prevent Unintended Pregnancy Level

Behavior to Prevent Unintended Pregnancy	Number (n = 418)	Percentage
Poor (0-42 scores)	134	32.1
Moderate (43-57 scores)	245	58.6
High sufficiency (58-72 scores)	39	9.3

$\bar{x}$ = *46.59, SD = 7.708, Min = 26, Max = 68*

4.1.1.5 Situation analysis conclusion

To sum up briefly, the situation analysis results reveal that Chon Buri is an industrialism and tourism province. There were 66.3 cases per 1,000 youths of birth rate between the age of 15 to 19 years old in this province, which is the first highest in Thailand. Moreover, reports of sexual behaviors among both sexes of youth in Eastern regional university of Thailand showed that 61.5% had sexual intercourse. It can be concluded that unsafe sex behavior among female university students accounted for the highest birth rate in Thailand. In addition there are 4 famous public universities which serve 28,707 female undergraduate students. From baseline survey of 418 female university students aged 18–24 years, one-fourth of them reported that their parents were separated. Three-quarter lived outside the university dormitory. Nearly one-third had a boyfriend and a half of the respondents had hugging and kissing experience, while nearly one-third had experienced sexual intercourse, and all of them used contraception. Those female university students had sexual risk behaviors.

Regarding to health literacy to prevent unintended pregnancy results, most of the female university students had insufficient health literacy to prevent unintended pregnancy level (78.2%). There were insufficient of six components of health literacy among female university students as following; accessibility to health information and health services (80.1%), communication skills (73.7%), decision-making skills (64.6%), cognitive health (61.2%), media and information literacy (47.8%), self-management (39.5%).

Most of the female university students exhibited insufficiency behaviors with respect to unintended pregnancy prevention (90.7%). Although 87.6% of female university students experienced condom using to prevent pregnancy, 68.2% of them used coitus interruptus. Surprisingly, only 24% of them used emergency contraceptive pill after sexual intercourse. Only two-fifth of the respondents searched for information about pregnancy prevention via online sources and through lover. Half the respondents were self-providing medication/ equipment to prevent pregnancy.

Based on gap analysis from this situation, the intervention was designed to promote appropriate condom and emergency pill using, and increase their health literacy about preventing unintended pregnancy. Health literacy and self-efficacy

were used to create this program. The program consists of eight activities that was carried out for eight weeks and applies methods such as lectures, group discussions, edutainment, brainstorming, live modeling, and role-playing. Moreover, the peer education was applied in this program. They had the same age as the female university students and they were trained in pregnancy-prevention content and techniques to communicate about safe sex. Thus, the necessary information was easily transferred to female university students, and the participants' about using condom and emergency contraceptive pills.

4.2 Phase 2: Determining the effect of the "Sex Must Safe" program on health literacy intention and practice regarding condom and emergency contraceptive pill uses among female university students in Chon Buri province, Thailand

4.2.1 Initial survey

For the purposes of the quasi-experimental study, 37 students from university A were selected as the intervention group, and 37 students from university B were selected as the comparison group. One student in the intervention group dropped out because she was expelled from the university, leaving 36 students in the intervention group and 37 in the comparison group. In total, then, 73 students were entered in the final analysis. The participants were Thai female university students in their first to fourth year of undergraduate studies. Each participant had a boyfriend at the time of signing the study consent form; each was able to participate fully over the twenty weeks of the study; and no participant had a history of pregnancy. Of the 73 distributed questionnaires, all were completed and returned and were therefore included in the analysis.

4.2.1.1 Socio demographic characteristics

The participants in intervention and comparison group were not different in terms of age, grade average point, parent marital status, average income distribution, current residence type, sexual activities, knowledge of condom and emergency contraceptive pill, attitudes towards condom and emergency contraceptive pill, perceived self-efficacy and expectation on condom and emergency contraceptive pill, and social and environmental factors, as shown in Table 4.18.

Table 4.18 Demographic characteristics of intervention group and comparison group

Demographic characteristics	**Intervention group (n = 36)**	**Comparison group (n = 37)**	***p*-value**
	Number (%)	**Number (%)**	
Age (years)			0.72[a]
≤ 20	20 (55.6%)	19 (51.4%)	
> 20	16 (44.4%)	18 (48.6%)	
$\bar{x}$ = 20.27, SD = 1.19, Min = 18, Max = 23			
Grade average point			0.74[a]
≤ 2.5	10 (27.8%)	9 (24.3%)	
>2.5	26 (72.2%)	28 (75.7%)	
Parent marital status			0.74[a]
Separated	10 (27.8%)	9 (27.3%)	
Married	26 (72.2%)	28 (75.7%)	
Average income per month (baht)			0.12[a]
≤ 5,000	6 (16.7%)	12 (32.4%)	
> 5,000	30 (83.3%)	25 (67.6%)	
x̄ = 8,336.99, SD = 5,424.95, Min = 3,000, Max = 40,000			
Current residence type			0.06[a]
Dormitory outside the university	31 (86.1%)	25 (67.6%)	
Dormitory in the university	5 (13.9%)	12 (32.4%)	
Staying with boyfriend			0.21[a]
Yes	9 (25.0%)	5 (13.5%)	
No	27 (75.0%)	32 (86.5%)	

[a] Chi-square test, [b] Fisher exact test

Table 4.18 Demographic characteristics of intervention group and comparison groups (Continues)

Demographic characteristics	Intervention group (n = 36)	Comparison group (n = 37)	*p*-value
	Number (%)	Number (%)	
Hugging and kissing experience			0.26[b]
Yes	34 (94.4%)	31 (83.8%)	
No	2 (5.6%)	6 (16.2%)	
Previous sexual intercourse (vaginal)			0.50[a]
Yes	26 (72.2%)	24 (64.9%)	
No	10 (27.8%)	13 (35.1%)	
Experience of drinking alcohol in the last 6 months			0.87[a]
Yes	15 (57.7%)	14 (58.3%)	
No	11 (42.3%)	10 (41.7%)	
Experience of an emergency contraceptive pill			0.40[a]
Yes	15 (57.7%)	11 (45.8%)	
No	11 (42.3%)	13 (54.2%)	
Using condom			1.00[b]
Yes	24 (92.3%)	23 (95.8%)	
No	2 (7.7%)	1 (4.2%)	
Knowledge of condom and emergency contraceptive pill			0.30[a]
Poor	9 (25.0%)	14 (37.8%)	
Moderate	19 (52.8%)	19 (51.4%)	
High	8 (22.2%)	4 (10.8%)	

[a] Chi-square test, [b] Fisher exact test

Table 4.18 Demographic characteristics of intervention group and comparison groups (Continues)

Demographic characteristics	Intervention group (n = 36)	Comparison group (n = 37)	*p*-value
	Number (%)	Number (%)	
Attitudes towards condom and emergency contraceptive pill			0.35[b]
Negative	0 (%)	0 (%)	
Moderate	3 (8.3%)	1 (2.7%)	
Positive	33 (91.7%)	36 (97.3%)	
Perceived self-efficacy and expectation on condom and emergency contraceptive pill			0.33[a]
Poor	8 (22.2%)	8 (21.6%)	
Moderate	13 (36.1%)	8 (21.6%)	
High	15 (41.7%)	21 (56.8%)	
Social and environmental factors			0.65[b]
Poor	1 (2.8%)	2 (5.4%)	
Moderate	33 (91.7%)	31 (83.8%)	
High	2 (5.5%)	4 (10.8%)	

[a] Chi-square test, [b] Fisher exact test

4.2.1.2 Comparison of the health literacy scores in the intervention and comparison group before and after the intervention, as well as at the follow up 3 months after implementation of the "Sex Must Safe" program

Normality was tested for health literacy measured at baseline, week 8 and 20 by Shapiro-Wilk test statistic. Wilcoxon signed ranks test was used for comparing the score when the scores were non-normal distribution by median (interquartile range, IQR), and *p*-value of total scores in each subscale. Paired samples t-test was used for comparing the score when the scores were normally distributed by mean

(95% confident interval, 95% CI) and standard deviation of total scores in each subscale.

The comparison of the mean/ median scores categorized by health literacy in the intervention group showed that, at baseline, the mean score was 96.89. After the program implementation (week 8), the mean scores for health literacy decreased significantly, to 91.50, while the median scores increased significantly, to 130.50, at week 20. The baseline mean score for health literacy in the comparison group was 107.65. After the program implementation (week 8), the mean scores for health literacy decreased significantly, from 107.65 to 101.78, and they again decreased significantly, to 97.97, at week 20.

When considering the intervention group, the results showed that there was a significance in the health literacy scores between baseline and 8 (mean difference = 5.389, 95% CI = 4.751, 6.027). In addition, there were significant differences in the health literacy scores between weeks 8 and week 20 ($p < 0.001$) and baseline and week 20 ($p = 0.006$)

In the comparison group, the results showed that there was a significance in the health literacy scores between baseline and week 8 (mean difference = 5.865, 95% CI = 5.319, 6.410). In addition, there were significant differences in the health literacy scores between weeks 8 and week 20 ($p < 0.001$) and baseline and week 20 (mean difference = -9.676, 95% CI = -15.623, -3.728), as shown in Table 4.19. The health literacy mean scores of intervention and comparison groups measuring at baseline, week 8, and week 20 after program implementation are shown in Figure 4.1.

Table 4.19 Comparison of health literacy scores in the intervention and comparison group before and after the intervention, as well as at the 3-month follow up after implementation of the “Sex Must Safe” program.

Time	**Intervention Group (*n* = 36)**		**Comparison Group (*n* = 37)**	
	Mean	**SD**	**Mean**	**SD**
Baseline	96.89	15.49	107.65	16.22
Week 8	91.50	14.51	101.78	15.53
Week 20	130.50[c]	22.00[d]	97.97	18.82
Mean Difference (95%CI) Baseline – Week 8	5.389 (4.751, 6.027) [a]		5.865 (5.319, 6.410) [a]	
p-value Week 8 - Week 20	< 0.001[b]		< 0.001[b]	
p-value/ Mean Difference Baseline - Week 20	0.006[b]		-9.676 (-15.623, -3.728) [a]	

[a] Paired Samples t-test, [b]Wilcoxon Signed Ranks Test, [c]Median, [d]Interquartile range

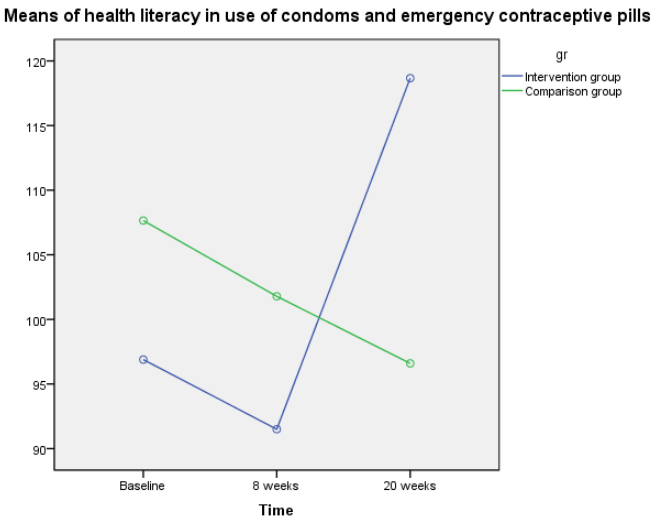


Figure 4. 1 Means of health literacy in use of condoms and emergency contraceptive pills.

4.2.1.3 Comparison of the intention and practice scores in the intervention and comparison group before and after intervention, as well as at the 3-month follow up after implementation of the “Sex Must Safe” program

Normality was tested for health literacy measured at baseline, week 8 and 20 by Shapiro-Wilk test statistic. Wilcoxon signed ranks test was used for comparing the score when the scores were non-normal distribution by median (interquartile range, IQR), and *p*-value of total scores in each subscale.

The comparison of the mean scores categorized by intention in the intervention group showed that, at baseline, the mean score was 17.39. After the program implementation (week 8), the median intention scores increased to 21.00, and this decreased slightly to 20.50 at week 20. The baseline median score for intention in the comparison group was 20.00. After the program implementation (week 8), the median score decreased to 19.00; then mean scores decreased significantly to 16.89 at week 20.

Considering the intervention group, the results showed that there was no significant difference in the intention scores between baseline and week 8 ($p = 0.070$). Moreover, there were no significant differences in the intention scores between week 8 and week 20 ($p = 0.417$) or baseline and week 20 ($p = 0.538$).

Considering the comparison group, the results showed that there was no significant difference in the intention scores between baseline and week 8 ($p = 0.110$). Moreover, there was no significant difference in the intention scores between weeks 8 and week 20 ($p = 0.120$), but there was a significant difference in the intention scores between baseline and week 20 ($p = 0.015$), as shown in Table 4.20. The measurements in the intervention group compared with the comparison group at baseline, week 8, and week 20 are shown in Figure 4.2.

Table 4.20 Comparison of intention scores in the intervention and comparison group before and after the intervention, as well as at the 3-month follow up after implementation of the "Sex Must Safe" program

Time	Intervention Group (*n* = 36)		Comparison Group (*n* = 37)	
	Mean	**SD**	**Mean**	**SD**
Baseline	17.39	3.604	20.00 [b]	7.000[c]
Week 8	21.00[b]	6.000[c]	19.00 [b]	7.000[c]
Week 20	20.50 [b]	4.000[c]	16.89	4.202
p-value Baseline–Week 8	0.070 [a]		0.110 [a]	
p-value Week 8–Week 20	0.417 [a]		0.120 [a]	
p-value Baseline–Week 20	0.538 [a]		0.015 [a]	

[a] Wilcoxon signed-rank test, [b]Median, [c]Interquartile range

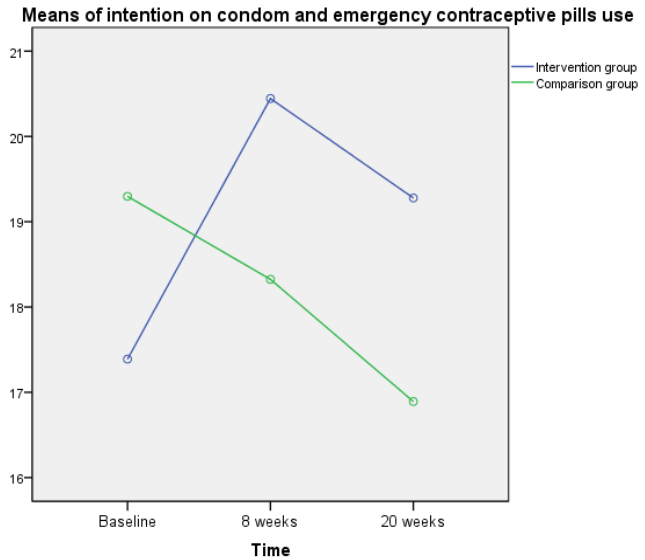


Figure 4.2 Means of intention toward condom and emergency contraceptive pill use

Normality was tested for health literacy measured at baseline, week 8 and 20 by Shapiro-Wilk test statistic. Wilcoxon signed ranks test was used for comparing the score when the scores were non-normal distribution by median (interquartile range, IQR), and *p*-value of total scores in each subscale.

The comparison of the median scores categorized by practice in the intervention group showed that, at baseline, the median score was 8.50. After the program implementation (week 8), the median practice score had increased significantly to 9.00, and it sustained at 9.00 at week 20. In contrast, the baseline median score for practice in the comparison group was 8.50. After the program implementation (week 8), the median score for practice decreased significantly, to 8.00, and it decreased significantly, to 7.88, at week 20.

Considering the intervention group, the results showed that there was a significant difference in the practice scores between baseline and 8 (p = 0.016). However, no significant differences in the practice scores was observed between weeks 8 and 20 (p = 0.181) or baseline and 20 (p = 0.074).

Considering the comparison group, the results showed that there was a significant difference in the practice scores between baseline and 8 (p = 0.011). However, no significant differences in the practice scores was observed between weeks 8 and 20 (p = 0.272) or baseline and 20 (p = 0.125), as shown in Table 4.21. The measurements for the intervention group compared with the comparison group for baseline, 8, and 20 are shown in Figure 4.3.

Table 4.21 Comparison of the practice scores in the intervention and comparison groups before and after the intervention, as well as at the 3-month follow up after implementation of the "Sex Must Safe" program in female university students who had sexual intercourse

Time	**Intervention Group (*n* = 26)**		**Comparison Group (*n* = 24)**	
	Median	**IQR**	**Median**	**IQR**
Baseline	8.50	4	8.50	3
Week 8	9.00	1	8.00	3
Week 20	9.00	2	7.88[b]	1.361[c]
p-value Baseline–Week 8	0.016 [a]		0.011 [a]	
p-value Week 8–Week 20	0.181 [a]		0.272 [a]	
p-value Baseline–Week 20	0.074 [a]		0.125 [a]	

[a] Wilcoxon signed-rank test, [b]Mean, [c]Standard deviation

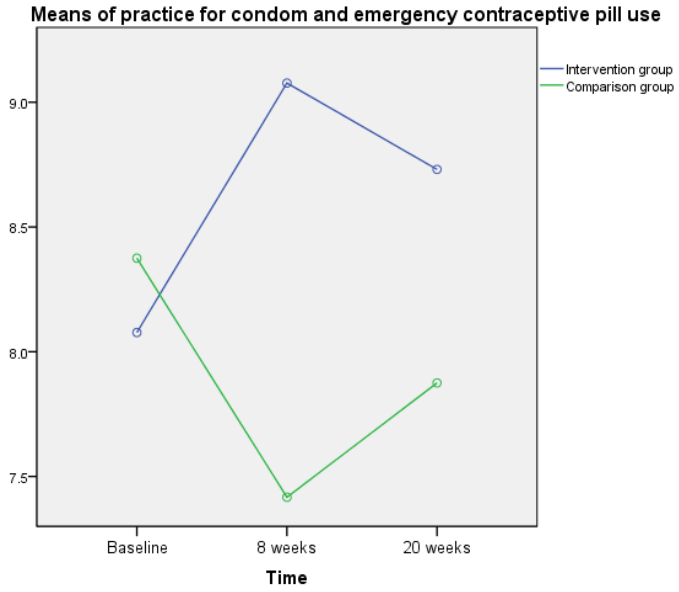


Figure 4.3 Means of practice for condoms and emergency contraceptive pill use.

4.2.1.4 Comparison of the health literacy scores between the intervention and comparison group before and after intervention, as well as at the 3-month follow up after implementation of the "Sex Must Safe" program

Comparison of health literacy between the intervention group and comparison group before, after, and follow-up 3 months after implementation of the program. Normality was tested for health literacy measured at baseline, week 8 and 20 by Shapiro-Wilk test statistic. Man-Whitney test was used for comparing the score when the scores were non-normal distribution by median (interquartile range, IQR), and *p*-value of total scores in each subscale. Independent sample t-test was used for comparing the score when the scores were normally distributed by mean (95% confident interval, 95% CI) and standard deviation of total scores in each subscale. Generalized Estimating Equations (GEE) was used for analyzing the overall program between intervention group and comparison group because the GEE were used for analyzing repeated data and were used for irregularly-time..

Comparing the health literacy scores between the intervention and before and after the intervention, as well as at the 3-month follow up after the implementation, for overall, the results showed significant difference between intervention and comparison groups (p = 0.002, 95% CI = 3.429, 15.472). In the comparison of the intervention and comparison group at baseline, the results showed a

significantly higher score in the comparison group than in the intervention group (p < 0.001, 95% CI = –18.166, –3.353). After the program implementation (week 8), there was a significant difference in the "Sex Must Safe" program, where the comparison group scored higher than the intervention group did (p < 0.001, 95% CI = –17.305, –3.263), and there was a significant difference at week 20, where the intervention group scored higher than the comparison group (p < 0.001), as shown in Table 4.22.

Table 4.22 Comparison of the health literacy scores between the intervention and comparison group before and after the intervention, as well as at the 3-month follow up after implementation of the "Sex Must Safe" program

Time	**Intervention Group (n = 26)**		**Comparison Group (n = 24)**		***p*-value**	**95% CI**	
	Mean	**SD**	**Mean**	**SD**		**Lower**	**Upper**
Overall	105.287	-	102.468	-	0.002[c]	3.429	15.472
Baseline	96.89	15.490	107.65	16.224	<0.001[a]	-18.166	-3.353
Week 8	91.50	14.510	101.78	15.539	<0.001[a]	-17.305	-3.263
Week 20	130.50[d]	22.000[e]	97.97	18.829	<0.001[b]	-	-

[a]Independent samples test, [b]Mann-Whitney Test, [c]Generalized Estimating Equations, [d]Median, [e]Interquartile range

4.2.1.5 Comparison of the intention and practice scores between the intervention and comparison group before and after the intervention, as well as at the 3-month follow up after implementation of the "Sex Must Safe" program

Comparison intention between the intervention group and comparison group before, after, and the follow-up 3 months after implementation of the program. Normality was tested for health literacy measured at baseline, week 8 and 20 by Shapiro-Wilk test statistic. Man-Whitney test was used for comparing the score when the scores were non-normal distribution by median (interquartile range, IQR), and p-value of total scores in each subscale. Generalized Estimating Equations (GEE) was used for analyzing the overall program between intervention group and comparison

group because the GEE was used for analyzing repeated data and were used for irregularly-timed by used.

When comparing the intention scores between the intervention and comparison group before and after the intervention, as well as at the 3-month follow up after implementation, for overall, the results showed no significant difference between intervention and comparison groups (p = 0.111, 95% CI = –2.222, 2.154). In comparison between groups at the baseline, the comparison group showed higher score in the intervention group. This difference was statistically significant (p-value = 0.038). After the program implementation (week 8), the intervention group showed higher score than the comparison group. This difference was statistically significant (p = 0.043); similarly, there was a significant difference at week 20, the intervention group showed higher score the comparison group. This difference was statistically significant ($p < 0.001$), as shown in Table 4.23.

Table 4.23 Comparison of the intention scores between the intervention and comparison group before and after the intervention, as well as at the 3-month follow up after implementation of the "Sex Must Safe" program

Time	**Intervention Group (n = 26)**		**Comparison Group (n = 24)**		***p*-value**	**95% CI**	
	Mean	**SD**	**Mean**	**SD**		**Lower**	**Upper**
Overall	19.425	-	18.243	-	0.111[b]	–0.222	2.154
Baseline	17.39	3.604	20.00[c]	7.000[d]	0.038[a]	-	-
Week 8	21.00[c]	6.000[d]	19.00[c]	7.000[d]	0.043[a]	-	-
Week 20	20.50[c]	4.000[d]	16.89	4.202	<0.001[a]	-	-

[a] Mann–Whitney test, [b] Generalized estimating equation, [c]Median, [d]Interquartile range

Comparison practice between the intervention group and comparison group before, after, and follow-up 3 months after implementation of the program. Normality was tested for health literacy measured at baseline, week 8 and 20 by Shapiro-Wilk

test statistic. Man-Whitney test was used for comparing the score when the scores were non-normal distribution by median (interquartile range, IQR), and *p*-value of total scores in each subscale. Generalized Estimating Equations (GEE) was used for analyzing the overall program between intervention group and comparison group because the GEE was used for analyzing repeated data and was used for irregularly-timed. .

When comparing the practice scores between the intervention and comparison group before and after the intervention, as well as at the 3-month follow up after implementation, for overall, the results showed significant difference between intervention and comparison groups ($p = 0.004$, 95% CI = 0.267, 1.450).

In comparison between groups at baseline, the difference was not statistically significant (*p*-value = 0.653). After the program implementation (week 8), the intervention group showed higher score than the comparison group. This difference was statistically significant ($p < 0.001$); similarly, there was a significant difference at week 20, the intervention group showed higher score than the comparison group. This difference was statistically significant ($p < 0.001$), as shown in table 4.24.

Table 4.24 Comparison of practice scores between the intervention and comparison group before and after intervention, as well as 3 months follow-up after implementation of the "Sex Must Safe" program in female university students who had sexual intercourse

Time	**Intervention Group (*n* = 26)**		**Comparison Group (*n* = 24)**		***p*-value**	**95% CI**	
	Median	**IQR**	**Median**	**IQR**		**Lower**	**Upper**
Overall	8.628[c]	-	7.888[c]	-	0.004[b]	0.267	1.450
Baseline	8.50	4	8.50	3	0.653[a]	-	-
Week 8	9.00	1	8.00	3	<0.001[a]	-	-
Week 20	9.00	2	7.88[c]	1.361[d]	0.025[a]	-	-

[a] Mann–Whitney test, [b] Generalized estimating equation , [c]Mean, [d]Standard deviation

CHAPTER V
DISCUSSION, CONCLUSION, AND RECOMMENDATIONS

This study was designed to evaluate the effects of the "Sex Must Safe" program on health literacy intention and practice regarding condom and emergency contraceptive pill uses among female university students in Chon Buri province, Thailand. The discussions for this study are presented in two parts. The first discusses Phase 1: Situational analysis of health literacy regarding contraceptive use among female university students, while the second part reports the discussion for Phase 2: Determining the effects of the "Sex Must Safe" program on health literacy intention and practice regarding condom and emergency contraceptive pill uses before and after the intervention, as well as at the 3-month follow up after finishing the "Sex Must Safe" program. The chapter outline is as follows:

5.1 Discussion

5.1.1 Phase 1: Situational analysis of health literacy regarding contraceptive use among female university students

5.1.2 Phase 1: Program design and situational analysis conclusion

5.1.3 Phase 2: Effects of the "Sex Must Safe" program on health literacy intention and practice regarding condom and emergency contraceptive pill uses.

5.2 Conclusion, limitations, and recommendations

5.1 Discussion

5.1.1 Situational analysis of health literacy regarding contraceptive use among female university students

5.1.1.1 Socio demographic characteristics

The study was conducted among female youths, who are in the developmental Phase 1 in the human lifecycle between childhood and maturity [1]. Young people undergo various changes in terms of their physical, cognitive, emotional, and sexual development at this stage [116]. These changes become risk factors for premarital sexual behavior, adolescent pregnancy, abortion, and sexually

transmitted diseases (STDs) like acquired immune deficiency syndrome (AIDS) [117].

From previous study it was found that, one-quarter of the respondents reported that their parents were separated. Living with separated parents may result in a poor understanding of sex issues and ineffective teaching about sexual preventive behaviors by parents [118]. Adolescents who live with separated/divorced parents, or whose parent(s) have died, experience higher risks of having sex than adolescents who live with their parents [119]. Likewise, previous study pointed out that parents' marital status is significantly associated with the intention to prevent teenage pregnancy [120]. Moreover, the study showed that three-quarters lived in dormitories outside the university. This suggests that changes in social conditions have allowed university students to have a freer lifestyle [121]; such students are at a higher risk for having sexual intercourse, unintended pregnancies, abortions, STDs (including human immunodeficiency virus [HIV]) [111], infections, suicide (if there is no solution to the mentioned problems), and so on [122]. In addition, many students are forced to live far away from their homes when they are pursuing higher education. Furthermore, universities have limited dormitory space, so some university students must rent their residences, such as apartments, condominiums, and houses; one-third of these university students live with members of the opposite sex. In such conditions, parents or guardians cannot monitor or control the students' behaviors [123].

5.1.1.2 Sexual activity

The study showed that two-fifths of the respondents had a lover. Similarly, in a study of youth aged 15–17, an even higher percentage (88%) of youth reported ever having a lover [124]. In addition, it has been found that most adolescents have had their first sexual intercourse with a lover, and a half of those did so without protection [125, 126]. The first sexual intercourse can occur intentionally or unintentionally, but in cases where it is unintentional, sexual intercourse may occur because of close relationship or having consumed alcohol [127].

This study showed that the respondents had temporary partner(s), which corresponded to the results of a study on the risk perception concerning HIV and STDs among youth at the university in Zimbabwe; that study indicated that more than half of the sexually transmitted infections resulted from temporary partner(s)

[14]. In addition, the study showed that half the respondents had hugging and kissing experience; such experiences increased the risk of having sexual intercourse by 60% [128].

The study showed that nearly one-third of the respondents had sexual intercourse experience, which is a similar rate to the American teenagers [129]. The results also illustrated that female university students had sexual intercourse because they saw it as a proof of love. Pressure from boyfriends often resulted in female university students' decision not to use any contraceptives [130]. However, in this study, the result showed that the university students who had sexual intercourse used at least one method of contraception, with more than four-fifths used condoms during sex; unfortunately, a high proportion of these students reported using less effective contraception, with three-fifths reporting coitus interruptus. Moreover, one-quarter used emergency contraceptive pills (ECPs). Condoms remained the contraceptive of choice of university students, as they are among young people in the United Kingdom [131]. In contrast, the percentage of American teenagers who do not use condoms was found to be higher than the rate identified in this study [129]. Condoms not only prevent pregnancy, but they also guard against STDs and HIV [132]. An early study in Thailand showed lower condom use, indicating that the self-awareness related to preventing STDs among teenagers who had sexual experiences was relatively low, as they only occasionally used condoms. It can be suggested that this problem is caused by a lack of knowledge, socialization (in relation to sex education), and pregnancy-prevention guidance from the family [120].

The study showed that half of the respondents had consumed alcohol before having sex. Alcohol use was significantly associated with inconsistent condom use and multiple sexual partners [133]. Sex-related alcohol expectancies were moderators of the relationship between alcohol use and risky sex in adolescents [134].

The study showed that half of the respondents could not self-provide medication/supplies for preventing pregnancy. This suggests that females may be more embarrassed to procure prescriptions or equipments for preventing pregnancy than men are [135]. Despite the well-documented importance of condoms and safe sex, there are still many people who do not use condoms. Negative emotions, including embarrassment, that occur while acquiring condoms are arguably

compromising factors when it comes to consistent condom purchasing and use [136, 137].

The study showed that two-fifths of the respondents sought information about pregnancy prevention from online sources and their lovers. Another study in Spain showed a higher rate of receiving sexual information online than this study did [138]. An early study in New York found that the internet was the second most frequently reported source of information about birth control and safe sex (31.6%), surpassed only by friends (61.3%) [139]. An early study among adolescents/young adults showed that the youth gained the information on contraception mainly from friends, and in some cases, through searching the Internet [140]. The study findings showed that the Internet and peers were mostly mentioned as main sources of knowledge about contraception [140]. Other findings showed that the Internet and peers were mostly mentioned as main sources of knowledge about contraception [140]. Adolescents mostly obtain information about contraception from friends, which is sometimes inaccurate; relying on this information could expose them to unwanted pregnancy [141].

5.1.1.3 Health literacy in the use of condoms and ECPs

Health literacy is an important factor in achieving positive health outcomes, including unintended pregnancy prevention. The baseline results of this study showed that most of the female university students had insufficient health literacy to prevent unintended pregnancy, especially in terms of access to health information and health services, cognitive health, and communication skills.

For adolescents' health information and health service accessibility, decision-making guidance needs to be supported by relevant, accurate health information [142]. One-fourth of the respondents had an insufficient ability of access to health information and health services to prevent unintended pregnancy. The adolescent childbirth rate in Chon Buri province is the highest in Thailand [24], and this can be connected with the lack of access to adequate services.

Most university students in this study had insufficient cognitive health related to preventing unintended pregnancy. Gaining knowledge is the first step in health promotion, although conveying information may not reduce adolescent risk behaviors [143]. While knowledge about pregnancy is related to pregnancy

prevention behaviors among adolescents [144, 145], this study showed a low level of pregnancy prevention knowledge. A European study presented an insignificant association between pregnancy, knowledge of the timing of emergency contraception, and knowledge about how to access contraception and sexual health services [146]. Furthermore, a study among female undergraduate students revealed that most of the participants had poor or moderate levels of knowledge, attitudes, and intentions to prevent unintended pregnancy [94]. Similarly, most of the females in this study exhibited insufficient knowledge and behaviors related to unintended pregnancy prevention.

The university students in this study exhibited inadequate communication skills for preventing unintended pregnancy. Lack of communication skills is one factor that leads to teenage pregnancy [147]. Likewise, infrequent communication has been significantly related to lower condom use, resulting in higher levels of unintended pregnancy [148-150].

5.1.2 Program design and situation analysis conclusion

To summarize, in the situational analysis results from the baseline survey of 418 female university students aged 18–24 years, nearly one-third had a boyfriend, and half had hugging and kissing experience. Nearly one-third had experienced sexual intercourse, and in this group, all had used contraception, but they still reported inappropriate practice concerning contraceptive use. Those university students engaged in sexual risk behaviors.

Regarding health literacy to prevent unintended pregnancy, most of the female university students had insufficient health literacy in this regards (78.2%). There were six components of health literacy that were lacking among the female university students, which are as follows: accessibility of health information and health services (80.1%), communication skills (73.7%), decision-making skills (64.6%), cognitive health (61.2%), media and information literacy (47.8%), and self-management (39.5%).

Most of the female university students exhibited inappropriate behaviors with respect to unintended pregnancy prevention (90.7%). Although 87.6% of the respondents had used condoms to prevent pregnancy, 68.2% had used coitus interruptus. Moreover, 24% had used the emergency contraceptive pill after sexual

intercourse, which has low effectiveness if it is not used correctly. Only two-fifths of the respondents sought information about pregnancy prevention via online sources and their lovers, and in the latter case, they may have received incorrect information. Half of the respondents self-provided contraceptive medication/supplies.

Based on the gap identified in the situational analysis, the intervention in Phase 2 of this study was designed to promote appropriate condom and emergency pill use by increasing youths' health literacy about unintended pregnancy prevention via a sex education program. Health literacy and self-efficacy theories were used to create this program, which consisted of eight activities carried out for 8 weeks and applied various teaching methods, such as lectures, group discussions, edutainment, brainstorming, live modeling, and role-playing. Peer-led education was also employed; the program leader was the same age as the participants, and she was trained in pregnancy-prevention content and techniques to communicate about safe sex. Thus, the necessary information was easily transferred to the participants concerning the use of condoms and emergency contraceptive pills.

5.1.3 Effects of the "Sex Must Safe" program on health literacy intention and practice regarding condom and emergency contraceptive pill uses.

The participants in the intervention group gained more health literacy and showed better practice concerning condom and emergency contraceptive pill use after the intervention period.

5.1.3.1 Comparison of the health literacy scores in the intervention and comparison group before and after the intervention, as well as at the 3-month follow up after ending the implementation of the "Sex Must Safe" program.

The mean differences in the health literacy scores in the intervention and comparison group before and after the intervention, as well as at the 3-month follow up after the "Sex Must Safe" program in this study were significant. The results were comparable to those of another study on the effectiveness of health education program for health literacy development involving a questioning method for sexual relations prevention behaviors [151]. The study results showed that the mean scores for health literacy concerning condom and emergency contraceptive pill use dropped slightly from weeks 0 to 8, but they increased dramatically after this point. This resulted from

the long period requirement for a change in health literacy [152]. Although the health literacy scores initially decreased, they rose again from weeks 8 to 20, which can be explained in that the intervention activities comprised all six components of health literacy [153].

People can only improve their literacy skills through intensive interventions [154]. The mean scores in the comparison group gradually declined from weeks 0 to 20. Specifically, the scores for all six components decreased throughout this study. This may have been because the comparison group did not receive the intervention.

5.1.3.2 Comparison of the intention and practice scores in the intervention and comparison group before and after the intervention, as well as at the 3-month follow up after implementation of the "Sex Must Safe" program

The increasing trend in the intention and practice scores from baseline to week 8 was comparable to a study of the program. There were eight activities and learning methods, namely lectures, group discussions, edutainment, brainstorming, live modeling, and role-playing in both the intervention in this study and the program in the previous study [155]. Moreover, the program design, based on self-efficacy theory, increased the participants' intention and practice. Therefore, the aim of the activities was achieved. Mastery experiences were the main principle for enhancing intention and practice among adolescents, as direct experience is highly effective when it comes to developing self-efficacy [155, 156]. Between weeks 8 and week 20 of the program, there were no booster activities [157]; thus, the intention and practice scores decreased in that period. Overall, the scores of intention and practice related to each other, as intention leads to behaviors [158].

In the comparison group, there was no significant difference in the intention scores between weeks 0 and 8 or week 8 and 20. However, there was a significant difference in the scores between weeks 0 and 20. The study results showed that scores for intention and practices decreased between weeks 0 to 8 because these participants did not receive the intervention. It was found that nearly two-fifths of the female university students had had previous sexual intercourse (vaginal), which resulted in reduced intention to use condoms and emergency contraceptive pills [159]. It was observed that the practice score for the comparison group increased between

weeks 8 and 20. This could be explained in that this part of the study occurred at the end of the semester, when most students returned to their homes. Thus, they were not exposed to sexual risk factors.

5.1.3.3 Comparison of the health literacy scores between the intervention and comparison group before and after the intervention, as well as at the 3-months follow up after implementation of the "Sex Must Safe" program

The mean health literacy scores in the intervention group were significantly higher than those in the comparison group. The intervention group completed the "Sex Must Safe" program, which included all the components of health literacy [153]. The participants gained higher health literacy levels from various learning methods, and was also found in a study in Thailand, especially the live-modeling technique based on vicarious experiences. Observational learning from live modeling promoted health literacy regarding condom and emergency contraceptive pill use [155]. Overall, the adolescents found the "Sex Must Safe" program, which applied the emotional-arousal principle in conjunction with the edutainment technique, to be attractive, funny, and non-boring. The program climate prepared the participants for learning. It can cautiously be concluded that adolescents have sensitive emotions, so appropriate techniques need to be selected to avoid unplanned negative events as much as possible [116, 160, 161].

5.1.3.4 Comparison of the intention and practice scores between the intervention and comparison group before and after the intervention, as well as at the 3-month follow up after implementation of the "Sex Must Safe" program

When comparing the intention scores between the intervention and comparison group before and after the intervention, as well as at the 3-month follow up after implementation, the results revealed that there was no significant difference in the intention scores between the groups. The short duration for implementing the program was the most important factor affecting the intention change among the female university students. The length of the program was limited by the need to integrate it into the students' normal timetable. Therefore, this study was designed to last only 8 weeks to make it appropriate for a normal schedule. Furthermore, the end of the semester was a barrier to lengthening the program. A booster at the end of the semester is recommended; this could be implemented using social media and online

communication to support students in maintaining their practice to prevent pregnancy [157].

The practice scores were only analyzed for those participants with sexual intercourse experience. The results revealed that there was a significant difference in the practice scores between the groups. The research assistants (RAs) were a crucial component in the success of the results. They were selected from among the fourth-year students, and they were trained in pregnancy-prevention content and techniques for communicating about safe sex [97]. Since the RAs liked peer-led sex educator on adolescent and reproductive health, they easily transferred the contents and practice to female university students; this was facilitated by their similar age and similar life situation. The participants' intentions and behaviors concerning condom and emergency contraceptive pill use improved due to the RAs' involvement [99, 162, 163]. However, previous study found that peer-led education was an ineffective strategy for changing adolescent behaviors [98].

5.2 Conclusion, limitations, and recommendations

5.2.1 Conclusion

This study explored the situation of health literacy concerning contraceptive use among female university students in Chon Buri province, Thailand. In addition, effects of the "Sex Must Safe" program on health literacy intention and practice regarding condom and emergency contraceptive pill uses among female university students in this province was determined. The situational analysis showed that around 25% reported that their parents were separated, and the majority of respondents had a good relationship with their parents. Around 75% lived outside of university dormitories. Their average income was 7,348 baht per month. Sixty eight percent reported that their monthly allowance was adequate. Around 42% of the respondents have a lover and 4.8% stay together. Half of the respondents had hugging and kissing experience; 30.9% had experienced in sexual intercourse, and all used contraception. In addition, 68.2% had coitus interruptus; 12.4% did not use a condom, and 24.0% used ECPs. Half of the respondents had consumed alcohol before having sex. The majority did not use substance before having sex. Half of the respondents got themselves condoms or contraceptive pills to prevent pregnancy and majority of them

could easily get access to condoms and contraceptive pills. Seventy-seven percent of the respondents consulted their boyfriend and searched the internet for information on preventing pregnancy. The results showed that respondents' behavior was moderate to prevent unintended pregnancy. The access to health information and health services, cognitive health, and communication skills was insufficient among most of the female university students.

Based on the gap identified in the situational analysis, an intervention was designed to promote appropriate condom and emergency pill used by increasing youths' health literacy about unintended pregnancy prevention via a sex education program, wherein peer-led education was applied. The similar age and similar life situation of the RAs involved in the study and the participants led to an increase in the validity of the information. The program in this study resulted in a gain in health literacy and improved practice concerning condom and emergency contraceptive pill use.

5.2.2 Limitations

The context of this study was industrialism and tourism; to generalize the results of this study, it is necessary to be aware of these contexts. The most important event for female university students is graduation; therefore, the length of the program was limited by the need to integrate it into a normal timetable. As a result, the intervention was designed to run for only 8 weeks to adhere to this constraint. Furthermore, the end of the semester was a barrier for lengthening the program.

5.2.3 Recommendations

The following recommendations are presented based on the finding of this study including the implementation and further study improve health literacy, intention, and practice regarding condom and emergency contraceptive pill use among female university students.

5.2.3.1 Recommendations for implementation

This program increased the health literacy and practice of female university students therefore extending the program into female university students in Thailand especially the university in industrialism and tourism province would increase appropriate condom and emergency contraceptive pill use to prevent unintended pregnancies and HIV/AIDs. In order to sustain this program, parents,

executives, and instructors should be involved by supporting this program. A booster during the semester-end period is needed; social media and online communication could be used to support students in maintaining their practice to prevent pregnancy. However, the program should be emphasized on media and information literacy because the results presented that they still sought the information about condom and ECPs via internet and boyfriend, which those information was not reliable. It was observed that more than half of female university students drank alcohol which may effect on low level unintended pregnancy and HIV/AIDs preventive behaviors. Thus promotion of the rains retreat anti-alcohol campaign among female university students is needed along with the sex must safe program. The sex must safe program should be a basic course of life skills to all university students.

5.2.3.2 Recommendations for further research

This study did not show a significant change in intention between intervention and comparison group, therefore, new approaches should be created and be tested further to improve positive intention on using condom and emergency contraceptive pill to prevent unwanted pregnancies among university students.

This study suggests that living in an outside dormitory may effect the prevention of unintended pregnancies. However, qualitative research is essential to comprehend this occurrence.

REFERENCES

1. World Health Organization. (2011). *Youth and health risks.* Sixty-fourth World Health Assembly. Resolution WHA 64.28. Geneva: World Health Organization. Available from: http://apps.who.int/gb/ebwha/pdf_files/WHA64/A64_R28-en.pdf.
2. Huberman B. (2015). *Growth and development, ages 13 to 17 what parents need to know.* Available from: http://www.advocatesforyouth.org/publications/156-parents. [cited: 2016, 26 April].
3. Lloyd CB. (2017). *World development report 2007: development and the next generation.* JSTOR.
4. Goodburn EA, Ross DA. (1995). *A picture of health?: A review and annotated bibliography of the health of young people in developing countries.* Geneva: World Health Organization.
5. Fonseca H, Greydanus DE. (2007). Sexuality in the child, teen, and young adult: concepts for the clinician. *Primary Care: Clinics in Office Practice*. 34(2), 275-92.
6. Stanger-Hall KF, Hall DW. (2011). Abstinence-only education and teen pregnancy rates: why we need comprehensive sex education in the US. *PLoS One.* 6(10), e24658.
7. World Health Organization. (2015). *Adolescent pregnancy.* Available from: http://www.who.int/maternal_child_adolescent/topics/maternal/adolescent_pregnancy/en/. [cited: 2016, 6 April].
8. Richter MS and Mlambo G. (2005). Perceptions of rural teenagers on teenage pregnancy. *Health SA Gesondheid.* 10(2), 61-9.
9. Ziyane I, Ehlers V. (2006). Swazi youths/ attitudes and perceptions concerning adolescent pregnancies and contraception. *Health SA Gesondheid*. 11(1), 31-42.
10. World Health Organization. (2014). *Adolescent pregnancy.* Available from: http://www.who.int/mediacentre/factsheets/fs364/en/. [cited 2016 15 June].

11. Hamilton B, Martin J, Osterman M and Curtin S. Births. (2015). *Final Data for 2014.* Hyattsville, MD: National Center for Health Statistics.
12. Cappa C, Wardlaw T, Langevin-Falcon C and Diers J. (2012). Progress for children: a report card on adolescents. *The Lancet.* 379(9834), 2323-5.
13. Sukrat B. (2014). Thailand adolescent birth rate: trend and related indicators. *Thai Journal of Obstetrics and Gynaecology.* 22(1), 15-21.
14. Williamson NE. (2013). *Motherhood in childhood: facing the challenge of adolescent pregnancy.* United Nations Population Fund.
15. Bureau of Reproductive Health MoPH. (2014). *Abortion Surveillance in Thailand Report 2013.* Bangkok: The war veterans organization of Thailand under royal patronage of his majesty the king Publication.
16. Thai health. (2013). *When the unintended pregnancy? What is the solution?.* Available from: http://www.thaihealth.or.th/Content/20187. [cited: 2016, 17 April].
17. Langille DB. (2007). Teenage pregnancy: trends, contributing factors and the physician's role. *Canadian Medical Association Journal.* 176(11),1601-2.
18. UNICEF. (2015). *Situation analysis of adolescent pregnancy in Thailand: Synthesis report 2015.* Available from: https://www.unicef.org/thailand/160614_SAAP_ in_Thailand_report_EN.pdf. [cited: 2017, 17 January].
19. Osiri S, Phoolcharoen W. (2012). Dispensing of Emergency Hormonal Contraceptive Pills, Pregnancy Test Kits, and Pharmacy Services for Sexually Transmitted Infections by Drug Stores in Chon Buri Province. *The Public Health Journal of Burapha University.* 7(1), 1-12.
20. Dilokpattanamongkol P. (2016). *Emergency contraceptive pill for women.* Available from: www.pharmacy.mahidol.ac.th/knowledge/files/0054.pdf. [cited: 2016, 19 December].
21. Padpai S. (2010). *Experience in emergency contraceptive pill among young women: feminist theory.* Bangkok: Mahidol University.
22. Kay NS, Jones MR, Jantaraweragul S. (2010). Teaching sex education in Thailand. *The ICHPER-SD Journal of Research in Health, Physical Education, Recreation, Sport & Dance.* 5(2), 10.

23. Thongnopakun S, Maharachpong N, Abdullakasim P. (2016). Factors related to the sexual behaviors among youth in universities located in the eastern region of Thailand. *J Med Assoc Thai.* 99(1), 43-50.

24. Ministry of Social Development and Human Security. (2014). *Situation of Teenage Abortation in Year 2013.* Available from: www.dcy.go.th/webnew/uploadchild/cld/.../file_th_20152002002459_1.pdf. [cited: 2016, 8 May].

25. American Psychological Association. (2002). *A reference for professionals: Developing adolescents.* Washington DC: American Psychological Association.

26. World Health Organization. (2015). *Adolescent development.* Available from: http://www.who.int/maternal_child_adolescent/topics/adolescence/dev/en/. [cited: 2016, 13 April].

27. Steinberg, L. (1996). *Adolescence.* (4th ed). New York: McGraw-Hill.

28. Stanford children health. (2017). *Cognitive Development.* Available from: http://www.stanfordchildrens.org/en/topic/default?id=cognitive-development-90-P01594.

29. Santrock JW. (2001). Adolescence (8th ed.). New York: McGraw-Hill.

30. Markus H, Nurius P. (1986). *Possible selves American Psychologist*. 954-69p.

31. Hamilton SF, Hamilton MA, Pittman K. (2004). Principles for youth development. *The youth development handbook: Coming of age in American communities.* 2: 3-22.

32. Mukherji O., Ganguly R., S. (2016). *Basics of Gynecology for Examinees.* India: Academic publishers.

33. Jain R, Muralidhar S. (2011). Contraceptive methods: needs, options and utilization. *The Journal of Obstetrics and Gynecology of India.* 61(6), 626-34.

34. Hatcher RA, Nelson AL. (2007). *Contraceptive technology.* Ardent Media.

35. Bureau of Reproductive Health MoPH. (2007). *Contraceptive guidebook for adolescent.* Bangkok: The War Veterans Organization of Thailand Under Royal Patronage of His Majesty the King publishers.

36. World Health Organization. (2016) *Family planning/ Contraception.* Available from: http://who.int/mediacentre/factsheets/fs351/en/. [cited: 2017, 19 January].

37. Bureau of Epidemiology MoPH. (2014). *Annual Epidemiological Surveillance Report.* Thailand: Ministry of Public Health.

38. Rothschild TJ. (2003). Switching emergency contraception to over the counter status. *N Engl J Med.* 348:82.

39. Bureau of Reproductive Health MoPH. (2012). *Municipal Reproductive Health.* Available from: http://rh.anamai.moph.go.th/drh.html. [cited: 2016, 13 April].

40. World Health Organization. (2015). *Family planning/ Contraception.* Available from: http://who.int/mediacentre/factsheets/fs351/en/. [cited: 2016, 13 August].

41. Black KI. (2009). Developments and challenges in emergency contraception. *Best Practice & Research Clinical Obstetrics & Gynaecology.* 23(2), 221-31.

42. Ellertson C, Webb A, Blanchard K, Bigrigg A, Haskell S, Shochet T, et al. (2003). Modifying the Yuzpe regimen of emergency contraception: a multicenter randomized controlled trial. *Obstetrics & Gynecology*. 101(6), 1160-7.

43. Von Hertzen H, Piaggio G, Peregoudov A, Ding J, Chen J, Song S, et al. (2002). Low dose mifepristone and two regimens of levonorgestrel for emergency contraception: a WHO multicenter randomized trial. *The Lancet.* 360(9348), 1803-10.

44. Fontenot HB, Harris AL. (2008). The latest advances in hormonal contraception. *Journal of Obstetric, Gynecologic, & Neonatal Nursing.* 37(3), 369-74.

45. Derman SG, Peralta LM. (1995). Postcoital contraception: present and future options. *Journal of adolescent health.* 16(1), 6-11.

46. Cheng L, Gulmezoglu A, Piaggio G, Ezcurra E, Van Look P. (2008). Interventions for emergency contraception. *Cochrane Database Syst Rev.* 2.

47. Thongkhao P. (2002). *Emergency contraceptive pills: the situation of knowledge attitudes and use among vocational students in Phatthalung province.* Institute for Population and Social Research, Mahidol University, Bangkok.

48. Finer LB, Zolna MR. (2011). Unintended pregnancy in the United States: Incidence and disparities. *Contraception.* 84(5), 478-85.

49. Sedgh G, Singh S, Hussain R. (2014). Intended and unintended pregnancies worldwide in 2012 and recent trends. *Studies in family planning.* 45(3), 301-14.

50. Corcoran J. (1998). Consequences of adolescent pregnancy/ parenting: A review of the literature. *Social work in health care.* 27(2), 49-67.

51. Bureau of Reproductive Health Ministry of Public Health. (2016). *Situation of reproductive health in adolescent and youth.* Available from: http://rh.anamai.moph.go.th/ewt_news.php?nid=23&filename=index. [cited: 2017, 12 January].

52. Auld E, Gambescia S. (2011). *Annotated bibliography for health education.* Oxford University Press Oxford, England.

53. Green LW, Kreuter MW. (2005). *Health program planning: An educational and ecological approach:* McGraw-Hill Companies.

54. Eleftheriou A. (n.d.) *Health Education.* Available from: http://www.ncbi.nlm.nih.gov/books/NBK190468/. [cited: 2016, 18 April].

55. World Health Organization. (1998). *Health Promotion WHO Publications.*

56. Parker RM, Williams MV, Weiss BD, Baker DW, Davis TC, Doak CC, et al. (1999). Health literacy-report of the council on scientific affairs. *Jama-Journal of the American Medical Association.* 281(6), 552-7.

57. Kickbusch IS. (2001). Health literacy: addressing the health and education divide. *Health promotion international.* 16(3), 289-97.

58. Kindig DA, Panzer AM, Nielsen-Bohlman L. (2004). Health literacy: a prescription to end confusion: *National Academies Press.*

59. Zarcadoolas C, Pleasant A, Greer DS. (2005). Understanding health literacy: an expanded model. *Health promotion international.* 20(2), 195-203.

60. Nutbeam D. (2008). The evolving concept of health literacy. *Social science & medicine.* 67(12), 2072-8.

61. Pleasant A, Kuruvilla S. (2008). A tale of two health literacies: public health and clinical approaches to health literacy. *Health promotion international.* 23(2), 152-9.

62. Ishikawa H, Yano E. (2008). Patient health literacy and participation in the health-care process. *Health Expectations.* 11(2), 113-22.

63. Health Systems Research Institute (HSRI). (2008). *Operational Definition of Health Promotion*. Nonthaburi.

64. Nutbeam D. (2009). *Defining and measuring health literacy: what can we learn from literacy studies?:* Springer.

65. Rootman I, Ronson B. (2005). Literacy and health research in Canada: where have We been and where should we go? *Canadian Journal of Public Health/ Revue Canadienne de Sante'e Publique.* S62-S77.

66. Amonwiwat S. (2010). *Health Literacy.* Nonthaburi: Health Education Division, Health Service Support, Ministry of Public Health.

67. Chin J, Morrow DG, Stine-Morrow EA, Conner-Garcia T, Graumlich JF, Murray MD. (2011). The process-knowledge model of health literacy: evidence from a componential analysis of two commonly used measures. *Journal of Health Communication.* 16(sup3), 222-41.

68. Edwards M, Wood F, Davies M, Edwards A. (2012). The development of health literacy in patients with a long-term health condition: the health literacy pathway model. *BMC public health.* 12(1), 130.

69. Health education division BoHSS, Ministry of Public Health. (2013). *Guideline to develop health Literacy for change behavior tree E (Eating, Exercise, Emotion) two S (stop drinking, stop smoking).* Nonthaburi: Ministry of Public Health.

70. Suramitmaitree B. (2014). *Development of health education to health literacy and health behavior.* Nonthaburi: Health Service Support, Ministry of Public Health.

71. Thipwong A, Numphol J. (2014). The associations between health literacy related to obesity and health behavior eating and exercise in over nutritional children. *J Public Health Nursing.* 28(2), 1-11.

72. Lee S-YD, Arozullah AM, Cho YI. (2004). Health literacy, social support, and health: a research agenda. *Social science & medicine.* 58(7), 1309-21.

73. Paasche-Orlow MK, Wolf MS. (2007). The causal pathways linking health literacy to health outcomes. *American journal of health behavior.* 31(1), S19-S26.

74. Von Wagner C, Steptoe A, Wolf MS, Wardle J. (2009). Health literacy and health actions: a review and a framework from health psychology. *Health Education & Behavior.* 36(5):860-77.

75. Sorensen K, Van den Broucke S, Fullam J, Doyle G, Pelikan J, Slonska Z, et al. (2012). Health literacy and public health: a systematic review and integration of definitions and models. *BMC public health.* 12(1), 80.

76. Kaeo-dum-koeng K. et al. (2011). *Health literacy.* Nonthaburi: Health Education Division, Health Service Support, Ministry of Public Health.

77. Bandura A. (1997). *Self-efficacy and health behavior.* Cambridge University Press.

78. Bandura A, Cervone D. (1986). Differential engagement of self-reactive influences in cognitive motivation. *Organizational behavior and human decision processes.* 38(1), 92-113.

79. Kaewkangwal S. (2006). *Psychology for life (No.2) Teenager-Elderly.* (9th ed). Bangkok: Thammasart University.

80. Parker RM, Williams MV, Baker DW, Nurss JR. (1996). Literacy and contraception: exploring the link. *Obstetrics & gynecology.* 88(3), 72S-7S.

81. Kiewpilarp C., Boonchai T. (2004). *Use of emergency contraceptive pills in Thai students.* Bangkok: Faculty of Pharmacy, Mahidol University.

82. Aimnoi K, Taeborisutikul W, Chuenbunngam W, Ngaechareankul S, Lermankul W. (2004). Knowledge of Emergency Contraceptive Pills Among Undergraduate Students in Bangkok. *Thai Journal of Pharmaceutical Sciences.* 28(1-2), 31-41.

83. Kang HS, Moneyham L. (2008). Use of emergency contraceptive pills and condoms by college students: A survey. *International journal of nursing studies.* 45(5), 775-83.

84. Sirikittikorn D. (2010). *Emergency contraceptive pills: knowledge and attitudes among undergraduate students in a college, Bangkok.* Bangkok: Thammasat University.

85. Miller LM. (2011). College student knowledge and attitudes toward emergency contraception. *Contraception.* 83(1), 68-73.

86. Meechai P. et al, (2013). *editor Knowledge, attitude and behavior of emergency contraceptive pills use among students in Muang district of Maha Sarakham Province.* The 5th Annual Northeast Pharmacy Research Conference of 2013 “Pharmacy Profession: Moving Forward to ASEAN Harmonization”. 6-17 February 2013 Faculty of Pharmaceutical Sciences, Khon Kaen University. Thailand.

87. Thepa W. (2014). *Factors related to the use of the emergency contraceptive pills among female adolescents.* Mahidol University

88. El-Ibiary SY, Youmans SL. (2007). Health literacy and contraception: a readability evaluation of contraceptive instructions for condoms, spermicides and emergency contraception in the USA. *The European Journal of Contraception & Reproductive Health Care.* 12(1), 58-62.

89. Sarmad R, Akhtar S, Manzoor S. (2007). Relationship of female literacy to contraceptive use in urban slums of Khushab (Punjab). *Biomedica.* 23(1), 21-3.

90. Melnick AL, Rdesinski RE, Creach ED, Choi D, Harvey SM. (2008). The influence of nurse home visits, including provision of 3 months of contraceptives and contraceptive counseling, on perceived barriers to contraceptive use and contraceptive use self-efficacy. *Women's Health Issues.* 18(6), 471-81.

91. Tung WC, Lu M, Cook DM. (2010). Condom use and stages of change among college students in Taiwan. *Public Health Nursing.* 27(6), 474-81.

92. Jemmott LS, JEMMOTT III JB. (1992). Increasing condom-use intentions among sexually active black adolescent women. *Nursing Research.* 41(5), 273-9.

93. Lindberg CE. (2000). Knowledge, self-efficacy, coping, and condom use among urban women. *Journal of the Association of Nurses in AIDS Care.* 11(5), 80-90.

94. Sirirat C, Pumpaibool T, Phupong V. (2015). Knowledge attitude and intention of preventing unwanted pregnancy among female undergraduate students in Bangkok, Thailand. *Journal of Health Research.* 29, 193-9.

95. Krinara P., Ketvatimart M., Maneechot M. (2013). The effects of nursing student-lead unplanned pregnancy prevention program on knowledge, attitude and intention to prevent unplanned pregnancy among early adolescents. *The journal of Boromarajonani College of Nursing, Nakhonratchasima*. 19(2), 20-9.

96. Parwej S, Kumar R, Walia I, Aggarwal AK. (2005). Reproductive health education intervention trial. *The Indian Journal of Pediatrics.* 72(4), 287-91.

97. Vuttanont U, Greenhalgh T, Griffin M, Boynton P. (2006). "Smart boys" and "sweet girls" sex education needs in Thai teenagers: a mixed-method study. *The lancet.* 368(9552), 2068-80.

98. Chandra-Mouli V, Lane C, Wong S. (2015). What does not work in adolescent sexual and reproductive health: a review of evidence on interventions commonly accepted as best practices. *Global Health: Science and Practice.* 3(3), 333-40.

99. Jennings J, Howard S, Perotte C. (2014). Effects of a school-based sexuality education program on peer educators: the Teen PEP model. *Health education research.* 29(2), 319-29.

100. Bureau of Reproductive Health, Ministry of Public Health. (2015). *Teenage and reproductive health.* Available from: http://rh.anamai.moph.go.th/ewt_news.php?nid=23&filename=index.

101. Krejcie RV, Morgan DW. (1970). Determining sample size for research activities. *Educational and psychological measurement.* 30(3), 607-10.

102. Statistics UIf. (2012). *International Standard Classification of Education.* ISCED: UIS, Montreal, Quebec.

103. Chirawatkun A. (2010). *Statistics for Health Science Research.* Bangkok: Wittayapat Printing.

104. Ministry of Public Health. (2014). *Health Literacy Scale for Unwanted Pregnancy Prevention of Thai Female Adolescents.* Nonthaburi.

105. Than Htike OO. (2011). *Intention to use condom among universities students in Nakhon Pathom province, Thailand.* Bangkok: Mahidol University.

106. Bloom BS. (1971). *Handbook on formative and summative evaluation of student learning.* (Handbook).

107. Cleland J, Ingham R, Nicole S. (2001). *Asking young people about sexual and reproductive behaviours: Illustrative questionnaire for interview surveys with young people.* Geneva: World Health Organization. Available from: http://www.who.int/reproductivehealth/topics/adolescence/questionnaire/en/. [cited: 2016, 25 December].

108. Brafford LJ, Beck KH. (1991). Development and validation of a condom self-efficacy scale for college students. *Journal of American College Health.* 39, 219-25.

109. Kulprasutidilok A. (2014). Development of condom use self-efficacy scale for undergraduate students. *Journal of Sports Science and Health.* 15(3), 105-18.

110. Than HO. (2011). *Intention to Use Condom Among University Students in Nakhon Pathom Province.* Thailand: Mahidol University.

111. Buunk BP, Bakker AB, Siero FW, van den Eijinden RJ, Yzer MC. (1998). *Predictors of AIDS-preventive behavioral intentions among adult heterosexuals at risk for HIV-infection: Extending current models and measures.* AIDS Education and Prevention.

112. Thato S, Charron-Prochownik D, Dorn LD, Albrecht SA, Stone CA. (2003). Predictors of condom use among adolescent Thai vocational students. *Journal of Nursing Scholarship.* 35(2), 157-63.

113. Sieving RE, Bearinger LH, Resnick MD, Pettingell S, Skay C. (2007). Adolescent dual method use: relevant attitudes, normative beliefs and self-efficacy. *Journal of Adolescent Health.* 40(3), 275. e15-. e22.

114. DeVellis RF. (2016). *Scale development: Theory and applications:* Sage publications.

115. Kuder GF, Richardson MW. (1937). *The theory of the estimation of test reliability. Psychometrika.* 2(3), 151-60.

116. Sawyer SM, Afifi RA, Bearinger LH, Blakemore S-J, Dick B, Ezeh AC, et al. (2012). Adolescence: a foundation for future health. *The Lancet.* 379(9826), 1630-40.

117. Stanger-Hall KF, Hall DW. (2011). Abstinence-Only Education and Teen Pregnancy Rates: Why We Need Comprehensive Sex Education in the U.S. *PLoS ONE.* 6(10), e24658.

118. Vajanasara K., Kritiya A. (2011). *Mariginalised Population and Social Justice in Thai Society.* Thailand: Mahidol University

119. Katianurak A. (2000). *Risky sexual behaviors to HIV infection of male student in North-East of Thailand*. Thailand: Mahidol University.

120. Tumchuae S. (2015). Sexual behaviors and factors correlated with the intention of protection. *Nursing Journal of the Ministry of Public Health.* 25(1), 97-109.

121. Suwan P. (2006). *Risk factors leading to unwanted teenager pregnancy in the Muang district Chiang Mai province.* Chiang Mai: Chiang Mai University.

122. Wong-arsa W., Kongnguen P., Vuthiarpa S. (2015). Factors Affecting Sexual Risk Behaviors among Adolescents: a Case Study Conducted in One University. *Journal of Public Health.* 45(3), 285-97.

123. Thato S. (2007). Premarital Sexual Behavior Among Thai Adolescents. *Journal of Nursing and Health Science.* 1(2), 3.

124. Menlo Park. (2002). *SexSmarts.* Relationships CA: Henry Kaiser Family Foundation and Seventeen Magazine.

125. Piya_Anant M, Kositanon U, Leckyim NA, Patrasupapong N, Watcharaprapapong O. (1999). Past and current STDs in Thai adolescent population. *Journal of the Medical Association of Thailand*. 82, 444-50.

126. Thato S. (2003). Factors that influence adolescents to engage in premarital sexual activity. *Journal of Nursing Science Chulalongkorn University*. 15(1), 1-11.

127. Timpan U. (2005). *Sexuality of male adolescents: a case study of urban male adolescents at risk to sexual behavior in Chiang Mai province.* Thailand: Mahidol University.

128. Bureau of Reproductive Health. (2015). *Handbook of adolescent and youth unwanted pregnancy.* Thailand: Bureau of Reproductive Health, Department of Health, Ministry of Public Health.

129. Kann L. (2016). Youth risk behavior surveillance United States. *MMWR Surveillance Summaries.* 65.

130. De Villiers F, Kekesi K. (2004). Social interaction of teenage mothers during and after their pregnancy. *South African Family Practice.* 46(2), 21-4.

131. Tripp J, Viner R. (2005). ABC of adolescence: Sexual health, contraception, and teenage pregnancy. *BMJ: British Medical Journal.* 330(7491), 590.

132. UNFPA W. (2016). *Position statement on condoms and the prevention of HIV, other sexually transmitted infections and unintended pregnancy.* UNAIDS.

133. Zablotska IB, Gray RH, Serwadda D, Nalugoda F, Kigozi G, Sewankambo N, et al. (2006). Alcohol use before sex and HIV acquisition: a longitudinal study in Rakai, Uganda. *Aids.* 20(8), 1191-6.

134. Dermen KH, Cooper ML, Agocha VB. (1998). Sex-related alcohol expectancies as moderators of the relationship between alcohol use and risky sex in adolescents. *Journal of studies on alcohol.* 59(1), 71-7.

135. Reeves B, Ickes MJ, Mark KP. (2016). Gender Differences and Condom-Associated Embarrassment in the Acquisition of Purchased Versus Free Condoms among College Students. *American Journal of Sexuality Education.* 11(1), 61-75.

136. Brackett KP. (2004). College students condom purchase strategies. *The Social Science Journal.* 41(3), 459-64.

137. Ronis ST, LeBouthillier DM. (2013). University students' attitudes toward purchasing condoms. *The Canadian Journal of Human Sexuality.* 22(2), 86-94.

138. González-Ortega E, Vicario-Molina I, Martínez JL, Orgaz B. (2015). The internet as a source of sexual information in a sample of Spanish adolescents: Associations with sexual behavior. *Sexuality Research and Social Policy.* 12(4), 290-300.

139. Borzekowski DL, Rickert VI. (2001). Adolescents, the Internet, and health: Issues of access and content. *Journal of Applied Developmental Psychology.* 22(1), 49-59.

140. Skrzeczkowska A, Heimrath J, Surdyka J, Zalewski J. (2015). Knowledge of contraceptive methods among adolescents/young adults. *Polish Journal of Public Health.* 125(3), 144-8.

141. Hagan JE, Buxton C. (2012). Contraceptive knowledge, perceptions and use among adolescents in selected senior high schools in the central region of Ghana. *Journal of Sociological Research.* 3(2), 170-80.

142. Eng TR, Maxfield A, Patrick K, Deering M, Ratzan SC, Gustafson DH. (1998). Access to health information and support: A public highway or a private road? *JAMA.* 280(15), 1371-5.

143. Borzekowski DL, Rickert VI. (2001). Adolescent cybersurfing for health information: a new resource that crosses barriers. *Archives of pediatrics & adolescent medicine.* 155(7):813-7.

144. Wang RH, Wang HH, Hsu MT. (2003). Factors associated with adolescent pregnancy a sample of Taiwanese female adolescents. *Public Health Nursing.* 20(1), 33-41.

145. Frost JJ, Lindberg LD, Finer LB. (2012). Young adults' contraceptive knowledge, norms and attitudes: associations with risk of unintended pregnancy. *Perspectives on sexual and reproductive health.* 44(2), 107-16.

146. Imamura M, Tucker J, Hannaford P, Da Silva MO, Astin M, Wyness L, et al. (2007). Factors associated with teenage pregnancy in the European Union countries: a systematic review. *European Journal of Public Health.* 17(6), 630-6.

147. Hacker KA, Amare Y, Strunk N, Horst L. (2000). Listening to youth: teen perspectives on pregnancy prevention. *Journal of Adolescent Health.* 26(4), 279-88.

148. Richard AC, Ralph JD, Gina MW, Brenda KC, Kathy H, Susan LD, et al. (2002). Condom Use and Correlates of African American Adolescent Females' Infrequent Communication with Sex Partners about Preventing Sexually Transmitted Diseases and Pregnancy. *Health Education & Behavior.* 29(2), 219-31.

149. Kisker EE. (1985). Teenagers talk about sex, pregnancy and contraception. *Family Planning Perspectives.* 17(2), 83-90.

150. Inazu JK, Fox GL. (1980). Maternal Influence on the Sexual Behavior of Teen-Age Daughters: Direct and Indirect Sources. *Journal of Family Issues.* 1(1), 81-102.

151. Anee C., Boonchuaythanasit K., P. K. (2017). Effectiveness of health education program for health literacy development by questioning method for sexual relations prevention behaviors among junior high school students, Nonthaburi Province. *Kasetsart educational review.* 32(2), 137-43.

152. Kuhls DA, Risucci DA, Bowyer MW, Luchete F. (2012). ASSET: an effective educational experience for practicing surgeons. *Bull Am Coll Surg.* 97, 31.

153. Health education division. (2011). *The development of health literacy assessment tools for obesity among the secondary school students: grade 9 (phaseI).* Bangkok: Department of health services support, Ministry of public health.

154. Berkman ND, Davis TC, McCormack L. (2010). Health Literacy: What Is It?. *Journal of Health Communication.* 15(sup2), 9-19.

155. Bandura A. (1969). Principles of behavior modification. (n.p.)

156. Thongyoo D. (2014). Guidelind for developing adolescent self-esteem based on self-efficacy theory. *Valaya Alongkorn Review.* 4(2), 179-90.

157. Fishbein M, Hennessy M, Yzer M, Douglas J. (2003). Can we explain why some people do and some people do not act on their intentions?. *Psychology, health & medicine.* 8(1), 3-18.

158. Ajzen I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes.* 50(2), 179-211.

159. Bartz D, Shew M, Ofner S, Fortenberry JD. (n.d.). Pregnancy Intentions and Contraceptive Behaviors Among Adolescent Women: A Coital Event Level Analysis. *Journal of Adolescent Health.* 41(3), 271-6.

160. Klein H. (1990). Adolescence, youth, and young adulthood: Rethinking current conceptualizations of life stage. *Youth & society.* 21(4), 446-71.

161. Steinberg L. (2005). Cognitive and affective development in adolescence. *Trends in cognitive sciences.* 9(2), 69-74.

162. Denison J, Tsui S, Bratt J, Torpey K, Weaver M, Kabaso M. (2011). Do peer educators make a difference? An evaluation of a youth-led HIV prevention model in Zambian Schools. *Health education research.* 27(2), 237-47.

163. Parwej S, Kumar R, Walia I, Aggarwal AK. (2005). Reproductive health education intervention trial. *Indian journal of pediatrics.* 72(4), 287-91.

APPENDIX

Appendix A

Questionnaire No. .....

Questionnaire (Phase 1)

Factors associated with contraceptive among female university students in Chon Buri Province, Thailand

Instruction: This questionnaire is designed to determine the situation analysis of health literacy to use contraceptive among female university students in Chon Buri province, Thailand. Data collected from this study will be used to plan, to serve as basis for developing "Sex Must Safe" program on health literacy intention or practice regarding condom and emergency contraceptive pill uses among female university students, Chon Buri province, Thailand. Your kind cooperation is requested in completing the questionnaire. Please answer all of the following 4 parts (78 items);

Part 1: Sociodemographic characteristics (10 items)

Part 2: Aspect and pattern of sexual behavior (15 items)

Part 3: Health literacy for pregnancy prevention (35 items)

Part 4: Behaviors to prevent unintended pregnancy (18 items)

1. Please complete every item of the questionnaire as fully as possible. The time needed for questionnaire completion is about 20 minutes.
2. After completing the questionnaire, kindly place it in the box provided by the researcher.
3. Data collected from this questionnaire will be treated as confidential; in any future presentation, the information will be revealed in summary format only.

Part 1: Sociodemographic characteristics (10 items)

No	Question	Answer
1	What is your current age?	… years (If more than 6 months in, the number should be rounded to 1 year.)
2	What is your program of study?	( )1. Regular Program ( )2. Special Program
3	Which year are you in?	( )1. 1st ( )2. 2nd ( )3. 3rd ( )4. 4th
4	What is your current average grade (GPAX)?	( )1. Below 2.00 ( )2. 2.00–2.49 ( )3. 2.50–2.99 ( )4. 3.00–3.49 ( )5. Above 3.51
5	What is your parents' marital status?	( )1. Living together ( )2. Separated (Not divorced) ( )3. Divorced ( )4. Widowed ( )5. Other (please indicate).....
6	How is the relationship with the parents during the past year?	( )1. Very good ( ) 2. Good ( ) 3. Moderate ( ) 4. Poor
7	What is your current housing situation (while studying at university)	( )1. Staying with parents ( )2. Staying with father ( )3. Staying with mother ( )4. Staying with relatives ( )5. Staying alone ( )6. Staying with friend ( )7. Staying with lover ( )6. Other (please indicate).....

Part 1: Sociodemographic characteristics (continued)

No	Question	Answer
8	From question 7, What is your type of current residence?	( )1. Dormitory in the university ( )2. Dormitory outside the university ( )3. Rented house ( )4. Parents' house/Own house ( )5. Condominium/Apartment ( )6. Other (please indicate).....
9	What is your average income?	.....Baht (per month)
10	What is your monthly allowance situation?	( )1. Adequate, and enough for saving ( )2. Adequate ( )3. Inadequate, and what have you handled this situation ….....

Part 2: Aspect and pattern of sexual behavior (15 items)

No	Question	Answer
1	What is your sexual orientation?	( )1. Heterosexual ( )2. Homosexual ( )3. Bisexual ( )4. Other (*please indicate*)……
2	Do you have a lover?	( )1. Have a lover but not staying together ( )2. Have a lover and staying together ( )3. Have not had lover
3	Beyond any lover from question 2, do you have any temporary partner/s?	( )1. Yes (*please indicate number*)…… ( )2. No
4	Are you satisfied when having sexual intercourse with sex?	( )1. Male only ( )2. Mostly male ( )3. Female only ( )4. Mostly female ( )5. Both gender equally
5	Have you had hugging and kissing experience?	( )1. Ever ( )2. Never
6	Have you had previous sexual intercourse (vaginal)?	( )1. Ever ( )2. Never
7	From question 6, have you had previous sexual intercourse (vaginal) with a temporary partner?	( )1. Ever ( )2. Never
8	In the past, have you drunk alcohol before having sexual intercourse (vaginal)?	( )1. Ever ( )2. Never
9	In the past, have you used recreational substances before having sexual intercourse (vaginal)?	( )1. Ever ( )2. Never

Part 2: Aspect and pattern of sexual behavior (continued)

No	Question	Answer
10	In the past 6 months, with whom have you had sexual intercourse?	( )1. Have not had sex in the past year. ( )2. Having sex with partner of the same sex ( )2.1 Boyfriend ( )2.2 Friend ( )2.3 Acquaintance ( )2.4 Sex worker ( )2.5 Other (*please indicate*)… ( )3. Having sex with partner of the opposite sex ( )3.1 Boyfriend ( )3.2 Friend ( )3.3 Acquaintance ( )3.4 Sex worker ( )2.5 Other (*please indicate*)…
11	What is/are the method (s) you use to prevent pregnancy? (More than 1 answer is possible)	( )1. Condom ( )2. Contraceptive pill ( )3. Emergency contraceptive pill ( )4. Contraceptive injection ( )5. Coitus interruptus ( )6. Contraceptive implant ( )7. Have never prevented pregnancy ( )8. Other (*please indicate*)…….

Part 2: Aspect and pattern of sexual behavior (continued)

No	Question	Answer
12	Which person provides you medication/equipment to prevent pregnancy?	( )1. Yourself ( )2. Lover ( )3. Parents ( )4. Friend ( )5. Acquaintance ( )6. Prostitution-related agent ( )7. Other (*please indicate*)…….
13	Are you think that currently the medication / equipment for pregnancy prevention is easily accessible?	( )1. Agree ( )2. Disagree ( )3. Not sure
14	Regarding pregnancy prevention methods, you have consulted with …….the most (Please choose only 1 answer)	( )1. Girlfriend/Boyfriend ( )2. Friend/Acquaintance ( )3. Parents ( )4. Medical officers ( )5. Internet ( )6. TV/Radio ( )7. Book/Pamphlet ( )8. Other (*please indicate*)…….
15	Have you had side effect/ (s) from having sexual intercourse (More than 1 answer is possible)	( )1. Never ( )2. Yes ( )2.1 Pregnancy ( )2.2 Abortion ( )2.3 Abnormality on the genital such as itching, red spot etc. ( )2.4 Sexually transmitted disease ( )2.5 Other (*please indicate*)…….

Part 3: Health literacy in preventing unintended pregnancy (35 items)

Part 3.1: Access to health information and health services for preventing unintended pregnancy (5 items)

Please respond as truthfully as possible by placing a √ mark in the space reflecting level of action.

No	Issue	Strongly agree	Agree	Not sure	Disagree
1	If you wish to access information about preventing unintended pregnancy, you can select the appropriate source of information immediately.				
2	You have been taught by experts about selecting reliable sources of information about preventing unintended pregnancy.				
3	When you need to obtain information about preventing unintended pregnancy, you are able to search for accurate and up-to-date information from reliable sources.				
4	You tend to believe information about preventing unintended pregnancy even though you have not verified the reliability of the source.				

Part 3: Health literacy in preventing unintended pregnancy (35 items)

Part 3.1: Access to health information and health services for preventing unintended pregnancy (continue)

Please respond as truthfully as possible by placing a √ mark in the space reflecting level of action.

No	Issue	Strongly agree	Agree	Not sure	Disagree
5	You have verified the accuracy of information about preventing unintended pregnancy to confirm your own understanding.				

Part 3.2: Cognitive health in relation to preventing unintended pregnancy (10 items)

No	Issue	Strongly agree	Agree	Not sure	Disagree
1	Procreation results from the combination of egg and sperm, leading eventually to pregnancy.				
2	Contraceptive medication can be purchased at a convenience store.				
3	Alcoholic drink consumption exposes you to the risk of unprotected sex.				

Part 3.2: Cognitive health in relation to preventing unintended pregnancy (continue)

No	Issue	Strongly agree	Agree	Not sure	Disagree
4	When a condom has slipped or broken during sexual intercourse, it is advisable to take the emergency contraceptive pill immediately to prevent pregnancy.				
5	While alone with a friend of the opposite sex, women should refrain from intimacy, and men should respect women.				
6	Getting pregnant while attending university has an adverse effect on academic results				
7	Pregnancy prevention methods can be found on the internet.				
8	A condom is the best method of preventing pregnancy.				
9	Coitus interruptus is the most efficient method of preventing pregnancy.				
10	Counting the safe period (7 days before and 7 days after) is an efficient method of preventing pregnancy.				

Part 3.3: Communication skills for enhancing preventing unintended pregnancy (5 items)

No	Issue	Strongly agree	Agree	Not sure	Disagree
1	You do not quite understand when reading material about preventing unintended pregnancy.				
2	You speak openly with friends and try to make others understand about pregnancy prevention in relation to taking the contraceptive pill; use of condoms; avoid sexual intercourse for prevent unintended pregnancy.				
3	You can convey information about preventing unintended pregnancy through speaking and writing to make others understand.				
4	You can convince others to accept pregnancy prevention practice.				
5	You can convince others of the significance of abstinence in preventing pregnancy				

Part 3.4: Decision-making skills for preventing unintended pregnancy (5 items)

No	Issue	Strongly agree	Agree	Not sure	Disagree
1	When your boyfriend/lover asks you to have sex, you agree**.**				
2	If a friend of the opposite sex asked to stay overnight with you, you would refuse.				
3	If your boyfriend asked you out alone for a date, you would refuse and offer an explanation.				
4	If a friend of the opposite sex/ lover asked you to drink alcohol or an intoxicating drink, you would refuse, as it may lead to unprotected sex and pregnancy.				
5	If friend of the opposite sex/ lover ask to hug/kiss your cheek, you would allow as you see it as a friendly act.				

Part 3.5: Self-management for preventing unintended pregnancy (5 items)

No	Issue	Strongly agree	Agree	Not sure	Disagree
1	You have planned your lifestyle to prevent pregnancy.				
2	You have set your goal in terms of abstinence.				
3	You can control and manage your sex drive to meet your goal to prevent pregnancy.				
4	You have reviewed your actions to meet your goal to prevent pregnancy.				
5	You have adjusted your environment to control your sex drive.				

Part 3.6: Media and information literacy in relation to prevent unintended pregnancy (5 items)

No	Issue	Strongly agree	Agree	Not sure	Disagree
1	You have verified information and the accuracy of the pregnancy prevention product before buying.				
2	When you see an advertisement for beauty enhancement to attract the opposite sex, you would search for additional information to verify its accuracy before buying.				
3	You would consider the benefits and negative consequences before accepting information about prevent unintended pregnancy from the media.				
4	You would evaluate messages received from the media regarding prevent unintended pregnancy before transferring that information to others.				
5	You would analyze the content and accuracy of information received from the media before deciding to prevent unintended pregnancy.				

Part 4: Behaviors to prevent unintended pregnancy

Instruction Please answer the question by fill the √ mark in the given space to reflect the level of practice as truthful as possible.

No	Issue	Always	Very often	Some times	Rarely	Never
1	If your friend of the opposite sex asks you to the entertainment place, you will accept the invitation.					
2	When you are alone with your friend of the opposite sex you will not consume alcoholic drink.					
3	Your friend of the opposite sex often asks you to look at books/magazines/cartoons/videos containing sexual content.					
4	You have met a friend of the opposite sex at a location unseen by others.					
5	You cohabit with a friend of the opposite sex.					
6	You wear unprovocative clothes when interact with the opposite sex.					

Part 4: Behaviors to prevent unintended pregnancy

Instruction Please answer the question by fill the √ mark in the given space to reflect the level of practice as truthful as possible.

No	Issue	Always	Very often	Some times	Rarely	Never
7	You can reject the request to have sex.					
8	You allow friends of the opposite sex to hold your hand to express affection.					
9	You have hobbies to distract you from your sex drive.					
10	You can negotiate with your sex partner to use a condom.					
11	When you are sexually aroused, you would masturbate.					
12	You will convince your girlfriend/boyfriend not to have sex during while attending university.					
13	You have to ask your sex partner to use a condom before having sex.					
14	You have taken the emergency contraceptive pill after having sex.					

Part 4: Behaviors to prevent unintended pregnancy

Instruction Please answer the question by fill the √ mark in the given space to reflect the level of practice as truthful as possible.

No	Issue	Always	Very often	Some times	Rarely	Never
15	You have yourself bought medication or equipment to prevent pregnancy.					
16	You request your sex partner to coitus interruptus to prevent pregnancy.					
17	Your prevent pregnancy by counting the date (7 days before and 7 days after).					
18	When you have problem regarding the use of contraceptive pill, you usually seek consultation from your parents.					

Appendix B

Questionnaire No. .....

Questionnaire (Phase 2)

Effects of the "Sex Must Safe" program on health literacy intention and practice regarding condom and emergency contraceptive pill uses among female university students in Chon Buri province, Thailand.

Instruction: This questionnaire is designed to determine the effects of the "sex must safe" program on health literacy intention and practice regarding condom and emergency contraceptive pill uses among female university students in Chon Buri province, Thailand. Data collected from this study will be used to plan, to solve problems, to offer guidance, and to promote health literacy, appropriate condom use behavior, and correct use of the emergency contraceptive pill. Your kind cooperation is requested in completing the questionnaire. Please answer all of the following 7 parts (112 items).

Part 1: Socio demographic characteristics (7 items)

Part 2: Sexual activity (15 items)

Part 3: Knowledge of condoms and emergency contraceptive pills (12 items)

Part 4: Attitudes to the use of condoms and emergency contraceptive pills (12 items)

Part 5: Self-efficacy and expectations in using condoms and the emergency contraceptive pill (12 items)

Part 6: Social and environmental factors in using condoms and the emergency contraceptive pill (17 items)

Part 7: Health literacy in the use of condoms and the emergency contraceptive pill (38 items)

Part 8: Intentions in relation to condoms and the emergency contraceptive pill (6 items)

Part 9: Practice in relation to condoms and the emergency contraceptive pill (2 items)

1. Please complete every item of the questionnaire as fully as possible. The time needed for questionnaire completion is about 20 minutes.

2. After completing the questionnaire, kindly place it in the box provided by the researcher.

3. Data collected from this questionnaire will be treated as confidential; in any future presentation, the information will be revealed in summary format only.

Part 1: Socio demographic characteristics (7 items)

No	Question	Answer
1	What is your current age?	… years (If more than 6 months in, the number should be rounded to 1 year.)
2	What is your current faculty of study?	Faculty.....
3	Which year are you in?	( )1. 1st ( )2. 2nd ( )3. 3rd ( )4. 4th
4	What is your current average grade (GPAX)?	( )1. Below 2.00 ( )2. 2.01–2.50 ( )3. 2.51–3.00 ( )4. 3.01–3.50 ( )5. Above 3.51
5	What is your parents' marital status?	( )1. Living together ( )2. Separated (Not divorced) ( )3. Divorced/Widowed ( )4. Other (please indicate).....
6	What is your average income?	.....Baht (per month)
7	What is your current housing situation (while studying at university)	( )1. Staying with parents ( )2. Staying with relatives ( )3. Staying with friend ( )4. Staying alone ( )5. Staying with boyfriend ( )6. Other (please indicate).....

Part 2: Sexual activity (15 items)

No	Question	Answer
1	Do you have a boyfriend?	( )1. Have boyfriend but not staying together ( )2. Have boyfriend and staying together
2	Beyond any boyfriend from question 1, do you have any temporary partner/s?	( )1. Yes (*please indicate umber*)…… ( )2. No
3	Have you had hugging and kissing experience?	( )1. Ever ( )2. Never
4	Have you had previous sexual intercourse (vaginal)?	( )1. Ever ( )2. Never
5	From question 4, have you had previous sexual intercourse (vaginal) with a temporary partner?	( )1. Ever ( )2. Never
6	In the past 6 months, have you drunk alcohol before having sexual intercourse (vaginal)?	( )1. Ever ( )2. Never
7	In the past 6 months, have you used recreational substances before having sexual intercourse (vaginal)?	( )1. Ever ( )2. Never
8	In the past 6 months, with whom have you had sexual intercourse (vaginal)?	( )1. Have not had sex in the past year. ( )2. Having sex with partner of the opposite sex ( )2.1 Boyfriend ( )2.2 Friend ( )2.3 Acquaintance ( )2.4 Sex worker ( )2.5 Other (*please indicate*)……

Part 2: Sexual activity (continued)

No	Question	Answer
9	Do you take the emergency contraceptive pill?	( )1. Ever ( )1.1 Have taken less than or up to 4 pills per month ( )1.2 Have taken more than 4 pills per month ( )2. Never (*If the answer is Never, please go to question 13*.)
10	How do you take the emergency contraceptive pill? (More than one answer is possible.)	( )1. Before sexual intercourse (vaginal) ( )1.1 Have taken 1 pill before having sex ( )1.2 Have taken 2 pills before having sex ( )2. After sexual intercourse (vaginal) ( )2.1 Have taken 1 pill immediately after having sex ( )2.2 Have taken 2 pills immediately after having sex ( )3. Other (*please indicate*).....
11	Why do you take the emergency contraceptive pill**?**	( )1. Being forced ( )2. Having unexpected sex ( )3. Failure of contraception by other methods (for example, condom leakage or break, forgot to take contraceptive pill) (21/28 pills) ( )4. Do not regularly have sex with boyfriend. ( )5. Other (*please indicate*).....

Part 2: Sexual activity (continued)

No	Question	Answer
12	Have you had side effects as a result of taking the emergency contraceptive pill**?**	( )1. Never ( )2. Having side effect/s (*More than one answer is possible*) ( ) 2.1 Nausea ( ) 2.2 Vomiting ( ) 2.3 Dizziness ( ) 2.4 *Menstrual* spotting ( ) 2.5 Other (*please indicate*) ……
13	Do you use a condom during sexual intercourse?	( )1. Ever ( )2. Never (*If the answer is Never, please go to Part 3*)
14	Why do you use a condom**?**	( ) 1. To prevent sexually transmitted diseases/ AIDS ( ) 2. To prevent pregnancy ( ) 3. Because boyfriend/sex partner requires this ( ) 4. Mistrust of boyfriend/sex partner ( ) 5. Other (*please indicate*) ……..
15	Have you had side effect/s from using condoms?	( ) 1. Never had side effects ( ) 2. Had side effects ( ) 2.1 Skin itching ( ) 2.2 Rash ( ) 2.3 Other (*please indicate*) ……..

Part 3: Knowledge of condoms and the emergency contraceptive pill (12 items)

No	Issue	Correct	Incorrect	Not sure
1	The emergency contraceptive pill has the same ingredients as the oral contraceptive pill (21 pills or 28 pills).			
2	The emergency contraceptive pill will be effective if taken within 72 hours after having sexual intercourse. The second pill must be taken 12 hours after taking the first pill.			
3	The emergency contraceptive pill will be effective if taken before having sex.			
4	Side effects of the emergency contraceptive pill include nausea, vomiting, or *menstrual* spotting.			
5	The emergency contraceptive pill can prevent pregnancy in 100% of cases.			
6	The emergency contraceptive pill will be effective if the first pill is taken immediately after having unprotected sex.			
7	Use of a condom every time when having sex can prevent pregnancy.			
8	Use of a condom can prevent all sexual transmitted diseases.			
9	A condom has fewer side effects than other methods of contraception.			
10	Using double condoms during sexual intercourse will increase efficiency of protection.			

Part 3: Knowledge of condoms and the emergency contraceptive pill (continued)

No	Issue	Correct	Incorrect	Not sure
11	Use of a condom every time during sexual intercourse can prevent HIV/AIDS.			
12	Oil or oil-based lubricants such as cooking oil, skin cream etc. can be used in combination with a condom.			

Part 4: Attitudes to the use of condoms and the emergency contraceptive pill (12 items)

No	Issue	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
1	It is appropriate to use a condom with a temporary sex partner.					
2	It is embarrassing to buy condoms yourself.					
3	Using a condom with a boyfriend/lover means you do not trust each other.					
4	Using a condom during sexual intercourse reduces sexual pleasure.					
5	Carrying a condom with you means that you are aware of self-protection.					

Part 4: Attitudes to the use of condoms and the emergency contraceptive pill (continued)

No	Issue	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
6	Female teenagers who have pre-marital sexual relationships should use a condom every time they have sex.					
7	Using the emergency contraceptive pill indicates a lack of sexual responsibility.					
8	Using the emergency contraceptive pill promotes promiscuity.					
9	Use of the emergency contraceptive pill can cause sexually-transmitted diseases or increase chances of HIV infection (because no condom is used).					
10	The emergency contraceptive pill may affect my brain.					
11	The emergency contraceptive pill may affect my body.					
12	I have a concern about the possible side effect/s of using the emergency contraceptive pill.					

Part 5: Self-efficacy and expectations in using condoms and the emergency contraceptive pill (12 items)

No	Issue	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
1	I am confident that I will not forget to use a condom even though I may be drunk.					
2	If my sex partner does not want to use a condom during sexual intercourse, it is easy for me to convince him of the necessity to use it.					
3	I am confident that I can use a condom without losing any sexual pleasure.					
4	I am confident in my ability to use a condom correctly.					
5	I am confident that I can remove and dispose of a condom correctly.					
6	I am not confident about buying condoms myself because of embarrassment.					

Part 5: Self-efficacy and expectations in using condoms and the emergency contraceptive pill (continued)

No	Issue	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
7	I am confident that I will not forget to bring a condom with me when I need it.					
8	I am confident that I will not forget to take the emergency contraceptive pill even though I may be drunk.					
9	I am not confident about inquiring from an expert about the method and how to take the emergency contraceptive pill.					
10	I am confident in my ability to use the emergency contraceptive pill correctly.					
11	I am not confident about buying the emergency contraceptive pill myself because of embarrassment.					
12	I am confident that I will not forget to bring the emergency contraceptive pill with me when I need it.					

Part 6: Social and environmental factors in using condoms and the emergency contraceptive pill (17 items)

No	Issue	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
Influence of peer norms						
1	Friends can influence you in deciding whether to use a condom.					
2	Friends can influence you in deciding whether to take the emergency contraceptive pill.					
3	Friends can influence you in deciding whether to use a condom every time you have sexual intercourse.					
4	If you do not have other methods of birth control, your friends will encourage you to use the emergency contraceptive pill.					
5	A friend is the person who manages to find or provide you with a condom and/or the emergency contraceptive pill.					
6	Receiving information from media encourages you to use a condom.					
7	Receiving information from media encourages you to use the emergency contraceptive pill.					

Part 6: Social and environmental factors in using condoms and the emergency contraceptive pill (continued)

No	Issue	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
social media influence						
8	Media help you to learn how to use a condom.					
9	Media help you to learn how to use the emergency contraceptive pill.					
10	Media do not make you embarrassed to buy condoms or the emergency contraceptive pill.					
11	After receiving information from the media, you have the courage to take condoms and the emergency contraceptive pill with you.					
Access to contraceptives/pill						
12	Condoms are easily accessible.					
13	Condoms are affordable for me.					
14	I can always find a condom when I need it.					
15	The emergency contraceptive pill is easily accessible.					
16	The emergency contraceptive pill is affordable.					
17	I can find the emergency contraceptive pill when I need it.					

Part 7: Health literacy in the use of condoms and the emergency contraceptive pill (38 items)

Part 7.1: Access to health information and health services for condom and emergency contraceptive use (7 items)

Please respond as truthfully as possible by placing a √ mark in the space reflecting level of action.

No	Issue	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
1	If you wish to access information about condoms or the emergency contraceptive pill, you can select the appropriate source of information immediately.					
2	You have been taught by experts about selecting reliable sources of information on condoms and the emergency contraceptive pill.					
3	When you need to obtain information on condoms and the emergency contraceptive pill, you are able to search for accurate and up-to-date information from reliable sources.					

Part 7.1: Access to health information and health services to condom and emergency contraceptive use (continued)

Please respond as truthfully as possible by placing a √ mark in the space reflecting level of action.

No	Question	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
4	You have verified the accuracy of information about condoms and the emergency contraceptive pill to confirm your own understanding.					
5	When you need information about condoms and the emergency contraceptive pill, you ask an expert for correct and up-to-date information.					
6	You usually have difficulty in searching for information from different sources about condoms and the emergency contraceptive pill.					
7	You tend to believe information about condoms and the emergency contraceptive pill even though you have not verified the reliability of the source.					

Part 7.2: Cognitive health in relation to condom and emergency contraceptive use (7 items)

No	Issue	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
1	When a condom has slipped or broken during sexual intercourse, it is advisable to take the emergency contraceptive pill immediately to prevent pregnancy.					
2	Double condoms used during sexual intercourse will be easily torn and broken.					
3	Using a condom can prevent pregnancy and sexually transmitted diseases.					
4	Condom allergy can happen to any woman.					
5	The emergency contraceptive pill must be taken 12 hours before sexual intercourse.					
6	Emergency contraceptive pills can prevent pregnancy in 100% of cases.					
7	Taking more than 4 pills per month will adversely affect women's health.					

Part 7.3: Communication skills for enhancing condom and emergency contraceptive use (6 items)

No	Issue	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
1	You do not quite understand when reading material about the use of condoms and the emergency contraceptive pill.					
2	You speak openly with friends and try to make others understand about pregnancy prevention in relation to taking the emergency contraceptive pill, side effects of taking the emergency contraceptive pill, and how to use the emergency contraceptive pill.					
3	You can convey information about the use of condoms and the emergency contraceptive pill through speaking and writing to make others understand.					
4	You can convince others to accept advice about the use of condoms and the emergency contraceptive pill.					

Part 7.3: Communication skills for enhancing condom and emergency contraceptive use (continued)

No	Issue	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
5	You can convince others to see the significance of using condoms and the emergency contraceptive pill.					
6	You can communicate in writing how to use condoms and the emergency contraceptive pill.					

Part 7.4: Decision-making skills for appropriate use of condoms and the emergency contraceptive pill (6 items)

No	Issue	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
1	When your boyfriend/lover does not use a condom while having sexual intercourse, you would agree.					
2	If your boyfriend/lover asked you to have sex without a condom, you would refuse.					
3	You have assessed the benefits and disadvantages of the condom before use.					

Part 7.4: Decision-making skills for appropriate use of condoms and the emergency contraceptive pill (continued)

No	Issue	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
4	Following unplanned sexual intercourse, you would take the emergency contraceptive pill immediately to prevent pregnancy.					
5	If your boyfriend/lover recommended using a condom, you would refuse and explain.					
6	If your friend said that using the emergency contraceptive pill is common, you would require your friend to explain and discuss the reasons for using the emergency contraceptive pill.					

Part 7.5: Self-management of condom and contraceptive pill use (6 items)

No	Issue	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
1	You have never planned your lifestyle in terms of condom/emergency contraceptive pill use.					
2	You have set your goals in terms of condom/emergency contraceptive pill use.					

Part 7.5: Self-management of condom and contraceptive pill use (continued)

No	Issue	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
3	You have controlled and managed yourself in terms of condom/ emergency contraceptive pill use.					
4	You have never reviewed your actions in relation to your goals for using condoms/emergency contraceptive pill as planned.					
5	You prepare for condom/emergency contraceptive pill use every time.					
6	You have taken action as planned to use a condom/emergency contraceptive pill.					

Part 7.6: Media and information literacy in relation to condom and emergency contraceptive pill use (6 items)

No	Issue	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
1	You have not verified the accuracy of information on the condom or emergency contraceptive pill package before buying.					

Part 7.6: Media and information literacy in relation to condom and emergency contraceptive pill use (continued)

No	Issue	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
2	When you see an advertisement for condoms or the emergency contraceptive pill, you search for additional information to verify accuracy before buying.					
3	You would consider the benefits and negative consequences before accepting information about condoms and the emergency contraceptive pill from the media.					
4	You would evaluate messages received from the media regarding condom and emergency contraceptive pill use before transferring that information to others.					
5	You would analyze the content and accuracy of information received from the media before deciding to use condoms or the emergency contraceptive pill.					

Part 7.6: Media and information literacy in relation to condom and emergency contraceptive pill use (continued)

No	Issue	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
6	You would conduct a comparative analysis based on information from the media about condoms and the emergency contraceptive pill before deciding to buy.					

Part 8: Intentions in relation to condoms and the emergency contraceptive pill (6 items)

No	Issue	Very likely	Likely	Neutral	Unlikely	Very unlikely
1	In the future, if you have sexual intercourse, you intend to use a condom.					
2	If it is impossible for your boyfriend to use a condom, you intend to refrain from having sex with him.					
3	When your boyfriend does not want to use a condom, you would insist that he must use it.					
4	In the future, if you have unexpected sexual intercourse, you intend to take the emergency contraceptive pill.					

Part 8: Intentions in relation to condoms and the emergency contraceptive pill (continued)

No	Issue	Very likely	Likely	Neutral	Unlikely	Very unlikely
5	If it is impossible to take the emergency contraceptive pill, you intend to refrain from having sex with your boyfriend.					
6	Even when your boyfriend does not want you to take the emergency contraceptive pill, you intend to take it.					

Part 9: Practice in relation to condom and emergency contraceptive pill use (2 items)

No	Question	Always	Very often	Sometimes	Rarely	Never
How often did you use these contraceptive methods in the last three months?						
1	Condom					
2	Emergency contraceptive pill					

Appendix C

เลขที่แบบสอบถาม .....

แบบสอบถาม ปัจจัยที่ส่งผลต่อการคุมกำเนิดของนิสิตนักศึกษาในมหาวิทยาลัย จังหวัดชลบุรี ประเทศไทย

คำชี้แจง แบบสอบถามนี้จัดทำขึ้นเพื่อวิเคราะห์ปัจจัยที่ส่งผลต่อการคุมกำเนิดของนิสิตนักศึกษาในมหาวิทยาลัย จังหวัดชลบุรี โดยข้อมูลที่ได้จากการศึกษาจะนำไปใช้สำหรับ**ข้อมูลที่ได้จากการศึกษาไปใช้สำหรับการวางแผนแก้ไขปัญหา สร้างเสริมความเข้าใจ และส่งเสริมให้มีพฤติกรรมที่เหมาะสมตรงกับความต้องการของนิสิตนักศึกษา** จึงใคร่ขอความร่วมมือจากท่านในการตอบแบบสอบถามฉบับนี้ โดยแบบสอบถามประกอบด้วย 4 ส่วน จำนวน 78 ข้อ ดังนี้

ส่วนที่ 1 ปัจจัยส่วนบุคคล (10 ข้อ)
ส่วนที่ 2 ลักษณะและรูปแบบของพฤติกรรมทางเพศ (15 ข้อ)
ส่วนที่ 3 ความรอบรู้ด้านสุขภาพเพื่อการป้องกันก่อนวัยอันควร (35 ข้อ)
ส่วนที่ 4 พฤติกรรมการป้องกันการตั้งครรภ์ (18 ข้อ)

1. ขอความร่วมมือในการตอบแบบสอบถามให้ได้ข้อมูลครบถ้วนและให้ตอบทุกข้อ โดยจะใช้เวลาในการทำประมาณ 20 นาที
2. หลังจากทำแบบสอบถามเสร็จขอให้ทุกท่านนำแบบสอบถามใส่ในกล่องที่ผู้วิจัยเตรียมไว้ให้
3. ข้อมูลที่ได้จากแบบสอบถามนี้จะเก็บเป็นความลับและนำเสนอในภาพรวมเท่านั้น

<u>การแปลความหมาย</u>

ทุกครั้ง	หมายถึง	มีการปฏิบัติตามข้อความนั้นทุกครั้ง
บางครั้ง	หมายถึง	มีการปฏิบัติตามข้อความนั้นบางครั้ง
นาน ๆ ครั้ง	หมายถึง	มีการปฏิบัติตามข้อความนั้นไม่สม่ำเสมอนาน ๆ ครั้ง
ไม่ได้ปฏิบัติ	หมายถึง	ไม่เคยมีการปฏิบัติตามข้อความนั้นเลย

ขอบคุณสำหรับความร่วมมือในการตอบแบบสอบถาม
นางสาวเสาวนีย์ ทองนพคุณ
นิสิตระดับปริญญาเอก (สาธารณสุขศาสตร์ดุษฎีบัณฑิต)
วิทยาลัยวิทยาศาสตร์สาธารณสุข จุฬาลงกรณ์มหาวิทยาลัย

ส่วนที่ 1 ปัจจัยส่วนบุคคล

<u>คำชี้แจง</u> กรุณาใส่เครื่องหมาย ☑หน้าข้อความและเติมคำในช่องว่างที่ตรงกับความเป็นจริงของท่าน

1. ปัจจุบันท่านอายุ ..... ปี (6 เดือนขึ้นไปนับเป็น 1 ปี)
2. แผนการศึกษา
   ☐1. ภาคปกติ ☐2. ภาคพิเศษ
3. ท่านเรียนอยู่ชั้นปีใด
   ☐1. ชั้นปีที่ 1 ☐2. ชั้นปีที่ 2 ☐3. ชั้นปีที่ 3 ☐4. ชั้นปีที่ 4
   ☐5. ชั้นปีที่ 5 ☐6. ชั้นปีที่ 6 ☐7. อื่นๆ โปรดโปรดระบุ.....
4. เกรดเฉลี่ยสะสม (GPAX) ของท่านในปัจจุบัน
   ☐1. เกรดเฉลี่ย ต่ำกว่า 2.00 ☐2. เกรดเฉลี่ย 2.00 – 2.49
   ☐3. เกรดเฉลี่ย 2.50 – 2.99 ☐4. เกรดเฉลี่ย 3.00 -3.49
   ☐5. เกรดเฉลี่ย 3.50 ขึ้นไป
5. สถานภาพสมรสของบิดามารดา
   ☐1. อยู่ด้วยกัน ☐2. แยกกันอยู่ (ไม่ได้หย่า)
   ☐3. หย่าร้าง ☐4. หม้าย
   ☐5. อื่นๆ โปรดระบุ.....
6. ในช่วง 1 ปีที่ผ่านมาความสัมพันธ์ของท่านกับผู้ปกครองเป็นอย่างไร
   ☐1. ดีมาก ☐ 2. ดี ☐ 3. ปานกลาง ☐ 4. น้อย
7. การพักอาศัยของท่านในปัจจุบัน (ขณะกำลังศึกษาในมหาวิทยาลัย)
   ☐1. อยู่กับบิดาและมารดา ☐2. อยู่กับบิดา
   ☐3. อยู่กับมารดา ☐4. อยู่กับญาติ
   ☐5. อยู่คนเดียวตามลำพัง ☐6. อยู่กับเพื่อน
   ☐7. อยู่กับคู่รัก/แฟน ☐8. อื่นๆ โปรดระบุ.....
8. จากข้อ 8. ข้อใดคือลักษณะที่พักอาศัยของท่านในปัจจุบัน
   ☐ 1. หอพักในมหาวิทยาลัย ☐ 2. หอพักนอกมหาวิทยาลัย ☐ 3. บ้านเช่า
   ☐ 4. บ้านผู้ปกครอง/ตัวเอง ☐ 5. คอนโด/ อพาร์ทเมนท์
   ☐ 6. อื่นๆ โปรดระบุ.....
9. รายรับเฉลี่ยของท่าน (ทุกแหล่งรายรับ) ..... บาท (ต่อเดือน)
10. เงินที่ท่านได้รับในแต่ละเดือนพอใช้หรือไม่
    ☐ 1. พอใช้เหลือเก็บ ☐2. พอใช้ ☐3. ไม่พอใช้ แล้วท่านทำอย่างไร.....

ส่วนที่ 2 ลักษณะและรูปแบบของพฤติกรรมทางเพศ

1. การแสดงออกทางเพศของท่าน

☐1. รักต่างเพศ (Heterosexual) ☐2. รักเพศเดียวกัน (Homosexual)

☐3. รักสองเพศ (Bisexual) ☐4. อื่นๆ โปรดระบุ.....

2. การมีคู่รัก/แฟน

☐1. มีคู่รัก/แฟน แต่ไม่ได้อาศัยอยู่ร่วมกัน ☐2. มีคู่รัก/แฟน และอาศัยอยู่ร่วมกัน

☐3. ยังไม่มีคู่รัก/แฟน

3. นอกจากแฟนหรือคู่รักที่ระบุในข้อ 2 แล้ว ท่านมีบุคคลอื่นที่คบกันแบบแฟนหรือคู่รัก **(กิ๊ก)** อีกหรือไม่

☐ 1. มี โปรดโปรดระบุจำนวน.....คน ☐ 2. ไม่มี

4. ท่านพอใจที่จะมีเพศสัมพันธ์กับเพศใด

☐1. ชายเท่านั้น ☐2. ชายเป็นส่วนใหญ่

☐3. หญิงเท่านั้น ☐4. หญิงเป็นส่วนใหญ่

☐5. หญิงและชายเท่าๆ กัน ☐6. อื่นๆ โปรดระบุ.....

5. ท่านเคยกอด/ จูบ หรือไม่

☐ 1. เคย ☐2. ไม่เคย

6. ท่านเคยมีเพศสัมพันธ์ (ทางช่องคลอด) กับเพศชายหรือไม่ (ถ้าไม่เคยให้ข้ามไปทำส่วนที่ 3)

☐ 1. เคยมีเพศสัมพันธ์ ☐2. ไม่เคยมีเพศสัมพันธ์

7. จากข้อ 6 ท่านมีเพศสัมพันธ์กับบุคคลอื่น **(กิ๊ก)** หรือไม่

☐ 1. มีเพศสัมพันธ์ ☐ 2. ไม่มีเพศสัมพันธ์

8. ท่านเคยดื่มเครื่องดื่มแอลกอฮอล์ ก่อนมีเพศสัมพันธ์หรือไม่

☐1. เคย ☐2. ไม่เคย

9. ท่านใช้สารเสพติด (เช่น กัญชา ยาไอซ์ ยาอี เป็นต้น) ก่อนมีเพศสัมพันธ์หรือไม่

☐1. เคย ☐2. ไม่เคย

10. ในรอบ 1 ปีที่ผ่านมาท่านมีเพศสัมพันธ์กับใครบ้าง **(ตอบได้มากกว่า 1 ข้อ)**

☐ 1. ไม่มีเพศสัมพันธ์ในช่วง 1 ปีที่ผ่านมา

☐ 2. มีเพศสัมพันธ์กับเพศเดียวกัน

☐2.1 เป็นคู่รัก หรือแฟน ☐2.2 เป็นคนรู้จักคุ้นเคย/ เพื่อน

☐2.3 เป็นคนรู้จักผิวเผิน ☐2.4 เป็นคนที่ซื้อ/ ขายบริการ

☐2.5. อื่นๆ โปรดระบุ.....

☐ 3. มีเพศสัมพันธ์กับต่างเพศ

☐3.1 เป็นคู่รัก หรือแฟน ☐3.2 เป็นคนรู้จักคุ้นเคย/ เพื่อน

☐3.3 เป็นคนรู้จักผิวเผิน ☐3.4 เป็นคนที่ซื้อบริการ/ ขายบริการ

☐3.5. อื่นๆ โปรดระบุ.....

ส่วนที่ 2 ลักษณะและรูปแบบของพฤติกรรมทางเพศ

11. ท่านป้องกันการตั้งครรภ์ด้วยวิธีใดบ้าง (ตอบได้มากกว่า 1 ข้อ)

☐1. ถุงยางอนามัย ☐2. ยาคุมกำเนิด ☐3. ยาคุมกำเนิดฉุกเฉิน
☐4. การฉีดยาคุมกำเนิด ☐5. หลั่งภายนอก ☐6. ยาฝังคุมกำเนิด
☐7. ไม่เคยป้องกันการตั้งครรภ์ ☐8. อื่น ๆ โปรดระบุ.....

12. บุคคลใดเป็นผู้จัดหายา/ อุปกรณ์ในการป้องกันการตั้งครรภ์

☐1. ตนเอง ☐2. คู่รัก หรือแฟน ☐3. ผู้ปกครอง
☐4. คนรู้จักคุ้นเคย/ เพื่อน ☐5. คนรู้จักผิวเผิน ☐6. คนที่ซื้อ/ ขายบริการ
☐7. อื่นๆ โปรดโปรดระบุ.....

13. ท่านคิดว่า ในปัจจุบันยา/ อุปกรณ์ในการป้องกันการตั้งครรภ์เป็นสิ่งที่หาได้ง่าย

☐1. เห็นด้วย ☐2. ไม่เห็นด้วย ☐3. ไม่แน่ใจ

14. ท่านปรึกษาเรื่องวิธีการป้องกันการตั้งครรภ์จากแหล่งใดมากที่สุด (ตอบเพียง 1 ข้อ)

☐1. คู่รัก หรือแฟน ☐2. คนรู้จักคุ้นเคย/ เพื่อน ☐3. ผู้ปกครอง
☐4. บุคลากรทางการแพทย์ ☐5. อินเตอร์เน็ต ☐6. โทรทัศน์/ วิทยุ
☐7. หนังสือ/ แผ่นพับ ☐8. อื่นๆ โปรดโปรดระบุ.....

15. ท่านเคยได้รับผลกระทบจากการมีเพศสัมพันธ์หรือไม่ (ตอบได้มากกว่า 1 ข้อ)

☐1. ไม่เคย
☐2. เคย
☐2.1 ตั้งครรภ์ ☐2.2 แท้ง ☐2.3 ความผิดปกติที่อวัยวะเพศ เช่น คัน ผื่น เป็นต้น
☐2.4 โรคติดต่อทางเพศสัมพันธ์ ☐2.5 อื่นๆ โปรดระบุ.....

ส่วนที่ 3 ความรอบรู้ด้านสุขภาพเพื่อการป้องกันการตั้งครรภ์ก่อนวัยอันควร

ส่วนที่ 3.1 การเข้าถึงข้อมูลสุขภาพและบริการสุขภาพเพื่อป้องกันการตั้งครรภ์ก่อนวัยอันควร

จงตอบคำถามโดยใส่เครื่องหมาย √ ลงในช่องความถี่ในการปฏิบัติตามความเป็นจริง

คำถาม	ระดับ			
	เห็นด้วยมาก	เห็นด้วยปานกลาง	ไม่เห็นด้วย	ไม่เห็นด้วยมาก
1. เมื่อท่านต้องการข้อมูลเรื่องการป้องกันการตั้งครรภ์ ท่านเลือกแหล่งข้อมูลนั้นได้ทันที				
2. ท่านได้รับการสอนจากผู้มีความรู้เรื่องวิธีเลือกแหล่งข้อมูลที่น่าเชื่อถือเกี่ยวกับวิธีป้องกันการตั้งครรภ์				
3. เมื่อต้องการข้อมูลเกี่ยวกับการป้องกันการตั้งครรภ์ ท่านจะค้นหาจากแหล่งที่น่าเชื่อถือ จนได้ข้อมูลที่ถูกต้อง ทันสมัย				
4. ท่านมักเชื่อข้อมูลจากแหล่งข้อมูล แม้ไม่ได้ตรวจสอบความน่าเชื่อถือของแหล่งข้อมูลเกี่ยวกับการป้องกันการตั้งครรภ์				
5. ท่านตรวจสอบความถูกต้องของข้อมูลเกี่ยวกับวิธีการป้องกันการตั้งครรภ์เพื่อยืนยันความเข้าใจของตนเองให้ถูกต้อง				

ส่วนที่ 3.2 ความรู้ เข้าใจทางสุขภาพเพื่อป้องกันการตั้งครรภ์ก่อนวัยอันควร

คำชี้แจง กรุณาใส่เครื่องหมาย √ ในช่องที่ท่านคิดว่าถูกต้องที่สุด

คำถาม	ระดับ			
	เห็นด้วยมาก	เห็นด้วยปานกลาง	ไม่เห็นด้วย	ไม่เห็นด้วยมาก
1. การปฏิสนธิระหว่างไข่กับอสุจิทำให้เกิดการตั้งครรภ์ได้				
2. ยาคุมกำเนิดมีขายในร้านสะดวกซื้อ				
3. การดื่มแอลกอฮอล์เสี่ยงต่อการมีเพศสัมพันธ์โดยไม่ป้องกัน				

ส่วนที่ 3.2 ความรู้ เข้าใจทางสุขภาพเพื่อป้องกันการตั้งครรภ์ก่อนวัยอันควร (ต่อ)
คำชี้แจง กรุณาใส่เครื่องหมาย √ ในช่องที่ท่านคิดว่าถูกต้องที่สุด

คำถาม	ระดับ			
	เห็นด้วยมาก	เห็นด้วยปานกลาง	ไม่เห็นด้วย	ไม่เห็นด้วยมาก
4. การที่ถุงยางอนามัยแตกหรือหลุดในระหว่างการร่วมเพศ ควรรับประทานยาคุมกำเนิดฉุกเฉินทันทีเพื่อป้องกันการตั้งครรภ์				
5. เมื่อต้องอยู่ร่วมกันสองต่อสองกับเพื่อนต่างเพศ ผู้หญิงควรรักนวลสงวนตัว ผู้ชายควรให้เกียรติผู้หญิง				
6. การตั้งครรภ์ในวัยเรียนส่งผลกระทบต่อการเรียน				
7. วิธีการป้องกันการตั้งครรภ์ค้นหาได้จากอินเตอร์เนต				
8. การสวมถุงยางอนามัยเป็นวิธีการป้องกันการตั้งครรภ์ที่ดีที่สุด				
9. การหลั่งอสุจิภายนอกเป็นวิธีการป้องกันการตั้งครรภ์ที่มีประสิทธิภาพมากที่สุด				
10. การนับระยะปลอดภัย (หน้า 7 หลัง 7) เป็นวิธีการป้องกันการตั้งครรภ์ที่มีประสิทธิภาพ				

ส่วนที่ 3.3 การสื่อสารเพื่อเพิ่มความเชี่ยวชาญในการป้องกันการตั้งครรภ์ก่อนวัยอันควร

คำชี้แจง จงตอบคำถามโดยใส่เครื่องหมาย √ ลงในช่องความถี่ในการปฏิบัติตามความเป็นจริง

คำถาม	ระดับการเข้าถึงข้อมูล			
	เห็นด้วยมาก	เห็นด้วยปานกลาง	ไม่เห็นด้วย	ไม่เห็นด้วยมาก
1. ท่านไม่ค่อยเข้าใจ เมื่อท่านอ่านเอกสารเกี่ยวกับการปรับตัวทางเพศ				
2. ท่านพูดคุยอย่างเปิดเผยกับเพื่อนเกี่ยวกับการป้องกันการตั้งครรภ์ เช่น เรื่องการรับประทานยาคุมกำเนิด การสวมถุงยางอนามัย การหลีกเลี่ยงการมีเพศสัมพันธ์ ฯลฯ ให้ทุกคนมีความเข้าใจที่ถูกต้อง				
3. ท่านมีการแสดงออกทางการพูด อ่าน เขียน เกี่ยวกับการป้องกันการตั้งครรภ์ให้บุคคลอื่นเข้าใจ				
4. ท่านโน้มน้าวให้ผู้อื่นยอมรับการปฏิบัติตนเองในการป้องกันการตั้งครรภ์				
5. ท่านโน้มน้าวให้ผู้อื่นเห็นความสำคัญของการรักนวลสงวนตัวเพื่อป้องกันการตั้งครรภ์				

ส่วนที่ 3.4 ทักษะการตัดสินใจเลือกปฏิบัติที่ถูกต้องเพื่อป้องกันการตั้งครรภ์

คำชี้แจง จงตอบคำถามโดยใส่เครื่องหมาย √ ลงในช่องความถี่ในการปฏิบัติตามความเป็นจริง

คำถาม	ระดับการเข้าถึงข้อมูล			
	เห็นด้วยมาก	เห็นด้วยปานกลาง	ไม่เห็นด้วย	ไม่เห็นด้วยมาก
1. ถ้าแฟน/คู่รักของท่านขอมีเพศสัมพันธ์ด้วย ท่านจะยินยอม				
2. หากเพื่อนต่างเพศของท่าน ขอนอนค้างที่บ้านกับท่านด้วยท่านจะปฏิเสธ				
3. หากเพื่อนต่างเพศชวนท่านไปเที่ยวสองต่อสอง ท่านจะปฏิเสธโดยบอกเหตุให้ฟัง				

ส่วนที่ 3.4 ทักษะการตัดสินใจเลือกปฏิบัติที่ถูกต้องเพื่อป้องกันการตั้งครรภ์ (ต่อ)

คำชี้แจง จงตอบคำถามโดยใส่เครื่องหมาย √ ลงในช่องความถี่ในการปฏิบัติตามความเป็นจริง

คำถาม	ระดับการเข้าถึงข้อมูล			
	เห็นด้วยมาก	เห็นด้วยปานกลาง	ไม่เห็นด้วย	ไม่เห็นด้วยมาก
4. หากเพื่อนต่างเพศชวนท่านดื่มสุรา/ของมึนเมา ท่านจะปฏิเสธ เพราะอาจนำไปสู่การมีเพศสัมพันธ์โดยไม่ป้องกันการตั้งครรภ์ได้				
5. หากเพื่อนต่างเพศมาขอกอด/หอมแก้มท่าน ท่านจะยินยอมให้ทำ เพราะเห็นว่าเป็นเพื่อน				

ส่วนที่ 3.5 การจัดการเงื่อนไขทางสุขภาพของตนเองเพื่อป้องกันการตั้งครรภ์ก่อนวัยอันควร

คำชี้แจง จงตอบคำถามโดยใส่เครื่องหมาย √ ลงในช่องการปฏิบัติตามความเป็นจริง

คำถาม	ระดับการเข้าถึงข้อมูล			
	เห็นด้วยมาก	เห็นด้วยปานกลาง	ไม่เห็นด้วย	ไม่เห็นด้วยมาก
1. ท่านวางแผนในการดำเนินชีวิตเพื่อการป้องกันการตั้งครรภ์				
2. ท่านวางเป้าหมายในเรื่องการรักนวลสงวนตัว				
3. ท่านควบคุมและจัดการกับอารมณ์ทางเพศเพื่อป้องกันการตั้งครรภ์ตามเป้าหมายที่ได้วางไว้				
4. ท่านมีการทบทวนวิธีการปฏิบัติตนตามที่ได้ตั้งใจไว้เพื่อป้องกันการตั้งครรภ์				
5. ท่านปรับปรุงสภาพแวดล้อมรอบตนเอง เพื่อควบคุมความรู้สึกทางเพศ				

ส่วนที่ 3.6 ทักษะการรู้เท่าทันสื่อและสารสนเทศเพื่อป้องกันการตั้งครรภ์

จงตอบคำถามโดยใส่เครื่องหมาย √ ลงในช่องความถี่ในการปฏิบัติตามความเป็นจริง

คำถาม	ระดับการเข้าถึงข้อมูล			
	เห็นด้วยมาก	เห็นด้วยปานกลาง	ไม่เห็นด้วย	ไม่เห็นด้วยมาก
1. ท่านตรวจสอบข้อมูล ความถูกต้องของผลิตภัณฑ์เพื่อป้องกันการตั้งครรภ์จากหลายแหล่งก่อนตัดสินใจซื้อ				
2. เมื่อท่านเห็นโฆษณาเสริมความงามเพื่อดึงดูดเพศตรงข้าม ท่านจะหาข้อมูลเพิ่มเติมเพื่อตรวจสอบความถูกต้องก่อนตัดสินใจซื้อ				
3. ท่านคำนึงถึงข้อดี ข้อเสียก่อนตัดสินใจเลือกรับข้อมูลจากสื่อในเรื่องการป้องกันการตั้งครรภ์				
4. ท่านประเมินข้อความที่ได้จากสื่อเรื่องการป้องกันการตั้งครรภ์ก่อนถ่ายทอดให้กับบุคคลอื่น				
5. ท่านวิเคราะห์ ประเมินเนื้อหา ความถูกต้องของข้อมูลจากสื่อ ก่อนตัดสินใจปฏิบัติเพื่อป้องกันการตั้งครรภ์				

ส่วนที่ 4 พฤติกรรมการป้องกันการตั้งครรภ์

คำชี้แจง จงตอบคำถามโดยใส่เครื่องหมาย √ ลงในช่องความถี่ในการปฏิบัติตามความเป็นจริง

ข้อความ	ระดับการปฏิบัติ				
	ทุกครั้ง	บ่อยครั้ง	บางครั้ง	นานๆครั้ง	ไม่เคยเลย
1. หากเพื่อนต่างเพศชวนไปเที่ยวสถานเริงรมย์ ท่านจะไปด้วย					
2. เมื่ออยู่กับเพื่อนต่างเพศสองต่อสอง ท่านจะไม่รับประทานเครื่องดื่มที่มีส่วนผสมของแอลกอฮอล์					
3. เพื่อนต่างเพศของท่านมักชวนอ่านหนังสือ/นิตยสาร/การ์ตูน/ วีดีโอที่มีเนื้อหาเกี่ยวกับการมีเพศสัมพันธ์					
4. ท่านนัดเจอกับเพื่อนต่างเพศในที่ลับตาคน					
5. ท่านพักอาศัยกับเพื่อนต่างเพศตามลำพัง					
6. ท่านแต่งกายมิดชิดเมื่ออยู่กับเพศตรงข้าม					

ส่วนที่ 4 พฤติกรรมการป้องกันการตั้งครรภ์ (ต่อ)

คำชี้แจง จงตอบคำถามโดยใส่เครื่องหมาย √ ลงในช่องความถี่ในการปฏิบัติตามความเป็นจริง

ข้อความ	ระดับการปฏิบัติ				
	ทุกครั้ง	บ่อยครั้ง	บางครั้ง	นานๆครั้ง	ไม่เคยเลย
7. ท่านสามารถปฏิเสธการมีเพศสัมพันธ์ได้					
8. ท่านยินยอมให้เพื่อนต่างเพศจับมือถือแขนเพื่อแสดงความรักต่อกัน					
9. ท่านหางานอดิเรกเพื่อเบี่ยงเบนความต้องการทางเพศของตนเอง					
10. ท่านสามารถเจรจาต่อรองกับคู่นอนให้สวมถุงยางอนามัย					
11. เมื่อมีความต้องการทางเพศท่านจะสำเร็จความใคร่ด้วยตนเอง					
12. ท่านจะเจรจาต่อรองกับแฟน/คู่รักไม่ให้มีเพศสัมพันธ์ในวัยเรียน					
13. ท่านให้คู่นอนสวมถุงยางอนามัยก่อนมีเพศสัมพันธ์					
14. ท่านรับประทานยาคุมกำเนิดฉุกเฉินภายหลังการมีเพศสัมพันธ์					
15. ท่านซื้อยา/ อุปกรณ์เพื่อการป้องกันการตั้งครรภ์ด้วยตนเอง					
16. ท่านให้คู่นอนหลั่งอสุจิภายนอกช่องคลอดเพื่อป้องกันการตั้งครรภ์					
17. ท่านป้องกันการตั้งครรภ์โดยการนับวัน (หน้า 7 หลัง 7)					
18. เมื่อมีปัญหาเกี่ยวกับการใช้ยาคุมกำเนิด ท่านมักขอคำปรึกษาจากผู้ปกครอง					

***** ขอบคุณทุกท่านได้สละเวลาในการตอบแบบสอบถามครั้งนี้*****

Appendix D

เลขที่แบบสอบถาม .....

แบบสอบถาม (PHASE 2)

แบบสอบถาม เรื่อง "เรื่องเพศ ต้องปลอดภัย" ต่อความฉลาดทางสุขภาพ ความตั้งใจ และการปฏิบัติในการใช้ถุงยางอนามัยและยาคุมกำเนิดฉุกเฉินของนิสิตนักศึกษาหญิงในมหาวิทยาลัย จังหวัดชลบุรี ประเทศไทย

คำชี้แจง แบบสอบถามนี้จัดทำขึ้นเพื่อวิเคราะห์ประสิทธิผลของโปรแกรม "เรื่องเพศ ต้องปลอดภัย" ต่อความฉลาดทางสุขภาพ ความตั้งใจ และการปฏิบัติในการใช้ถุงยางอนามัยและยาคุมกำเนิดฉุกเฉินของนิสิตนักศึกษาหญิงในมหาวิทยาลัย จังหวัดชลบุรี ประเทศไทย โดยข้อมูลที่ได้จากการศึกษาจะนำไปใช้สำหรับการวางแผน แก้ไขปัญหา ให้คำแนะนำ และส่งเสริมให้มีความรอบรู้ด้านสุขภาพและพฤติกรรมการใช้ถุงยางอนามัยและยาคุมกำเนิดฉุกเฉินที่ถูกต้องและเหมาะสมจึงใคร่ขอความร่วมมือจากท่านในการตอบแบบสอบถามฉบับนี้ โดยแบบสอบถามประกอบด้วย 9 ส่วน จำนวน 121 ข้อ ดังนี้

ส่วนที่ 1 ลักษณะทางประชากรและสังคม (7 ข้อ)

ส่วนที่ 2 กิจกรรมทางเพศ (15 ข้อ)

ส่วนที่ 3 ความรู้เกี่ยวกับถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน (12 ข้อ)

ส่วนที่ 4 ทัศนคติที่มีต่อถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน (12 ข้อ)

ส่วนที่ 5 การรับรู้อำนาจแห่งตนและการกำกับตนเองต่อการใช้ถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน (12 ข้อ)

ส่วนที่ 6 ปัจจัยทางด้านสังคมและสิ่งแวดล้อมที่เกี่ยวข้องกับการใช้ถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน (17 ข้อ)

ส่วนที่ 7 ความรอบรู้ด้านสุขภาพเพื่อการใช้ถุงยางอนามัยและยาคุมกำเนิด (38 ข้อ)

ส่วนที่ 8 ความตั้งใจและการปฏิบัติต่อการใช้ถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน (6 ข้อ)

ส่วนที่ 9 การปฏิบัติต่อการใช้ถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน (2 ข้อ)

1. ขอความร่วมมือในการตอบแบบสอบถามให้ได้ข้อมูลครบถ้วนและให้ตอบทุกข้อ โดยจะใช้เวลาในการทำประมาณ 35 นาที

2. หลังจากทำแบบสอบถามเสร็จ ขอให้ทุกท่านส่งสอบถามมาตามชื่อที่อยู่ที่ระบุไว้ในซองจดหมาย

3. ข้อมูลที่ได้จากแบบสอบถามนี้จะเก็บเป็นความลับและนำเสนอในภาพรวมเท่านั้น

ขอบคุณสำหรับความร่วมมือในการตอบแบบสอบถาม
นางสาวเสาวนีย์ ทองนพคุณ
นิสิตระดับปริญญาเอก (สาธารณสุขศาสตร์ดุษฎีบัณฑิต)
วิทยาลัยวิทยาศาสตร์สาธารณสุข จุฬาลงกรณ์มหาวิทยาลัย

ส่วนที่ 1 ลักษณะทางประชากรและสังคม 7 ข้อ

ข้อ	คำถาม	คำตอบ
1	อายุของท่าน	อายุ.....ปี (มากกว่า 6 เดือน นับเป็น 1 ปี)
2	ท่านศึกษาอยู่ในคณะใด	คณะ.....
3	กำลังศึกษาอยู่ในระดับใด	( ) 1.ชั้นปีที่ 1 ( ) 2.ชั้นปีที่ 2 ( ) 3.ชั้นปีที่ 3 ( ) 4.ชั้นปีที่ 4
4	ผลการเรียนของท่าน(เกรดเฉลี่ย) ในภาคการศึกษาที่ผ่านมาอยู่ในระดับใด	( ) 1. ต่ำกว่า 2.00 ( ) 2. อยู่ในช่วง 2.01-2.50 ( ) 3. อยู่ในช่วง 2.51-3.00 ( ) 4. สูงกว่า 3.01-3.50 ( ) 5. สูงกว่า 3.51
5	สถานภาพการสมรสของพ่อแม่ของท่านใน ปัจจุบัน คือ	( ) 1. อยู่ด้วยกัน ( ) 2. หม้าย ( ) 3. หย่า หรือ แยก ( ) 4. อื่นๆ (โปรดระบุ).....
6	ท่านได้รับค่าใช้จ่ายต่อเดือนเป็นจำนวนเงิน เท่าใด	.....บาท/เดือน
7	ปัจจุบันที่พักอาศัยของท่านมีลักษณะ อย่างไร	( ) 1. พักกับพ่อแม่ ( ) 2. พักกับญาติ ( ) 3. พักกับเพื่อน ( ) 4. พักตามลำพัง ( ) 5. พักกับแฟน/ คู่รัก ( ) 6. อื่นๆ โปรดระบุ.....

ส่วนที่ 2 กิจกรรมทางเพศ 15 ข้อ

ข้อ	คำถาม	คำตอบ
1	การมีคู่รัก/แฟน	( )1. มีคู่รัก/แฟน แต่ไม่ได้อาศัยอยู่ร่วมกัน ( )2. มีคู่รัก/แฟน และอาศัยอยู่ร่วมกัน
2	นอกจากแฟนหรือคู่รักที่ระบุในข้อ 2 แล้ว ท่านมีบุคคลอื่นที่คบกันแบบแฟนหรือคู่รัก **(กิ๊ก)** อีกหรือไม่	( )1. มี โปรดโปรดระบุจำนวน.....คน ( )2. ไม่มี
3	ท่านเคยกอด/ จูบ กับแฟนหรือคู่รักหรือไม่	( )1. เคย ( )2. ไม่เคย
4	ท่านเคยมีเพศสัมพันธ์ (ทางช่องคลอด) กับ เพศชายหรือไม่	( )1. เคยมีเพศสัมพันธ์ ( )2. ไม่เคยมีเพศสัมพันธ์ (ข้ามไปทำส่วนที่ 3)

ส่วนที่ 2 กิจกรรมทางเพศ 15 ข้อ (ต่อ)

ข้อ	คำถาม	คำตอบ
5	จากข้อ 4 ท่านมีเพศสัมพันธ์กับบุคคลอื่น (**กิ๊ก**) หรือไม่	( )1. มีเพศสัมพันธ์ ( )2. ไม่มีเพศสัมพันธ์
6	**6 เดือนที่ผ่านมา** ท่านเคยดื่มเครื่องดื่มแอลกอฮอล์ก่อนมีเพศสัมพันธ์หรือไม่	( )1. เคย ( )2. ไม่เคย
7	**6 เดือนที่ผ่านมา** ท่านใช้สารเสพติด ก่อนมีเพศสัมพันธ์หรือไม่	( )1. เคย โปรดระบุ..... ( )2. ไม่เคย
8	**6 เดือนที่ผ่านมา** ท่านมีเพศสัมพันธ์กับใครบ้าง (ตอบได้มากกว่า 1 ข้อ)	( )1. ไม่มีเพศสัมพันธ์ในช่วง 6 เดือนที่ผ่านมา ( )2. มีเพศสัมพันธ์กับต่างเพศ ( )2.1 เป็นคู่รัก หรือแฟน ( )2.2 เป็นคนรู้จักคุ้นเคย/ เพื่อน ( )2.3 เป็นคนรู้จักผิวเผิน ( )2.4 เป็นคนที่ซื้อบริการ/ ขายบริการ ( )2.5 อื่นๆ โปรดระบุ.....
9	ท่านเคยรับประทานยาคุมกำเนิดฉุกเฉินหรือไม่	( ) 1. เคย ( )1.1 รับประทานน้อยกว่าหรือเท่ากับ 4 เม็ดต่อเดือน ( )1.2 รับประทานมากกว่า 4 เม็ดต่อเดือน ( ) 2. ไม่เคย (ข้ามไปข้อ 13)
10	ท่านเคยรับประทานยาคุมกำเนิดฉุกเฉินอย่างไร (ตอบได้มากกว่า 1 ข้อ)	( )1. ก่อนมีเพศสัมพันธ์ ( )1.1 รับประทาน 1 เม็ด ก่อนมีเพศสัมพันธ์ ( )1.2 รับประทาน 2 เม็ด ก่อนมีเพศสัมพันธ์ ( )2. หลังมีเพศสัมพันธ์ ( )2.1 รับประทาน 1 เม็ด ทันทีหลังมีเพศสัมพันธ์ และรับประทานเม็ดที่ 2 ภายหลังจากเม็ดแรก 12 ชั่วโมง ( )2.2 รับประทาน 2 เม็ด ทันทีหลังมีเพศสัมพันธ์ ( )3. อื่น ๆ (โปรดระบุ) .....

ส่วนที่ 2 กิจกรรมทางเพศ 15 ข้อ (ต่อ)

ข้อ	คำถาม	คำตอบ
11	เหตุผลหลักที่ท่านรับประทานยาคุมกำเนิดฉุกเฉิน (ตอบเพียง 1 ข้อ)	( )1. ถูกบังคับให้มีเพศสัมพันธ์ ( )2. มีเพศสัมพันธ์โดยไม่ได้คาดการณ์มาก่อน ( )3. เกิดความผิดพลาดจากการคุมกำเนิดโดยวิธีอื่น เช่น ถุงยางอนามัยรั่ว หลุด หรือ แตก ลืมรับประทานยาคุมกำเนิด เป็นต้น ( )4. ไม่ได้มีเพศสัมพันธ์กับแฟนหรือคู่รักโดยสม่ำเสมอ ( )5. อื่น ๆ (โปรดระบุ).....
12	ท่านเคยได้รับผลข้างเคียงจากการรับประทานยาคุมกำเนิดฉุกเฉินหรือไม่	( )1. ไม่เคยได้รับผลข้างเคียง ( )2. เคยได้รับผลข้างเคียง (ตอบได้มากกว่า 1 ข้อ) ( )2.1 คลื่นไส้ ( )2.2 อาเจียน ( )2.3 เวียนหัว ( )2.4 ประจำเดือนกระปริบกะปรอย ( )2.5 อื่น ๆ (โปรดระบุ).....
13	ท่านเคยใช้ถุงยางอนามัยขณะมีเพศสัมพันธ์หรือไม่หรือไม่	( )1. เคย ( )2. ไม่เคย (ข้ามไปทำส่วนที่ 3)
14	เหตุผลหลักที่ท่านใช้ถุงยางอนามัย (ตอบเพียง 1 ข้อ)	( )1. ป้องกันโรคติดต่อทางเพศสัมพันธ์/ เอดส์ ( )2. ป้องกันการตั้งครรภ์ ( )3. เป็นความต้องการของแฟน/ คู่นอน ( )4. ไม่ไว้ใจแฟน/ คู่นอน ( )5. อื่น ๆ (โปรดระบุ).....
15	ท่านเคยได้รับผลข้างเคียงจากการใช้ถุงยางอนามัยหรือไม่	( )1. ไม่เคยได้รับผลข้างเคียง ( )2. เคยได้รับผลข้างเคียง ( ) 2.1 คัน ( ) 2.2 ผื่นแดง ( ) 2.3 อื่น ๆ (โปรดระบุ).....

ส่วนที่ 3 ความรู้เกี่ยวกับถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน 12 ข้อ

ข้อ	คำถาม	ถูก	ผิด	ไม่มั่นใจ
1	ยาคุมกำเนิดฉุกเฉินมีส่วนประกอบทางยาที่เหมือนกับยาคุมกำเนิดแบบเม็ด (21 เม็ด หรือ 28 เม็ด)			
2	ยาคุมกำเนิดฉุกเฉินจะมีประสิทธิภาพเมื่อรับประทานเม็ดแรกภายใน 72 ชั่วโมง หลังจากมีเพศสัมพันธ์ และรับประทานเม็ดที่สองภายหลังจากรับประทานเม็ดแรก 12 ชั่วโมง			
3	ยาคุมกำเนิดฉุกเฉินจะมีประสิทธิภาพเมื่อรับประทานก่อนมีเพศสัมพันธ์			
4	ผลข้างเคียงที่สำคัญของยาคุมกำเนิดฉุกเฉิน คือ ทำให้เกิดอาการคลื่นไส้ อาเจียน ประจำเดือนกะปริดกะปรอย			
5	ยาคุมกำเนิดฉุกเฉินสามารถป้องกันการตั้งครรภ์ได้ 100 %			
6	ยาคุมกำเนิดฉุกเฉินจะมีประสิทธิภาพดี หากรับประทานเม็ดแรกทันทีภายหลังการมีเพศสัมพันธ์โดยไม่ป้องกัน			
7	การใช้ถุงยางอนามัยทุกครั้งที่มีเพศสัมพันธ์ สามารถป้องกันการตั้งครรภ์ได้			
8	ถุงยางอนามัยสามารถป้องกันโรคติดต่อทางเพศสัมพันธ์ได้ทุกโรค			
9	ถุงยางอนามัยเป็นวิธีที่มีผลข้างเคียงน้อย เมื่อเทียบกับการคุมกำเนิดวิธีอื่น ๆ			
10	การสวมถุงยางอนามัย 2 ชั้นในขณะมีเพศสัมพันธ์ จะเพิ่มประสิทธิภาพในการป้องกันมากขึ้น			
11	การสวมถุงยางอนามัยทุกครั้งที่มีเพศสัมพันธ์จะช่วยป้องกัน HIV/ AIDS ได้			
12	น้ำมัน หรือ สารหล่อลื่นที่มีส่วนผสมของน้ำมัน (เช่น น้ำมันประกอบอาหาร ครีมทาผิว เป็นต้น) สามารถใช้ร่วมกับถุงยางอนามัยได้			

ส่วนที่ 4 ทัศนคติที่มีต่อถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน 12 ข้อ

ข้อ	คำถาม	เห็นด้วยมากที่สุด	เห็นด้วย	ไม่แน่ใจ	ไม่เห็นด้วย	ไม่เห็นด้วยอย่างยิ่ง
1	ถุงยางอนามัยเหมาะสำหรับการใช้กับคู่นอนชั่วคราว					
2	การซื้อถุงยางอนามัยด้วยตนเองเป็นเรื่องน่าอาย					
3	การใช้ถุงยางอนามัยกับแฟน/ คู่รักแสดงถึงความไม่ไว้วางใจต่อกัน					
4	การใช้ถุงยางอนามัยขณะมีเพศสัมพันธ์ทำให้ความสุขทางเพศลดลง					
5	การพกถุงยางอนามัยแสดงถึงความตระหนักในการป้องกันตนเอง					
6	วัยรุ่นหญิงที่มีเพศสัมพันธ์ควรใช้ถุงยางอนามัยทุกครั้ง					
7	ยาคุมกำเนิดฉุกเฉินเหมาะสำหรับการใช้กับคู่นอนชั่วคราว					
8	เป็นเรื่องปกติที่ต้องไปซื้อยาคุมกำเนิดฉุกเฉินด้วยตนเอง					
9	การรับประทานยาคุมกำเนิดฉุกเฉินแสดงถึงการขาดความรับผิดชอบในการมีเพศสัมพันธ์					
10	การรับประทานยาคุมกำเนิดฉุกเฉินช่วยให้เพิ่มการสำส่อนทางเพศได้					
11	การรับประทานยาคุมกำเนิดฉุกเฉินแสดงถึงความตระหนักในการป้องกันตนเอง					
12	ฉันกังวลผลข้างเคียงที่อาจเกิดขึ้นจากการใช้ยาคุมกำเนิดฉุกเฉิน					

ส่วนที่ 5 การรับรู้อำนาจแห่งตนและการกำกับตนเองต่อการใช้ถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน 12 ข้อ

ข้อ	คำถาม	เห็นด้วยมากที่สุด	เห็นด้วย	ไม่แน่ใจ	ไม่เห็นด้วย	ไม่เห็นด้วยอย่างยิ่ง
1	ข้าพเจ้ารู้สึกมั่นใจว่าจะไม่ลืมที่จะใช้ถุงยางอนามัย แม้ว่าจะดื่มแอลกอฮอล์มาก่อนหน้านี้ก็ตาม					
2	หากคู่นอนของข้าพเจ้าไม่ต้องการใช้ถุงยางอนามัยระหว่างการมีเพศสัมพันธ์ เป็นการง่ายสำหรับข้าพเจ้าที่จะโน้มน้าวให้เขาเห็นความจำเป็นที่จะต้องใช้					
3	ข้าพเจ้ามั่นใจว่าจะสามารถใช้ถุงยางอนามัยระหว่างการมีเพศสัมพันธ์ได้โดยไม่เป็นการลดความรู้สึกทางเพศลงเลย					
4	ข้าพเจ้ารู้สึกมั่นใจในความสามารถของตนเองที่จะใช้ถุงยางอนามัยได้อย่างถูกต้อง					
5	ข้าพเจ้ารู้สึกมั่นใจว่าสามารถถอดและทิ้งถุงยางอนามัยได้อย่างถูกวิธี					
6	ข้าพเจ้าไม่มั่นใจที่จะซื้อถุงยางอนามัยด้วยตนเอง เพราะรู้สึกเขินอาย					
7	ข้าพเจ้ารู้สึกมั่นใจว่า ข้าพเจ้าจะไม่ลืมพกถุงยางอนามัยติดตัวทุกครั้งเมื่อต้องการใช้					
8	ข้าพเจ้ารู้สึกมั่นใจว่าจะไม่ลืมที่จะรับประทานยาคุมกำเนิดฉุกเฉิน แม้ว่าจะดื่มแอลกอฮอล์มาก่อนหน้านี้ก็ตาม					

ส่วนที่ 5 การรับรู้อำนาจแห่งตนและการกำกับตนเองต่อการใช้ถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน 12 ข้อ

ข้อ	คำถาม	เห็นด้วยมากที่สุด	เห็นด้วย	ไม่แน่ใจ	ไม่เห็นด้วย	ไม่เห็นด้วยอย่างยิ่ง
9	ข้าพเจ้ารู้สึกไม่กล้าที่จะซักถามถึงวิธีการใช้และการรับประทานยาคุมกำเนิดฉุกเฉินจากผู้รู้					
10	ข้าพเจ้ารู้สึกมั่นใจในความสามารถของตนเองในการใช้ยาคุมกำเนิดฉุกเฉินได้อย่างถูกต้อง					
11	ข้าพเจ้าไม่มั่นใจที่จะซื้อยาคุมกำเนิดฉุกเฉิน เพราะรู้สึกเขินอาย					
12	ข้าพเจ้ารู้สึกมั่นใจว่า ข้าพเจ้าจะไม่ลืมพกยาคุมกำเนิดฉุกเฉินติดตัวทุกครั้งเมื่อต้องการใช้					

ส่วนที่ 6 ปัจจัยทางด้านสังคมและสิ่งแวดล้อมที่เกี่ยวข้องกับการใช้ถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน 17 ข้อ

ข้อ	คำถาม	เห็นด้วยมากที่สุด	เห็นด้วย	ไม่แน่ใจ	ไม่เห็นด้วย	ไม่เห็นด้วยอย่างยิ่ง
อิทธิพลจากกลุ่มเพื่อน						
1	เพื่อนมีอิทธิพลต่อการตัดสินใจใช้ถุงยางอนามัย					
2	เพื่อนมีอิทธิพลต่อการตัดสินใจใช้ยาคุมกำเนิดฉุกเฉิน					
3	เพื่อนสนับสนุนให้ใช้ถุงยางอนามัยทุกครั้งที่มีเพศสัมพันธ์					
4	หากท่านไม่ได้คุมกำเนิดด้วยวิธีอื่น เพื่อนจะสนับสนุนให้ท่านใช้ยาคุมกำเนิดฉุกเฉิน					
5	เพื่อนเป็นผู้จัดหาถุงยางอนามัย/ยาคุมกำเนิดฉุกเฉินมาให้ท่าน					
อิทธิพลจากสื่อ						
6	การได้รับข้อมูลจากสื่อทำให้ท่านอยากใช้ถุงยางอนามัย					
7	การได้รับข้อมูลจากสื่อทำให้ท่านอยากใช้ยาคุมกำเนิดฉุกเฉิน					
8	สื่อทำให้ท่านรู้จักวิธีการใช้ถุงยางอนามัย					
9	สื่อทำให้ท่านรู้จักวิธีการใช้ยาคุมกำเนิดฉุกเฉิน					
10	สื่อทำให้ท่านไม่เขินอายเวลาไปซื้อถุงยางอนามัยหรือยาคุมกำเนิดฉุกเฉิน					
11	การได้รับข้อมูลจากสื่อ ทำให้ท่านกล้าพกถุงยางอนามัยหรือยาคุมกำเนิดฉุกเฉิน					

ส่วนที่ 6 ปัจจัยทางด้านสังคมและสิ่งแวดล้อมที่เกี่ยวข้องกับการใช้ถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน 17 ข้อ (ต่อ)

ข้อ	คำถาม	เห็นด้วยมากที่สุด	เห็นด้วย	ไม่แน่ใจ	ไม่เห็นด้วย	ไม่เห็นด้วยอย่างยิ่ง
การเข้าถึงถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน						
12	ถุงยางอนามัยหาซื้อได้ง่ายตามร้านขายยา/ ร้านสะดวกซื้อ					
13	ถุงยางอนามัยมีราคาแพง					
14	ถุงยางอนามัยมีแจกที่หน่วยบริการสาธารณสุข เช่น โรงพยาบาล โรงพยาบาลส่งเสริมสุขภาพตำบล เป็นต้น					
15	ยาคุมกำเนิดฉุกเฉินเป็นสิ่งที่หาได้ง่ายตามร้านขายยา					
16	ยาคุมกำเนิดฉุกเฉินมีราคาแพง					
17	ยาคุมกำเนิดฉุกเฉินมีแจกที่หน่วยบริการสาธารณสุข เช่น โรงพยาบาล โรงพยาบาลส่งเสริมสุขภาพตำบล เป็นต้น					

ส่วนที่ 7 ความรอบรู้ด้านสุขภาพเพื่อการใช้ถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน 38 ข้อ

ส่วนที่ 7.1 การเข้าถึงข้อมูลสุขภาพและบริการสุขภาพเพื่อการใช้ถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน

จงตอบคำถามโดยใส่เครื่องหมาย √ ลงในช่องความถี่ในการปฏิบัติตามความเป็นจริง

ข้อ	คำถาม	ระดับ				
		มากที่สุด	มาก	ไม่แน่ใจ	น้อย	น้อยที่สุด
1	เมื่อท่านต้องการข้อมูลเรื่องถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน ท่านเลือกแหล่งข้อมูลนั้นได้ทันที					
2	ท่านได้รับการสอนจากผู้มีความรู้เรื่องวิธีเลือกแหล่งข้อมูลที่น่าเชื่อถือเกี่ยวกับถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน					
3	เมื่อต้องการข้อมูลเกี่ยวกับถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน ท่านจะค้นหาจากแหล่งที่น่าเชื่อถือ เช่น หนังสือ วารสาร เป็นต้น จนได้ข้อมูลที่ถูกต้อง ทันสมัย					
4	ท่านตรวจสอบความถูกต้องของข้อมูลเกี่ยวกับถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน เพื่อยืนยันความเข้าใจของตนเองให้ถูกต้อง					
5	เมื่อท่านต้องการข้อมูลเกี่ยวกับถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน ท่านจะสอบถามจากผู้รู้จนได้ข้อมูลที่ถูกต้อง ทันสมัย					

ส่วนที่ 7.1 การเข้าถึงข้อมูลสุขภาพและบริการสุขภาพเพื่อการใช้ถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน (ต่อ)

จงตอบคำถามโดยใส่เครื่องหมาย √ ลงในช่องความถี่ในการปฏิบัติตามความเป็นจริง

ข้อ	คำถาม	ระดับ				
		มากที่สุด	มาก	ไม่แน่ใจ	น้อย	น้อยที่สุด
6	ท่านมักมีปัญหาในการค้นหาข้อมูลเกี่ยวกับถุงยางอนามัยและยาคุมกำเนิดฉุกเฉินจากแหล่งข้อมูลต่างๆ					
7	ท่านมักเชื่อข้อมูลจากแหล่งข้อมูล แม้ไม่ได้ตรวจสอบความน่าเชื่อถือของแหล่งข้อมูลเกี่ยวกับถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน					

ส่วนที่ 7.2 ความรู้ เข้าใจทางสุขภาพเพื่อการใช้ถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน

ข้อ	คำถาม	ระดับ				
		มากที่สุด	มาก	ไม่แน่ใจ	น้อย	น้อยที่สุด
1	ในระหว่างการร่วมเพศ หากถุงยางอนามัยแตกหรือหลุด ควรรับประทานยาคุมกำเนิดฉุกเฉินทันทีเพื่อป้องกันการตั้งครรภ์					
2	การสวมถุงยางอนามัย 2 ชั้นขณะมีเพศสัมพันธ์ จะทำให้ฉีกขาด/ แตกง่าย					
3	การสวมถุงยางอนามัยช่วยป้องกันการตั้งครรภ์และโรคติดต่อทางเพศสัมพันธ์					
4	การแพ้ถุงยางอนามัยสามารถเกิดขึ้นได้กับผู้หญิงทุกคน					

ส่วนที่ 7.2 ความรู้ เข้าใจทางสุขภาพเพื่อการใช้ถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน (ต่อ)

ข้อ	คำถาม	ระดับ				
		มากที่สุด	มาก	ไม่แน่ใจ	น้อย	น้อยที่สุด
5	ยาคุมกำเนิดฉุกเฉินควรรับประทานก่อนมีเพศสัมพันธ์ 12 ชั่วโมง					
6	ยาคุมกำเนิดฉุกเฉินสามารถป้องกันการตั้งครรภ์ได้ 100%					
7	การรับประทานยาคุมกำเนิดฉุกเฉินมากกว่า 4 เม็ดต่อเดือน จะส่งผลเสียต่อสุขภาพของผู้หญิง					

ส่วนที่ 7.3 การสื่อสารเพื่อเพิ่มความเชี่ยวชาญในการใช้ถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน

ข้อ	คำถาม	ระดับ				
		มากที่สุด	มาก	ไม่แน่ใจ	น้อย	น้อยที่สุด
1	ท่านมักไม่เข้าใจ เมื่อท่านอ่านเอกสารเกี่ยวกับการใช้ถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน					
2	ท่านพูดคุยอย่างเปิดเผยกับเพื่อนเกี่ยวกับการใช้ถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน เช่น วิธีการรับประทานยาคุมกำเนิดฉุกเฉิน ผลข้างเคียงจากการใช้ยาคุมกำเนิด วิธีการสวมถุงยางอนามัย ฯลฯ ให้ทุกคนมีความเข้าใจที่ถูกต้อง					
3	ท่านมีการแสดงออกทางการพูด อ่าน เขียน เกี่ยวกับการการใช้ถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน ให้บุคคลอื่นเข้าใจ					
4	ท่านโน้มน้าวให้ผู้อื่นยอมรับการปฏิบัติตนเองในการการใช้ถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน					

ส่วนที่ 7.3 การสื่อสารเพื่อเพิ่มความเชี่ยวชาญในการใช้ถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน (ต่อ)

ข้อ	คำถาม	ระดับ				
		มากที่สุด	มาก	ไม่แน่ใจ	น้อย	น้อยที่สุด
5	ท่านโน้มน้าวให้ผู้อื่นเห็นความสำคัญของการใช้ถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน					
6	ท่านสามารถสื่อสารด้วยการเขียนข้อมูลเกี่ยวกับวิธีการการใช้ถุงยางอนามัยและยาคุมกำเนิดฉุกเฉินได้					

ส่วนที่ 7.4 ทักษะการตัดสินใจเลือกปฏิบัติที่ถูกต้องเพื่อการใช้ถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน

ข้อ	คำถาม	ระดับ				
		มากที่สุด	มาก	ไม่แน่ใจ	น้อย	น้อยที่สุด
1	ถ้าแฟน/คู่รักของท่านไม่สวมถุงยางอนามัยขณะมีเพศสัมพันธ์ ท่านจะยินยอม					
2	ถ้าแฟน/คู่รักของท่านขอมีเพศสัมพันธ์โดยไม่สวมถุงยางอนามัย ท่านจะปฏิเสธ					
3	ท่านวิเคราะห์ผลดี-ผลเสียของถุงยางอนามัยก่อนใช้ทุกครั้ง					
4	หากท่านมีเพศสัมพันธ์โดยไม่ได้วางแผน ท่านจะรับประทานยาคุมกำเนิดฉุกเฉินเพื่อป้องกันการตั้งครรภ์					
5	หากแฟน/คู่รัก แนะนำให้ท่านใช้ถุงยางอนามัย ท่านจะปฏิเสธโดยบอกเหตุให้ฟัง					
6	หากเพื่อนบอกว่า การรับประทานยาคุมกำเนิดฉุกเฉินเป็นเรื่องธรรมดา ท่านจะให้เพื่อนอธิบายเหตุผลให้ฟัง					

ส่วนที่ 7.5 การจัดการเงื่อนไขทางสุขภาพของตนเองเพื่อการใช้ถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน

ข้อ	คำถาม	ระดับ				
		มากที่สุด	มาก	ไม่แน่ใจ	น้อย	น้อยที่สุด
1	ท่านไม่เคยวางแผนในการดำเนินชีวิตเรื่องการใช้ถุงยางอนามัยและ/หรือยาคุมกำเนิดฉุกเฉิน					
2	ท่านควบคุมตนเองให้ใช้ถุงยางอนามัยและ/หรือยาคุมกำเนิดฉุกเฉิน					
3	ท่านควบคุมและจัดการตนเองเพื่อการใช้ถุงยางอนามัยและ/หรือยาคุมกำเนิดฉุกเฉินตามเป้าหมายที่ได้วางไว้					
4	ท่านไม่เคยทบทวนวิธีการปฏิบัติตนเรื่องการใช้ถุงยางอนามัยและ/หรือยาคุมกำเนิดฉุกเฉินตามที่ได้ตั้งใจไว้					
5	ท่านเตรียมถุงยางอนามัยและ/หรือยาคุมกำเนิดฉุกเฉินให้พร้อมใช้ในทุกสถานการณ์และสถานที่					
6	ท่านปฏิบัติตามความตั้งใจที่วางไว้ในการใช้ถุงยางอนามัยและ/หรือยาคุมกำเนิดฉุกเฉิน					

ส่วนที่ 7.6 ทักษะการรู้เท่าทันสื่อและสารสนเทศเพื่อการใช้ถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน

ข้อ	คำถาม	ระดับ				
		มากที่สุด	มาก	ไม่แน่ใจ	น้อย	น้อยที่สุด
1	ท่านไม่ตรวจสอบข้อมูล ความถูกต้องของถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน จากหลายแหล่งก่อนตัดสินใจซื้อ					
2	เมื่อท่านเห็นโฆษณาถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน ท่านจะหาข้อมูลเพิ่มเติมเพื่อตรวจสอบความถูกต้องก่อนตัดสินใจซื้อ					

ส่วนที่ 7.6 ทักษะการรู้เท่าทันสื่อและสารสนเทศเพื่อการใช้ถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน (ต่อ)

ข้อ	คำถาม	ระดับ				
		มากที่สุด	มาก	ไม่แน่ใจ	น้อย	น้อยที่สุด
3	ท่านคำนึงถึงข้อดี ข้อเสียก่อนตัดสินใจเลือกรับข้อมูลจากสื่อในเรื่องถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน					
4	ท่านประเมินข้อความที่ได้จากสื่อเรื่องการใช้ถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน ก่อนถ่ายทอดให้กับบุคคลอื่น					
5	ท่านวิเคราะห์ความถูกต้องของข้อมูลจากสื่อ ก่อนตัดสินใจใช้ถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน					
6	ท่านจะนำข้อมูลเรื่องถุงยางอนามัยและยาคุมกำเนิดฉุกเฉินที่ได้จากสื่อมาวิเคราะห์เปรียบเทียบก่อนตัดสินใจเชื่อ					

ส่วนที่ 8 ความตั้งใจต่อการใช้ถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน 6 ข้อ

ข้อ	คำถาม	ระดับ				
		ทุกครั้ง	บ่อยครั้ง	บางครั้ง	นานๆ ครั้ง	ไม่ปฏิบัติ
1	ในอนาคตเมื่อท่านมีเพศสัมพันธ์ ท่านตั้งใจที่จะใช้ถุงยางอนามัย					
2	หากการใช้ถุงยางอนามัยเป็นไปไม่ได้ ท่านตั้งใจที่จะงดการมีเพศสัมพันธ์กับคู่รัก					
3	เมื่อคู่รักของท่านไม่ต้องการใช้ถุงยางอนามัย ท่านจะยืนยันตามที่คู่รักของท่านร้องขอ					
4	ในอนาคตเมื่อท่านมีเพศสัมพันธ์โดยไม่ได้เตรียมตัว ท่านตั้งใจที่จะรับประทานยาคุมกำเนิดฉุกเฉินหรือไม่					
5	หากการรับประทานยาคุมกำเนิดฉุกเฉินเป็นไปไม่ได้ ท่านตั้งใจที่จะงดการมีเพศสัมพันธ์กับคู่รัก					

ส่วนที่ 8 ความตั้งใจต่อการใช้ถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน 6 ข้อ (ต่อ)

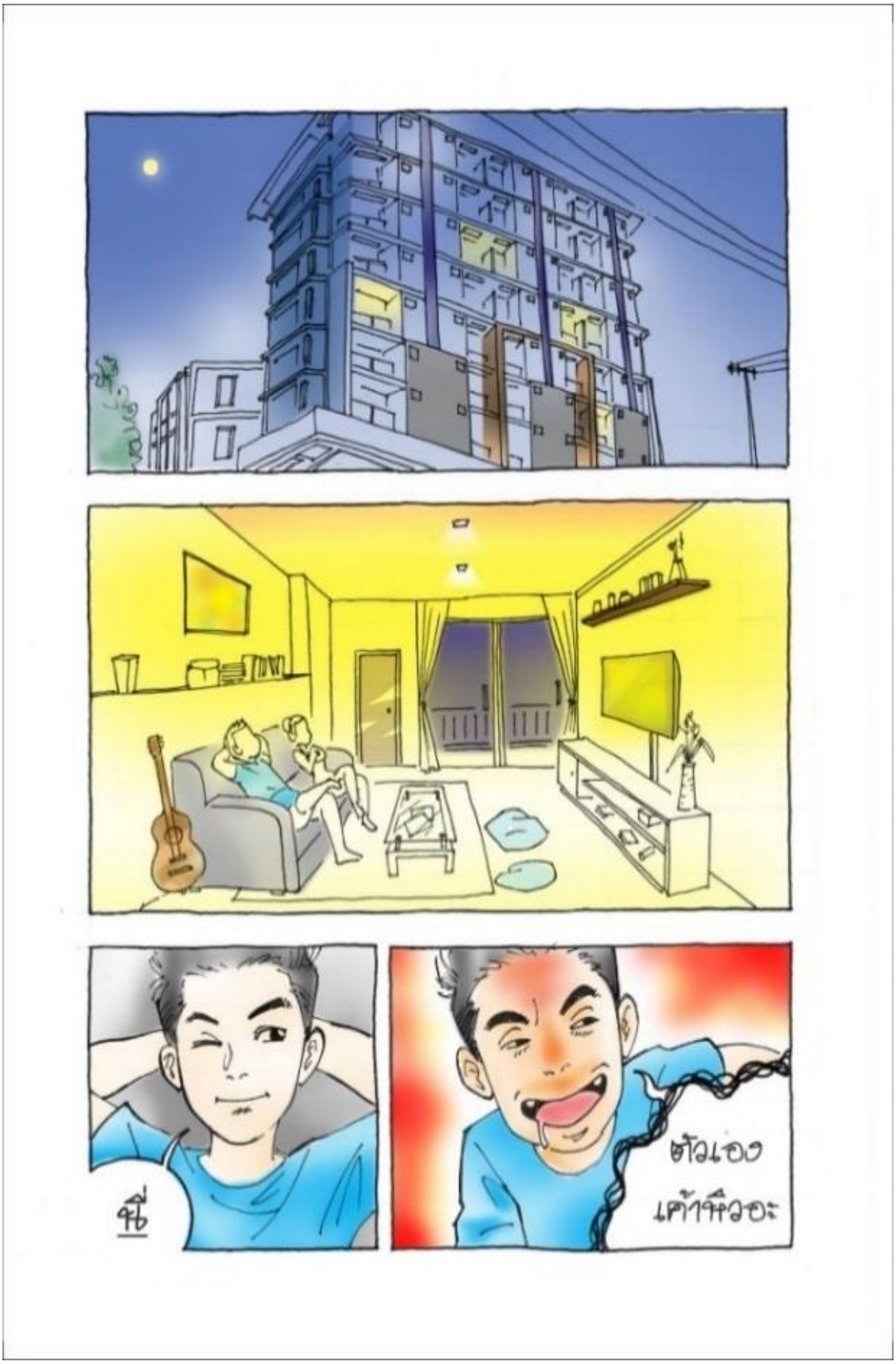
ข้อ	คำถาม	ระดับ				
		ทุกครั้ง	บ่อยครั้ง	บางครั้ง	นานๆ ครั้ง	ไม่ปฏิบัติ
6	เมื่อมีเพศสัมพันธ์โดยไม่ได้วางแผน และคู่รักของท่านไม่ต้องการให้ท่านรับประทานยาคุมกำเนิดฉุกเฉิน ท่านจะยืนยันตามที่คู่รักของท่านร้องขอ					

ส่วนที่ 9 การปฏิบัติต่อการใช้ถุงยางอนามัยและยาคุมกำเนิดฉุกเฉิน (2 ข้อ)

ข้อ	คำถาม	ระดับ				
		ทุกครั้ง	บ่อยครั้ง	บางครั้ง	นานๆ ครั้ง	ไม่ปฏิบัติ
ใน 3 เดือนที่ผ่านมา ท่านใช้วิธีการคุมกำเนิดต่อไปนี้บ่อยครั้งเพียงใด						
1	ถุงยางอนามัย					
2	ยาคุมกำเนิดฉุกเฉิน					

APPENDIX E

"Sex Must Safe"


นี่
ตัวเอง
เค้าหิวอะ


ตัวเอง
จะกิน
อะไร
เค้า
อยากกิน
ตัวเองอะ
ได้ปล่าว?
เดี๋ยว
ก่อน!!
ตัวเอง
มีของป่าว
ไม่ใส่
ได้มั้ย?


ไม่อ่ะตัวเอง
เดี๋ยวท้อง
เดี๋ยวค่อยไป
ซื้อยาคุมฉุกเฉิน
มากินทีหลัง
ไม่ท้องหรอก
อันตรายจะตายตัวเอง
อันตรายที่ไหน
ใครๆเค้าก็กินกันเยอะแยะ
ไม่เชื่อตัวเองดูนี่
ผลข้างเคียงมันเยอะจะตาย
ผลข้างเคียงของยาคุมฉุกเฉิน
คลื่นไส้ อาเจียน ปวดศีรษะ เวียนศีรษะ
เจ็บคัดเต้านม ปวดท้อง มีเลือดออก
กะปริบกะปรอย (ออกมาเล็กน้อยประมาณ
1-2 วัน หรือ 3-4 วัน) ประจำเดือนมาช้า
หรือเร็วกว่าปกติ ความผิดปกติที่รังไข่
เยื่อบุโพรงมดลูก รวมทั้งเพิ่มความเสี่ยง
ในการเกิดการตั้งครรภ์นอกมดลูกได้ถึง
2%

ยาคุมกำเนิดแบบฉุกเฉิน เหมาะสำหรับกรณี "ฉุกเฉิน" เท่านั้น เช่น ถูกข่มขืน มีเพศสัมพันธ์โดยบังเอิญ หรือเกิดปัญหาในการใช้อุปกรณ์การคุมกำเนิดแบบปกติ (เช่น ถุงยางอนามัยรั่ว/ แตก / หลุด ลืมรับประทานยาเม็ดคุมกำเนิด ลืมฉีดยาคุม ฯลฯ) สาว ๆ ทุกคน ต้องเรียนรู้วิธีการใช้ยาคุมกำเนิดแบบฉุกเฉินอย่างถูกต้อง เพราะเราอาจจำเป็นต้องใช้เอง ส่งต่อความรู้ให้กับเพื่อนหรือคนอื่นที่จำเป็นต้องใช้นะคะ ยาคุมกำเนิดแบบฉุกเฉินที่ขายในประเทศไทยจะขายเป็นกล่อง ในกล่องจะมี 2 เม็ด ทั้ง 2 เม็ดเหมือนกันทั้งปริมาณฮอร์โมนที่มีขนาดสูงมาก สี และลักษณะของเม็ดยา โดยยาจะได้ผลดีที่สุดถ้ารับประทานยาถูกต้อง

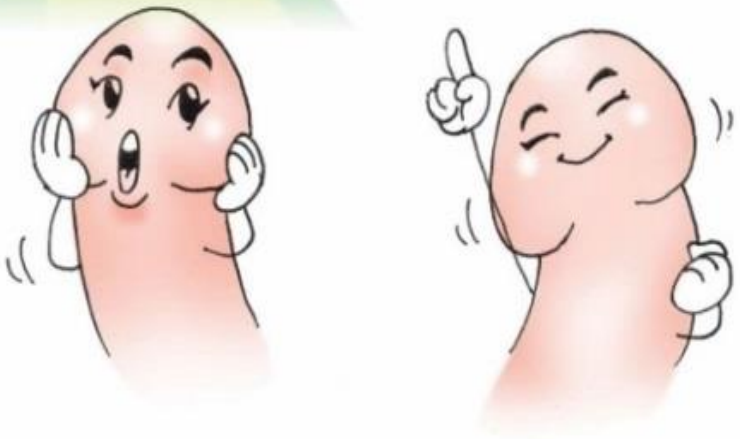
การรับประทานยาคุมกำเนิดแบบฉุกเฉินต้องรับประทานเม็ดแรกให้เร็วที่สุด (ไม่ควรรับประทาน 72 ชั่วโมง แต่หากจำเป็นก็สามารถรับประทานภายใน 5 วัน) หลังจากที่มีเพศสัมพันธ์โดยไม่ป้องกันหรือพิดพลาดจากการป้องกัน และต้องรับประทานเม็ดที่สองหลังจากรับประทานเม็ดแรกไม่เกิน 12 ชั่วโมง หรือถ้าจะให้ง่ายก็สามารถรับประทานทีเดียว 2 เม็ดภายหลังจากการมีเพศสัมพันธ์ทันทีก็จะได้ผลใกล้เคียงกัน แต่หากมีเพศสัมพันธ์ครั้งที่ 2 ห่างจากครั้งแรกนานเกิน 3 ชั่วโมง ให้รับประทานซ้ำอีก 1 เม็ด โดยใน 1 เดือน ไม่ควรรับประทานเกิน 4 เม็ด

สาว ๆ บางคน อาจได้รับผลข้างเคียงที่รุนแรงต่อสุขภาพ นั่นคือ อาจเกิดความผิดปกติที่รังไข่ เยื่อบุโพรงมดลูก รวมทั้งเพิ่มความเสี่ยงใน การตั้งครรภ์นอกมดลูก อีกด้วย


ดูซิตัวเอง ผลข้างเคียง
มันเยอะขนาดนี้
ยังจะให้เค้ากินอีก
วัยทันป่ะเนี่ย?
ก็เค้าไม่อยากใส่
ถุงยางอ่ะ มันไม่มันส์
เค้าไม่ทำให้ตัวเอง
ท้องหรอกน่า
อ่ะ
ตัวเอง
ดูนี่
มันไม่ใช่แค่ท้อง
หรือไม่ท้อง แต่มัน
ป้องกันโรคติดต่อทางเพศ
สัมพันธ์ที่แย่ลงได้ด้วยนะตัวเอง

การใช้ถุงยางอนามัย หรือที่หลายคนจะเรียกว่า Condom ไงคะ อันที่จริงถุงยางอนามัยก็มีทั้งสำหรับผู้หญิงและผู้ชาย ซึ่งบ้านเราเคยมีการนำถุงยางอนามัยสำหรับผู้หญิงมาใช้เมื่อนานมาแล้ว แต่ใช้ไม่สะดวกและไม่ถูกใจ อีกทั้งราคาก็แพง จึงตกยุคไป ตอนนี้จึงมีใช้แต่ถุงยางอนามัยสำหรับผู้ชายเท่านั้น และวิธีนี้มีประโยชน์เหนือกว่าวิธีอื่น คือ ถ้าฝ่ายชายใช้ถุงยางอนามัยอย่างสม่ำเสมอ และถูกต้องทุกครั้ง โดยถุงไม่มีการแตก รั่ว หรือหลุด จะช่วยป้องกันไม่ให้น้ำกาม ซึ่งมีเชื้ออสุจิ และอาจมีเชื้อของโรคต่าง ๆ ด้วย หากเปรอะเปื้อนอวัยวะเพศหญิง และผ่านเข้าไปถึงมดลูกของฝ่ายหญิง อาจทำให้ผู้หญิงตั้งท้องและได้รับเชื้อ เอชไอวี/เอดส์ และกามโรคหลาย ๆ อย่างได้ ฝ่ายชายจึงควรสวมใส่ถุงยางอนามัยทุกครั้ง เพื่อป้องกันการตั้งท้องและการได้รับเชื้อโรคต่าง ๆ ในผู้หญิง

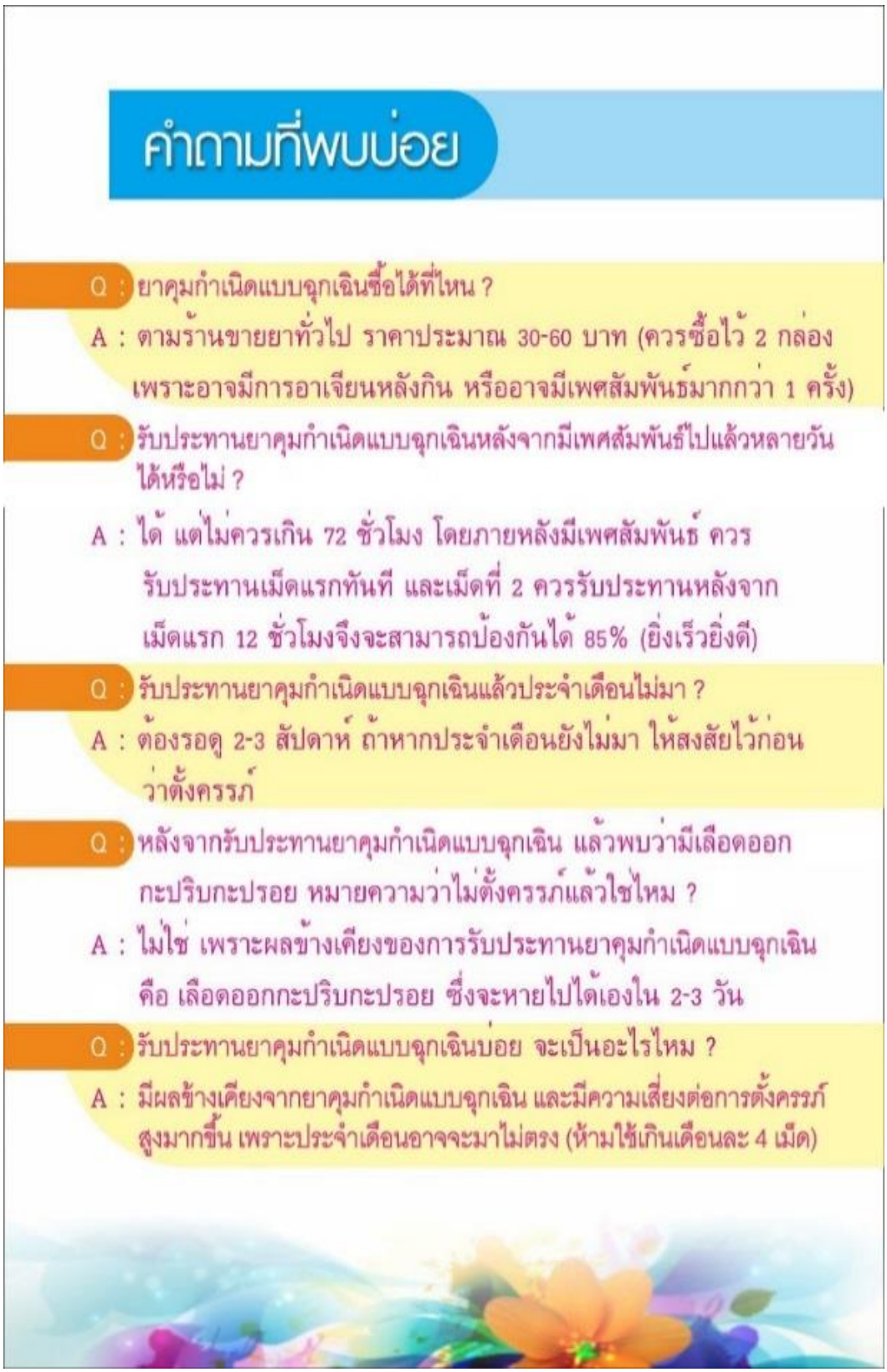
แต่ในบางคนอาจจะแพ้สารที่ใช้ทำถุงยางอนามัย จึงเกิดอาการแสบคันเล็กน้อย ข้อสำคัญสาว ๆ ต้องระวังไม่ให้เพื่อน คู่นอน หรือแฟนอ้างว่าแพ้ถุงยางอนามัย และไม่ยอมใช้นะคะ กรณีอย่างนี้แนะนำให้บอกกลับไปว่า "เราก็แพ้คนที่แพ้ถุงยาง" ดีไหมคะ

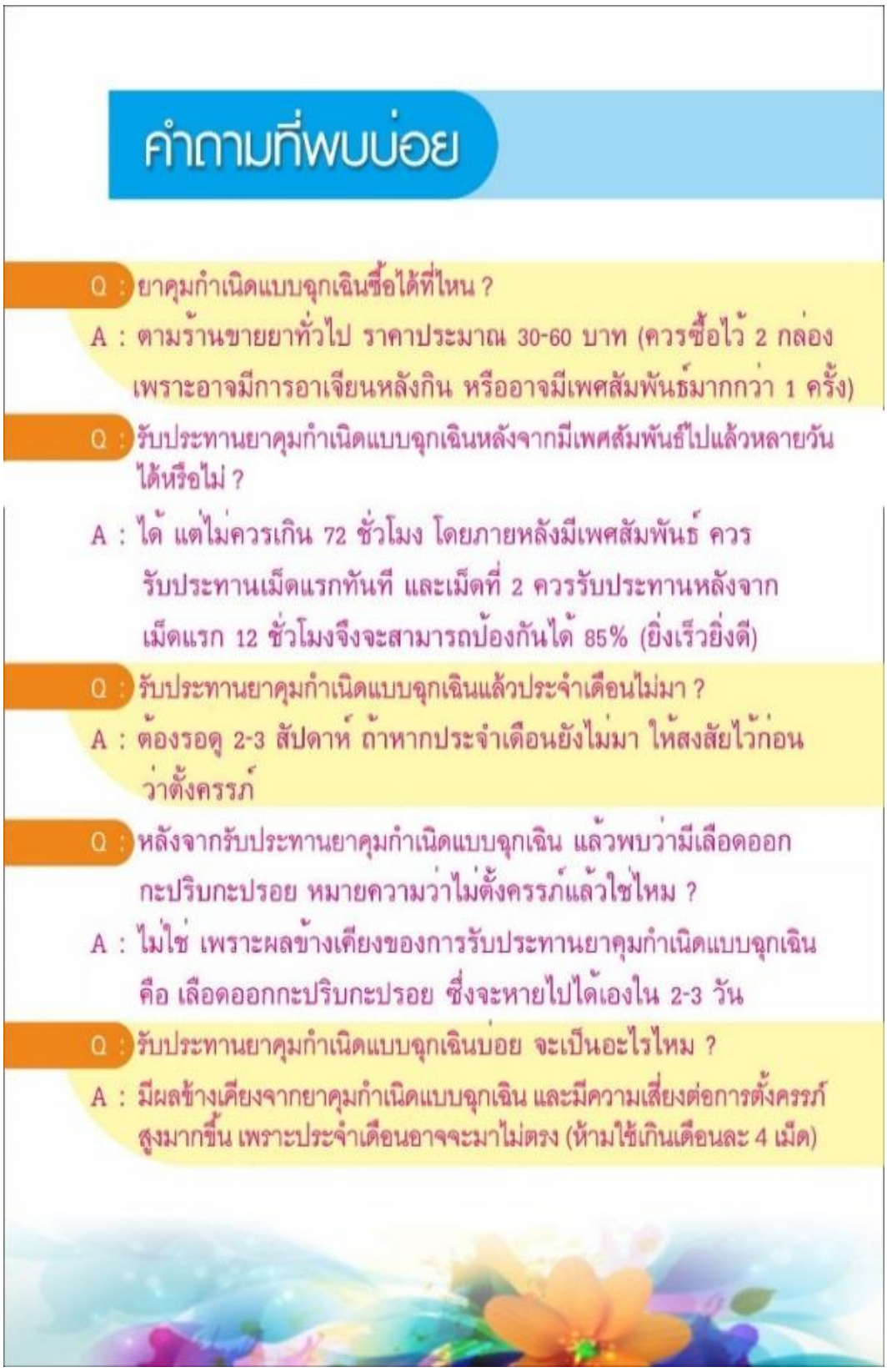


ถุงยางอนามัยใช้ไม่ยาก ราคาก็ไม่แพง มีสีสวย ๆ ชวนใช้ แถมหาซื้อก็ง่ายตามร้านสะดวกซื้อ ที่เปิดทั้งวันทั้งคืน ผู้ชายบางคนยังพกติดตัวเป็นประจำ แต่กลับไม่ยอมเสียเวลาที่จะใช้ ฉะนั้น สาว ๆ ต้องพึงระวังตัวตั้งสติก่อนมีเพศสัมพันธ์ทุกครั้งนะคะ อย่าเกรงใจ ตามใจ หรือกลัวเพื่อนหรือแฟนจะโกรธ เพื่อนหรือแฟนนั้น หาใหม่ได้ แต่ชีวิต และอนาคตของเรามีเพียงหนึ่งเดียวเท่านั้น เพราะฉะนั้นต้องรั้งไว้ให้สุดความสามารถนะคะ


ตัวเองไปเอาข้อมูล
พวกนี้มาจาก
ที่ไหนเนี่ย
rh.anamai.moph.go.th
MORE
สำนักอนามัยการเจริญพันธุ์
กรมอนามัย
คู่มือ/หนังสือ มาใหม่!
คู่มือพัฒนาศักยภาพแกนนำวัยรุ่น
อนามัยการเจริญพันธุ์วัยทอง
คุมกำเนิด
คู่มือการจัดการอบรม เรื่องเพศศึกษาในโ
Back


แล้วยังไง ตาหลวงยังจะ กินอยู่มั๊ย?
กินดี
กิน เค้า ซะ?
หึ !! กินข้าวอะ เค้าหิวตัวเอง หุดจนขี้เปิ้มแค้ หลับไปแล้วเนี่ย เดี๋ยวกินข้าวเสร็จค่อย แวะซื้อถุงยางเนอะ
ก็ได้ เดี๋ยวเราไป กินข้าวกันก่อน
แล้วค่อย กลับมา กินเค้า เนอะ ตัวเองงง


คำถามที่พบบ่อย
Q : ยาคุมกำเนิดแบบฉุกเฉินซื้อได้ที่ไหน ?
A : ตามร้านขายยาทั่วไป ราคาประมาณ 30-60 บาท (ควรซื้อไว้ 2 กล่อง เพราะอาจมีการอาเจียนหลังกิน หรืออาจมีเพศสัมพันธ์มากกว่า 1 ครั้ง)
Q : รับประทานยาคุมกำเนิดแบบฉุกเฉินหลังจากมีเพศสัมพันธ์ไปแล้วหลายวันได้หรือไม่ ?
A : ได้ แต่ไม่ควรเกิน 72 ชั่วโมง โดยภายหลังมีเพศสัมพันธ์ ควรรับประทานเม็ดแรกทันที และเม็ดที่ 2 ควรรับประทานหลังจากเม็ดแรก 12 ชั่วโมงจึงจะสามารถป้องกันได้ 85% (ยิ่งเร็วยิ่งดี)
Q : รับประทานยาคุมกำเนิดแบบฉุกเฉินแล้วประจำเดือนไม่มา ?
A : ต้องรอดู 2-3 สัปดาห์ ถ้าหากประจำเดือนยังไม่มา ให้สงสัยไว้ก่อนว่าตั้งครรภ์
Q : หลังจากรับประทานยาคุมกำเนิดแบบฉุกเฉิน แล้วพบว่ามีเลือดออกกะปริบกะปรอย หมายความว่าไม่ตั้งครรภ์แล้วใช่ไหม ?
A : ไม่ใช่ เพราะผลข้างเคียงของการรับประทานยาคุมกำเนิดแบบฉุกเฉิน คือ เลือดออกกะปริบกะปรอย ซึ่งจะหายไปได้เองใน 2-3 วัน
Q : รับประทานยาคุมกำเนิดแบบฉุกเฉินบ่อย จะเป็นอะไรไหม ?
A : มีผลข้างเคียงจากยาคุมกำเนิดแบบฉุกเฉิน และมีความเสี่ยงต่อการตั้งครรภ์สูงมากขึ้น เพราะประจำเดือนอาจจะมาไม่ตรง (ห้ามใช้เกินเดือนละ 4 เม็ด)


คำถามที่พบบ่อย
Q : ยาคุมกำเนิดแบบฉุกเฉินซื้อได้ที่ไหน ?
A : ตามร้านขายยาทั่วไป ราคาประมาณ 30-60 บาท (ควรซื้อไว้ 2 กล่อง เพราะอาจมีการอาเจียนหลังกิน หรืออาจมีเพศสัมพันธ์มากกว่า 1 ครั้ง)
Q : รับประทานยาคุมกำเนิดแบบฉุกเฉินหลังจากมีเพศสัมพันธ์ไปแล้วหลายวันได้หรือไม่ ?
A : ได้ แต่ไม่ควรเกิน 72 ชั่วโมง โดยภายหลังมีเพศสัมพันธ์ ควรรับประทานเม็ดแรกทันที และเม็ดที่ 2 ควรรับประทานหลังจากเม็ดแรก 12 ชั่วโมงจึงจะสามารถป้องกันได้ 85% (ยิ่งเร็วยิ่งดี)
Q : รับประทานยาคุมกำเนิดแบบฉุกเฉินแล้วประจำเดือนไม่มา ?
A : ต้องรอดู 2-3 สัปดาห์ ถ้าหากประจำเดือนยังไม่มา ให้สงสัยไว้ก่อนว่าตั้งครรภ์
Q : หลังจากรับประทานยาคุมกำเนิดแบบฉุกเฉิน แล้วพบว่ามีเลือดออกกะปริบกะปรอย หมายความว่าไม่ตั้งครรภ์แล้วใช่ไหม ?
A : ไม่ใช่ เพราะผลข้างเคียงของการรับประทานยาคุมกำเนิดแบบฉุกเฉิน คือ เลือดออกกะปริบกะปรอย ซึ่งจะหายไปได้เองใน 2-3 วัน
Q : รับประทานยาคุมกำเนิดแบบฉุกเฉินบ่อย จะเป็นอะไรไหม ?
A : มีผลข้างเคียงจากยาคุมกำเนิดแบบฉุกเฉิน และมีความเสี่ยงต่อการตั้งครรภ์สูงมากขึ้น เพราะประจำเดือนอาจจะมาไม่ตรง (ห้ามใช้เกินเดือนละ 4 เม็ด)


เพลง
รักต้องปลอดภัย SEX MUST SAFE
สวยหล่อวัยใส หลีกเลี่ยงไว้อย่าเพิ่งมีเซ็กส์
สวยหล่อเฟี้ยว ถ้าอยากเสียว ต้องใส่ถุงยาง
ป้องกันวัยใสไม่พลั้ง ป้องกันอุ้มท้องอ้างว้าง
ตั้งครรภ์ไม่พร้อม ต้องถุงยาง 100%
ยาคุมต้องคิดให้เป็น ฉุกเฉินไม่ 100%
สักวันจะเห็นถึงผลข้างเคียง
ยืดอกพกถุง ข้างเตียง
ยาคุมฉุกเฉินควรเลี่ยง
จำไว้ไม่เสี่ยง ก่อนฟิทเจอริ่ง
รักต้องแลกเซ็กส์ไม่จริง (ซ้ำ)
หนุ่มสาวชายหญิงเกี้ยวอย่างปลอดภัย
หากเธอมีข้อข้องใจ 1663 ช่วยได้
สงสัยอย่างไร ให้กดโทรมา
"Sex Must Safe" รักแค่ไหนก็ต้องปลอดภัย
"Sex Must Safe" รักแบบไหนก็ป้องกันได้
"Sex Must Safe" รักไม่วุ่นสวมถุงยางไว้
"Sex Must Safe" รักอยากให้ใช้สติเอย ....


1663
สายด่วน
ปรึกษาเอดส์
และท้องไม่พร้อม
เรื่องเล่า : เสาวนีย์ ทองนพคุณ ศิวานีตย์ ทองคำดี
เกวลี เรืองศิริ สุปรียา ใจกว้าง สุมินทร์ญา ติบวงษา
ภาพวาดปกหัว : จิระวัฒน์ วิษณุโยธิน
เพลงมันส์ มันส์ : วัธระ ชัยเลิศ
วิทยาลัยวิทยาศาสตร์สาธารณสุข จุฬาลงกรณ์มหาวิทยาลัย
ภาควิชาสุขศึกษา คณะสาธารณสุขศาสตร์ มหาวิทยาลัยบูรพา

APPENDIX F

Table F.1 Normality test of sum scores between the intervention and comparison group before and after the intervention, as well as at the 3-month follow up after implementation of the "Sex Must Safe" program

Variable	Time	Group	Shapiro-Wilk		
			Statistic	df	*p*-value
Health literacy	Baseline	Intervention Group	.989	36	.976
		Comparison Group	.942	37	.052
	Week 8	Intervention Group	.989	36	.970
		Comparison Group	.943	37	.055
	Week 20	Intervention Group	.844	36	.000
		Comparison Group	.974	37	.526
Intention	Baseline	Intervention Group	.982	36	.798
		Comparison Group	.912	37	.006
	Week 8	Intervention Group	.898	36	.003
		Comparison Group	.933	37	.029
	Week 20	Intervention Group	.906	36	.005
		Comparison Group	.958	37	.172
Practice	Baseline	Intervention Group	.859	26	.002
		Comparison Group	.851	24	.002
	Week 8	Intervention Group	.805	26	.000
		Comparison Group	.885	24	.010
	Week 20	Intervention Group	.842	26	.001
		Comparison Group	.930	24	.096

Table F.2 Normality test of sum scores of health literacy intention and practice in the intervention and comparison group before and after the intervention, as well as at the follow up 3 months after implementation of the "Sex Must Safe" program

Variable	Time	Group	Shapiro-Wilk		
			Statistic	df	*p*-value
Health literacy	Baseline – Week 8	Intervention Group	.881	36	.001
	Week 8 - Week 20		.982	36	.806
	Week 0 - Week 20		.983	36	.839
Intention	Baseline – Week 8		.981	36	.769
	Week 8 - Week 20		.968	36	.362
	Week 0 - Week 20		.985	36	.903
Practice	Baseline – Week 8		.914	36	.008
	Week 8 - Week 20		.946	36	.076
	Week 0 - Week 20		.940	36	.051
Health literacy	Baseline – Week 8	Comparison Group	.919	37	.010
	Week 8 - Week 20		.950	37	.093
	Week 0 - Week 20		.948	37	.086
Intention	Baseline – Week 8		.966	37	.312
	Week 8 - Week 20		.911	37	.006
	Week 0 - Week 20		.975	37	.545
Practice	Baseline – Week 8		.963	37	.253
	Week 8 - Week 20		.933	37	.028
	Week 0 - Week 20		.955	37	.142

APPENDIX G

Phase 2: Determining the effect of the "Sex Must Safe" program on health literacy intention and practice regarding condom and emergency contraceptive pill uses among female university students

in Chon Buri province, Thailand

Self-administered questionnaire were used to collect data for pre-test, post-test, and follow-up. This part showed questionnaire consists of 7 parts by items, as follows:

Part 1: Knowledge of condoms and the emergency contraceptive pill

Table G.1 Knowledge of condoms and the emergency contraceptive pill of intervention group and comparison group

Issue	Group	Correct n(%)	Incorrect n(%)	Total n(%)
1.The emergency contraceptive pill has the same ingredients as the oral contraceptive pill (21 pills or 28 pills).	A0	8 (22.2)	28 (77.8)	36 (100)
	B0	6 (16.2)	31 (83.8)	37 (100)
	A8	28 (78.8)	8 (22.2)	36 (100)
	B8	8 (21.6)	29 (78.4)	37 (100)
	A20	29 (80.6)	7 (19.4)	36 (100)
	B20	14 (37.8)	23 (62.2)	37 (100)
2.The emergency contraceptive pill will be effective if taken within 72 hours after having sexual intercourse. The second pill must be taken 12 hours after taking the first pill.	A0	25 (69.4)	11 (30.6)	36 (100)
	B0	22 (59.5)	15 (40.5)	37 (100)
	A8	31 (86.1)	5 (13.9)	36 (100)
	B8	25 (67.6)	12 (32.4)	37 (100)
	A20	29 (80.6)	7 (19.4)	36 (100)
	B20	25 (67.6)	12 (32.4)	37 (100)

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Table G.1 Knowledge of condoms and the emergency contraceptive pill of intervention group and comparison group (continue)

Issue	Group	Correct n(%)	Incorrect n(%)	Total n(%)
3.The emergency contraceptive pill will be effective if taken before having sex.	A0	20 (55.6)	16 (44.4)	36 (100)
	B0	23 (62.2)	14 (37.8)	37 (100)
	A8	31 (86.1)	5 (13.9)	36 (100)
	B8	20 (54.1)	17 (45.9)	37 (100)
	A20	30 (83.3)	6 (16.7)	36 (100)
	B20	27 (73.0)	10 (27.0)	37 (100)
4.Side effects of the emergency contraceptive pill include nausea, vomiting, or *menstrual* spotting.	A0	27 (75.0)	9 (25.0)	36 (100)
	B0	24 (64.9)	13 (35.1)	37 (100)
	A8	35 (97.2)	1 (2.8)	36 (100)
	B8	25 (67.6)	12 (32.4)	37 (100)
	A20	34 (94.4)	2 (5.6)	36 (100)
	B20	26 (70.3)	11 (29.7)	37 (100)
5.The emergency contraceptive pill can prevent pregnancy in 100% of cases.	A0	22 (61.1)	14 (38.9)	36 (100)
	B0	29 (78.4)	8 (21.6)	37 (100)
	A8	34 (94.4)	2 (5.6)	36 (100)
	B8	27 (73.0)	10 (27.0)	37 (100)
	A20	33 (91.7)	3 (8.3)	36 (100)
	B20	26 (70.3)	11 (29.7)	37 (100)
6. The emergency contraceptive pill will be effective if the first pill is taken immediately after having unprotected sex.	A0	26 (72.2)	10 (27.8)	36 (100)
	B0	20 (54.1)	17 (45.9)	37 (100)
	A8	33 (91.7)	3 (8.3)	36 (100)
	B8	21 (56.8)	16 (43.2)	37 (100)
	A20	33 (91.7)	3 (8.3)	36 (100)
	B20	26 (70.3)	11 (29.7)	37 (100)

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Table G 1 Knowledge of condoms and the emergency contraceptive pill of intervention group and comparison group (continue)

Issue	Group	Correct n(%)	Incorrect n(%)	Total n(%)
7. Use of a condom every time when having sex can prevent pregnancy.	A0	22 (61.1)	14 (38.9)	36 (100)
	B0	22 (59.5)	15 (40.5)	37 (100)
	A8	30 (83.3)	6 (16.7)	36 (100)
	B8	22 (59.5)	15 (40.5)	37 (100)
	A20	31 (86.1)	5 (13.9)	36 (100)
	B20	26 (70.3)	11 (29.7)	37 (100)
8.Use of a condom can prevent all sexual transmitted diseases.	A0	12 (33.3)	24 (66.7)	36 (100)
	B0	13 (35.1)	24 (64.9)	37 (100)
	A8	32 (88.9)	4 (11.1)	36 (100)
	B8	9 (24.3)	28 (75.7)	37 (100)
	A20	24 (66.7)	12 (33.3)	36 (100)
	B20	26 (70.3)	11 (29.7)	37 (100)
9. A condom has fewer side effects than other methods of contraception.	A0	31 (86.1)	5 (13.9)	36 (100)
	B0	25 (67.6)	12 (32.4)	37 (100)
	A8	34 (94.4)	2 (5.6)	36 (100)
	B8	28 (75.7)	9 (24.3)	37 (100)
	A20	34 (94.4)	2 (5.6)	36 (100)
	B20	31 (83.8)	6 (16.2)	37 (100)
10. Using double condoms during sexual intercourse will increase efficiency of protection.	A0	27 (75.0)	9 (25.0)	36 (100)
	B0	31 (83.8)	6 (16.2)	37 (100)
	A8	34 (94.4)	2 (5.6)	36 (100)
	B8	29 (78.4)	8 (21.6)	37 (100)
	A20	35 (97.2)	1 (2.8)	36 (100)
	B20	31 (83.8)	6 (16.2)	37 (100)

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Table G.1 Knowledge of condoms and the emergency contraceptive pill of intervention group and comparison group (continue)

Issue	Group	Correct n(%)	Incorrect n(%)	Total n(%)
11. Use of a condom every time during sexual intercourse can prevent HIV/AIDS.	A0	30 (83.3)	6 (16.7)	36 (100)
	B0	28 (75.7)	9 (24.3)	37 (100)
	A8	35 (97.2)	1 (2.8)	36 (100)
	B8	9 (24.3)	28 (75.7)	37 (100)
	A20	35 (97.2)	1 (2.8)	36 (100)
	B20	28 (75.7)	9 (24.3)	37 (100)
12. Oil or oil-based lubricants such as cooking oil, skin cream etc. can be used in combination with a condom.	A0	26 (72.2)	10 (27.8)	36 (100)
	B0	18 (48.6)	19 (51.4)	37 (100)
	A8	34 (94.4)	2 (5.6)	36 (100)
	B8	19 (51.4)	18 (48.6)	37 (100)
	A20	35 (97.2)	1 (2.8)	36 (100)
	B20	25 (67.6)	12 (32.4)	37 (100)

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Part 2: Attitudes to the use of condoms and the emergency contraceptive pill

Table G 2 Attitudes to the use of condoms and the emergency contraceptive pill of intervention group and comparison group at baseline

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
1.It is appropriate to use a condom with a temporary sex partner.	A0	3 (8.3)	7 (19.5)	4 (11.1)	9 (25.0)	13 (36.1)	36 (100)
	B0	4 (10.8)	10 (27.0)	4 (10.8)	8 (21.6)	11 (29.8)	37 (100)
	A8	3 (8.3)	0 (0)	7 (19.4)	5 (14.0)	21 (58.3)	36 (100)
	B8	3 (8.2)	8 (21.6)	6 (16.2)	8 (21.6)	12 (32.4)	37 (100)
	A20	4 (11.1)	6 (16.7)	5 (13.8)	10 (27.8)	11 (30.6)	36 (100)
	B20	2 (5.4)	8 (21.6)	2 (5.4)	12 (32.4)	13 (35.2)	37 (100)
2.It is embarrassing to buy condoms yourself.	A0	11 (30.6)	14 (38.9)	4 (11.1)	7 (19.4)	0 (0)	36 (100)
	B0	11 (29.7)	15 (40.6)	6 (16.2)	4 (10.8)	1 (2.7)	37 (100)
	A8	12 (33.3)	15 (41.7)	5 (13.9)	4 (11.1)	0 (0)	36 (100)
	B8	14 (37.8)	16 (43.2)	3 (8.2)	4 (10.8)	0 (0)	37 (100)
	A20	12 (33.4)	16 (44.4)	3 (8.3)	4 (11.1)	1 (2.8)	36 (100)
	B20	5 (13.5)	17 (45.9)	6 (16.2)	5 (13.6)	4 (10.8)	37 (100)

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Table G 2 Attitudes to the use of condoms and the emergency contraceptive pill of intervention group and comparison group at baseline (continue)

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
3.Using a condom with a boyfriend/lover means you do not trust each other.	A0	17 (47.2)	14 (38.9)	3 (8.3)	1 (2.8)	1 (2.8)	36 (100)
	B0	18 (48.6)	14 (37.8)	1 (2.8)	2 (5.4)	2 (5.4)	37 (100)
	A8	24 (66.6)	7 (19.4)	1 (2.8)	2 (5.6)	2 (5.6)	36 (100)
	B8	18 (48.6)	16 (43.3)	1 (2.7)	1 (2.7)	1 (2.7)	37 (100)
	A20	22 (61.1)	13 (36.1)	1 (2.8)	0 (0)	0 (0)	36 (100)
	B20	13 (35.1)	14 (37.8)	6 (16.2)	3 (8.1)	1 (2.7)	37 (100)
4.Using a condom during sexual intercourse reduces sexual pleasure.	A0	7 (19.4)	13 (36.1)	14 (38.9)	2 (5.6)	0 (0)	36 (100)
	B0	8 (21.6)	15 (40.6)	12 (32.4)	2 (5.4)	0 (0)	37 (100)
	A8	12 (33.3)	18 (50.0)	2 (5.6)	3 (8.3)	1 (2.8)	36 (100)
	B8	15 (40.5)	8 (21.6)	13 (35.2)	1 (2.7)	0 (0)	37 (100)
	A20	15 (41.7)	15 (41.7)	4 (11.0)	2 (5.6)	0 (0)	36 (100)
	B20	7 (19.0)	12 (32.4)	10 (27.0)	6 (16.2)	2 (5.4)	37 (100)

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Table G 2 Attitudes to the use of condoms and the emergency contraceptive pill of intervention group and comparison group at baseline (continue)

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
5.Carrying a condom with you means that you are aware of self-protection.	A0	16 (44.4)	14 (38.9)	4 (11.1)	1 (2.8)	1 (2.8)	36 (100)
	B0	19 (51.4)	14 (37.8)	3 (8.1)	1 (2.7)	0 (0)	37 (100)
	A8	20 (55.6)	15 (41.6)	0 (0)	0 (0)	1 (2.8)	36 (100)
	B8	24 (64.9)	8 (21.6)	4 (10.8)	1 (2.7)	0 (0)	37 (100)
	A20	27 (75.0)	7 (19.4)	0 (0)	1 (2.8)	1 (2.8)	36 (100)
	B20	13 (35.2)	18 (48.6)	1 (2.7)	3 (8.1)	2 (5.4)	37 (100)
6.Female teenagers who have pre-marital sexual relationships should use a condom every time they have sex.	A0	27 (75.0)	6 (16.6)	2 (5.6)	1 (2.8)	0 (0)	36 (100)
	B0	28 (75.6)	7 (19.0)	2 (5.4)	0 (0)	0 (0)	37 (100)
	A8	31 (86.1)	4 (11.1)	1 (2.8)	0 (0)	0 (0)	36 (100)
	B8	26 (70.3)	9 (24.3)	2 (5.4)	0 (0)	0 (0)	37 (100)
	A20	32 (88.9)	3 (8.3)	1 (2.8)	0 (0)	0 (0)	36 (100)
	B20	14 (37.8)	17 (46.0)	2 (5.4)	2 (5.4)	2 (5.4)	37 (100)

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Table G 2 Attitudes to the use of condoms and the emergency contraceptive pill of intervention group and comparison group at baseline (continue)

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
7. Using the emergency contraceptive pill indicates a lack of sexual responsibility.	A0	7 (19.4)	7 (19.4)	11 (30.6)	8 (22.2)	3 (8.4)	36 (100)
	B0	9 (24.3)	9 (24.3)	10 (27.0)	5 (13.6)	4 (10.8)	37 (100)
	A8	15 (41.7)	8 (22.2)	4 (11.1)	6 (16.7)	3 (8.3)	36 (100)
	B8	4 (10.8)	6 (16.2)	10 (27.0)	11 (29.8)	6 (16.2)	37 (100)
	A20	7 (19.4)	11 (30.6)	7 (194)	8 (22.2)	3 (8.4)	36 (100)
	B20	5 (13.5)	6 (16.2)	7 (18.9)	10 (27.0)	9 (24.2)	37 (100)
8. Using the emergency contraceptive pill promotes promiscuity.	A0	4 (11.1)	16 (44.4)	8 (22.2)	6 (16.7)	2 (5.6)	36 (100)
	B0	4 (10.8)	10 (27.0)	14 (37.8)	7 (19.0)	2 (5.4)	37 (100)
	A8	10 (27.8)	17 (47.2)	3 (8.3)	2 (5.6)	4 (11.1)	36 (100)
	B8	8 (21.6)	12 (32.4)	14 (37.8)	3 (8.2)	0 (0)	37 (100)
	A20	11 (30.6)	15 (41.7)	5 (13.8)	4 (11.1)	1 (2.8)	36 (100)
	B20	7 (18.9)	19 (51.4)	5 (13.5)	3 (8.1)	3 (8.1)	37 (100)

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Table G 2 Attitudes to the use of condoms and the emergency contraceptive pill of intervention group and comparison group at baseline (continue)

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
9. Use of the emergency contraceptive pill can cause sexually-transmitted diseases or increase chances of HIV infection (because no condom is used).	A0	5 (13.9)	9 (25.0)	9 (25.0)	10 (27.8)	3 (8.3)	36 (100)
	B0	3 (8.1)	11 (29.7)	8 (21.6)	12 (32.4)	3 (8.2)	37 (100)
	A8	10 (27.8)	14 (38.9)	4 (11.1)	5 (13.9)	3 (8.3)	36 (100)
	B8	4 (10.8)	7 (18.9)	12 (32.4)	11 (29.8)	3 (8.1)	37 (100)
	A20	7 (19.4)	12 (33.3)	6 (16.8)	7 (19.4)	4 (11.1)	36 (100)
	B20	5 (13.6)	13 (35.1)	10 (27.0)	7 (18.9)	2 (5.4)	37 (100)
10. The emergency contraceptive pill may affect my brain**.**	A0	14 (38.9)	10 (27.8)	7 (19.4)	2 (5.6)	3 (8.3)	36 (100)
	B0	18 (48.6)	12 (32.4)	6 (16.2)	1 (2.8)	0 (0)	37 (100)
	A8	17 (47.2)	7 (19.4)	6 (16.7)	4 (11.1)	2 (5.6)	36 (100)
	B8	16 (43.2)	9 (24.4)	8 (21.6)	3 (8.1)	1 (2.7)	37 (100)
	A20	15 (41.6)	11 (30.6)	6 (16.6)	2 (5.6)	2 (5.6)	36 (100)
	B20	9 (24.3)	10 (27.0)	13 (35.1)	3 (8.1)	2 (5.4)	37 (100)

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Table G 2 Attitudes to the use of condoms and the emergency contraceptive pill of intervention group and comparison group at baseline (continue)

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
11. The emergency contraceptive pill may affect my body.	A0	2 (5.6)	16 (44.4)	9 (25.0)	6 (16.7)	3 (8.3)	36 (100)
	B0	11 (29.8)	16 (43.2)	4 (10.8)	6 (16.2)	0 (0)	37 (100)
	A8	8 (22.2)	20 (55.6)	5 (13.8)	2 (5.6)	1 (2.8)	36 (100)
	B8	11 (29.8)	14 (37.8)	7 (18.9)	4 (10.8)	1 (2.7)	37 (100)
	A20	17 (47.2)	14 (38.9)	2 (5.6)	3 (8.3)	0 (0)	36 (100)
	B20	14 (37.8)	13 (35.2)	5 (13.5)	1 (2.7)	4 (10.8)	37 (100)
12. I have a concern about the possible side effect/s of using the emergency contraceptive pill.	A0	0 (0)	1 (2.8)	5 (13.9)	14 (38.9)	16 (44.4)	36 (100)
	B0	0 (0)	2 (5.4)	11 (29.8)	10 (27.0)	14 (37.8)	37 (100)
	A8	0 (0)	3 (8.3)	1 (2.8)	12 (33.3)	20 (55.6)	36 (100)
	B8	0 (0)	2 (5.4)	10 (27.0)	15 (40.6)	10 (27.0)	37 (100)
	A20	2 (5.6)	0 (0)	4 (11.1)	9 (25.0)	21 (58.3)	36 (100)
	B20	3 (8.1)	3 (8.1)	11 (29.8)	14 (37.8)	6 (18.2)	37 (100)

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Part 3: Self-efficacy and expectations in using condoms and the emergency contraceptive pill

Table G 3 Self-efficacy and expectations in using condoms and the emergency contraceptive pill of intervention group and comparison group at baseline

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
1.I am confident that I will not forget to use a condom even though I may be drunk.	A0	14 (38.9)	17 (47.2)	5 (13.9)	0 (0)	0 (0)	36 (100)
	B0	13 (35.1)	13 (35.1)	11 (29.8)	0 (0)	0 (0)	37 (100)
	A8	0 (0)	22 (61.1)	12 (33.3)	2 (5.6)	0 (0)	36 (100)
	B8	0 (0)	17 (46.0)	12 (32.4)	8 (21.6)	0 (0)	37 (100)
	A20	17 (47.2)	16 (44.4)	2 (5.6)	1 (2.8)	0 (0)	36 (100)
	B20	15 (40.5)	15 (40.5)	5 (13.6)	2 (5.4)	0 (0)	37 (100)

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Table G 3 Self-efficacy and expectations in using condoms and the emergency contraceptive pill of intervention group and comparison group at baseline (continue)

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
2.If my sex partner does not want to use a condom during sexual intercourse, it is easy for me to convince him of the necessity to use it.	A0	15 (41.7)	15 (41.7)	5 (13.8)	0 (0)	1 (2.8)	36 (100)
	B0	16 (43.2)	13 (35.1)	7 (18.9)	2 (2.8)	0 (0)	37 (100)
	A8	0 (0)	21 (58.3)	14 (38.9)	1 (2.8)	0 (0)	36 (100)
	B8	0 (0)	17 (45.9)	14 (37.8)	5 (13.5)	1 (2.7)	37 (100)
	A20	21 (58.3)	15 (41.7)	0 (0)	0 (0)	0 (0)	36 (100)
	B20	14 (37.8)	11 (29.7)	11 (29.7)	0 (0)	1 (2.7)	37 (100)
3.I am confident that I can use a condom without losing any sexual pleasure.	A0	14 (38.8)	15 (41.7)	6 (16.7)	1 (2.8)	0 (0)	36 (100)
	B0	11 (29.7)	20 (54.1)	6 (16.2)	0 (0)	0 (0)	37 (100)
	A8	0 (0)	21 (58.3)	14 (38.9)	1 (2.8)	0 (0)	36 (100)
	B8	0 (0)	16 (43.2)	14 (37.8)	7 (19.0)	0 (0)	37 (100)
	A20	20 (55.6)	15 (41.6)	1 (2.8)	0 (0)	0 (0)	36 (100)
	B20	13 (35.1)	14 (37.8)	7 (19.0)	3 (8.1)	0 (0)	37 (100)

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Table G 3 Self-efficacy and expectations in using condoms and the emergency contraceptive pill of intervention group and comparison group at baseline (continue)

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
4.I am confident in my ability to use a condom correctly.	A0	8 (22.2)	12 (33.4)	16 (44.4)	0 (0)	0 (0)	36 (100)
	B0	13 (35.1)	17 (46.0)	7 (18.9)	0 (0)	0 (0)	37 (100)
	A8	0 (0)	20 (55.6)	15 (41.6)	0 (0)	1 (2.8)	36 (100)
	B8	0 (0)	12 (32.4)	16 (43.2)	8 (21.6)	1 (2.8)	37 (100)
	A20	26 (72.2)	9 (25.0)	1 (2.8)	0 (0)	0 (0)	36 (100)
	B20	13 (35.1)	11 (29.7)	9 (24.4)	3 (8.1)	1 (2.7)	37 (100)
5.I am confident that I can remove and dispose of a condom correctly.	A0	4 (11.1)	13 (36.1)	18 (50.0)	1 (2.8)	0 (0)	36 (100)
	B0	11 (29.8)	16 (43.2)	10 (27.0)	0 (0)	0 (0)	37 (100)
	A8	0 (0)	17 (47.2)	15 (41.7)	3 (8.3)	1 (2.8)	36 (100)
	B8	0 (0)	8 (21.6)	18 (48.6)	10 (27.0)	1 (2.7)	37 (100)
	A20	24 (66.6)	10 (27.8)	2 (5.6)	0 (0)	0 (0)	36 (100)
	B20	12 (32.4)	8 (21.6)	10 (27.0)	5 (13.6)	2 (5.4)	37 (100)

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Table G 3 Self-efficacy and expectations in using condoms and the emergency contraceptive pill of intervention group and comparison group at baseline (continue)

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
6.I am not confident about buying condoms myself because of embarrassment.	A0	3 (8.3)	16 (44.4)	7 (19.4)	8 (22.2)	2 (5.6)	36 (100)
	B0	5 (13.5)	6 (16.2)	7 (18.9)	15 (40.6)	4 (10.8)	37 (100)
	A8	0 (0)	8 (22.2)	11 (30.6)	4 (11.0)	13 (36.2)	36 (100)
	B8	0 (0)	4 (10.8)	14 (37.8)	8 (21.6)	11 (29.8)	37 (100)
	A20	1 (2.8)	5 (13.9)	3 (8.3)	12 (33.3)	15 (41.7)	36 (100)
	B20	9 (24.3)	7 (19.0)	9 (24.3)	10 (27.0)	2 (5.4)	37 (100)
7.I am confident that I will not forget to bring a condom with me when I need it.	A0	3 (8.3)	14 (38.9)	17 (47.2)	1 (2.8)	1 (2.8)	36 (100)
	B0	7 (19.0)	14 (37.8)	14 (37.8)	2 (5.4)	0 (0)	37 (100)
	A8	0 (0)	13 (36.2)	16 (44.4)	7 (19.4)	0 (0)	36 (100)
	B8	0 (0)	11 (29.8)	7 (18.9)	16 (43.2)	3 (8.1)	37 (100)
	A20	14 (38.9)	15 (41.7)	7 (19.4)	0 (0)	0 (0)	36 (100)
	B20	9 (24.4)	10 (27.0)	14 (37.8)	2 (5.4)	2 (5.4)	37 (100)

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Table G 3 Self-efficacy and expectations in using condoms and the emergency contraceptive pill of intervention group and comparison group at baseline (continue)

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
8.I am confident that I will not forget to take the emergency contraceptive pill even though I may be drunk.	A0	5 (13.8)	11 (30.6)	17 (47.2)	1 (2.8)	2 (5.6)	36 (100)
	B0	8 (21.6)	9 (24.3)	17 (45.9)	2 (5.4)	1 (2.8)	37 (100)
	A8	0 (0)	12 (33.3)	18 (50.0)	1 (2.8)	5 (13.9)	36 (100)
	B8	0 (0)	14 (37.8)	13 (35.2)	9 (24.3)	2 (2.7)	37 (100)
	A20	19 (52.8)	13 (36.0)	2 (5.6)	2 (5.6)	0 (0)	36 (100)
	B20	12 (32.4)	10 (27.0)	9 (24.4)	3 (8.1)	3 (8.1)	37 (100)
9.I am not confident about inquiring from an expert about the method and how to take the emergency contraceptive pill.	A0	2 (5.6)	3 (8.3)	6 (16.7)	18 (50.0)	7 (19.4)	36 (100)
	B0	2 (5.4)	5 (13.6)	6 (16.2)	18 (48.6)	6 (16.2)	37 (100)
	A8	0 (0)	16 (44.4)	17 (47.2)	1 (2.8)	2 (5.6)	36 (100)
	B8	0 (0)	9 (24.4)	14 (37.8)	6 (16.2)	8 (21.6)	37 (100)
	A20	1 (2.8)	2 (5.6)	1 (2.8)	14 (38.8)	18 (50.0)	36 (100)
	B20	4 (10.8)	9 (24.4)	10 (27.0)	8 (21.6)	6 (16.2)	37 (100)

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Table G 3 Self-efficacy and expectations in using condoms and the emergency contraceptive pill of intervention group and comparison group at baseline (continue)

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
10. I am confident in my ability to use the emergency contraceptive pill correctly.	A0	1 (2.8)	12 (33.3)	19 (52.8)	4 (11.1)	0 (0)	36 (100)
	B0	8 (21.6)	15 (40.6)	12 (32.4)	2 (5.4)	0 (0)	37 (100)
	A8	0 (0)	21 (58.3)	14 (38.9)	1 (2.8)	0 (0)	36 (100)
	B8	0 (0)	10 (27.0)	10 (27.0)	14 (37.8)	3 (8.2)	37 (100)
	A20	22 (61.0)	11 (30.6)	1 (2.8)	1 (2.8)	1 (2.8)	36 (100)
	B20	7 (19.0)	10 (27.0)	12 (32.4)	4 (10.8)	4 (10.8)	37 (100)
11. I am not confident about buying the emergency contraceptive pill myself because of embarrassment.	A0	4 (11.1)	10 (27.8)	10 (27.8)	9 (25.0)	3 (8.3)	36 (100)
	B0	4 (10.8)	6 (16.2)	8 (21.6)	15 (40.6)	4 (10.8)	37 (100)
	A8	0 (0)	12 (33.3)	17 (47.2)	3 (8.3)	4 (11.1)	36 (100)
	B8	0 (0)	6 (16.2)	14 (37.8)	8 (21.6)	9 (24.4)	37 (100)
	A20	1 (2.8)	2 (5.6)	1 (2.8)	19 (52.8)	13 (36.0)	36 (100)
	B20	7 (18.9)	5 (13.5)	10 (27.0)	9 (24.4)	6 (16.2)	37 (100)

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Table G 3 Self-efficacy and expectations in using condoms and the emergency contraceptive pill of intervention group and comparison group at baseline (continue)

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
12. I am confident that I will not forget to bring the emergency contraceptive pill with me when I need it.	A0	1 (2.8)	13 (36.1)	15 (41.7)	4 (11.1)	3 (8.3)	36 (100)
	B0	4 (10.8)	13 (35.1)	17 (45.9)	3 (8.2)	0 (0)	37 (100)
	A8	0 (0)	9 (25.0)	13 (36.1)	9 (25.0)	5 (13.9)	36 (100)
	B8	0 (0)	8 (21.6)	11 (29.7)	15 (40.5)	3 (8.2)	37 (100)
	A20	15 (41.6)	14 (38.9)	5 (13.9)	2 (5.6)	0 (0)	36 (100)
	B20	10 (27.0)	6 (16.2)	15 (40.5)	5 (13.5)	1 (2.8)	37 (100)

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Part 4: Social and environmental factors in using condoms and the emergency contraceptive pill

Table G 4 Social and environmental factors in using condoms and the emergency contraceptive pill of intervention group and comparison group at baseline

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
Influence of peer norms							
1.Friends can influence you in deciding whether to use a condom.	A0	8 (22.2)	11 (30.6)	5 (13.9)	8 (22.2)	4 (11.1)	36 (100)
	B0	4 (10.8)	11 (29.7)	7 (18.9)	14 (37.8)	1 (2.8)	37 (100)
	A8	6 (16.7)	10 (27.8)	2 (5.6)	12 (33.2)	6 (16.7)	36 (100)
	B8	10 (27.0)	9 (24.3)	6 (16.2)	9 (24.3)	3 (8.2)	37 (100)
	A20	1 (2.8)	7 (19.4)	12 (33.3)	6 (16.7)	10 (27.8)	36 (100)
	B20	3 (8.2)	8 (21.6)	12 (32.4)	4 (10.8)	10 (27.0)	37 (100)

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Table G 4 Social and environmental factors in using condoms and the emergency contraceptive pill of intervention group and comparison group at baseline (continue)

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
Influence of peer norms							
2.Friends can influence you in deciding whether to take the emergency contraceptive pill.	A0	5 (13.9)	10 (27.8)	12 (33.3)	8 (22.2)	1 (2.8)	36 (100)
	B0	5 (13.6)	10 (27.0)	8 (21.6)	12 (32.4)	2 (5.4)	37 (100)
	A8	6 (16.7)	13 (36.1)	4 (11.1)	7 (19.4)	6 (16.7)	36 (100)
	B8	8 (21.6)	8 (21.6)	7 (19.0)	10 (27.0)	4 (10.8)	37 (100)
	A20	1 (2.8)	7 (19.4)	13 (36.1)	5 (13.9)	10 (27.8)	36 (100)
	B20	3 (8.2)	6 (16.2)	16 (43.2)	4 (10.8)	8 (21.6)	37 (100)
3.Friends can influence you in deciding whether to use a condom every time you have sexual intercourse.	A0	8 (22.2)	23 (63.9)	3 (8.3)	1 (2.8)	1 (2.8)	36 (100)
	B0	17 (45.9)	15 (40.5)	5 (13.6)	0 (0)	0 (0)	37 (100)
	A8	19 (52.8)	14 (38.9)	0 (0)	3 (8.3)	0 (0)	36 (100)
	B8	11 (29.8)	14 (37.8)	8 (21.6)	2 (5.4)	2 (5.4)	37 (100)
	A20	34 (94.4)	0 (0)	2 (5.6)	0 (0)	0 (0)	36 (100)
	B20	25 (67.6)	8 (21.6)	2 (5.4)	2 (5.4)	0 (0)	37 (100)

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Table G 4 Social and environmental factors in using condoms and the emergency contraceptive pill of intervention group and comparison group at baseline (continue)

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
Influence of peer norms							
4.If you do not have other methods of birth control, your friends will encourage you to use the emergency contraceptive pill.	A0	5 (13.9)	12 (33.3)	14 (38.9)	2 (5.6)	3 (8.3)	36 (100)
	B0	7 (18.9)	18 (48.6)	11 (29.7)	1 (2.8)	0 (0)	37 (100)
	A8	8 (22.2)	18 (50.0)	5 (13.9)	5 (13.9)	0 (0)	36 (100)
	B8	9 (24.3)	13 (35.2)	12 (32.4)	2 (5.4)	1 (2.7)	37 (100)
	A20	33 (91.7)	1 (2.8)	2 (5.6)	0 (0)	0 (0)	36 (100)
	B20	26 (70.2)	6 (16.2)	3 (8.2)	2 (5.4)	0 (0)	37 (100)
5.A friend is the person who manages to find or provide you with a condom and/or the emergency contraceptive pill.	A0	1 (2.8)	1 (2.8)	13 (36.0)	11 (30.6)	10 (27.8)	36 (100)
	B0	0 (0)	5 (13.6)	14 (37.8)	11 (29.7)	7 (18.9)	37 (100)
	A8	1 (2.8)	5 (13.9)	6 (16.7)	12 (33.3)	12 (33.3)	36 (100)
	B8	1 (2.8)	4 (10.8)	14 (37.8)	10 (27.0)	8 (21.6)	37 (100)
	A20	7 (19.5)	7 (19.4)	15 (41.7)	7 (19.4)	0 (0)	36 (100)
	B20	12 (22.4)	6 (16.2)	15 (40.6)	4 (10.8)	0 (0)	37 (100)

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Table G 4 Social and environmental factors in using condoms and the emergency contraceptive pill of intervention group and comparison group at baseline (continue)

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
Influence of peer norms							
6.Receiving information from media encourages you to use a condom.	A0	14 (38.8)	18 (50.0)	2 (5.6)	1 (2.8)	1 (2.8)	36 (100)
	B0	14 (37.8)	15 (40.6)	4 (10.8)	2 (5.4)	2 (5.4)	37 (100)
	A8	23 (63.9)	13 (36.1)	0 (0)	0 (0)	0 (0)	36 (100)
	B8	12 (32.4)	16 (43.2)	7 (18.9)	2 (5.4)	0 (0)	37 (100)
	A20	35 (97.2)	0 (0)	1 (2.8)	0 (0)	0 (0)	36 (100)
	B20	22 (86.5)	4 (10.8)	0 (0)	1 (2.7)	0 (0)	37 (100)
7.Receiving information from media encourages you to use the emergency contraceptive pill.	A0	3 (8.3)	7 (19.4)	11 (30.6)	12 (33.4)	3 (8.3)	36 (100)
	B0	2 (5.4)	7 (18.9)	10 (27.0)	13 (35.2)	5 (13.5)	37 (100)
	A8	9 (25.0)	8 (22.2)	5 (13.9)	6 (16.7)	8 (22.2)	36 (100)
	B8	0 (0)	5 (13.5)	11 (29.8)	13 (35.1)	8 (21.6)	37 (100)
	A20	11 (30.6)	5 (13.9)	13 (36.1)	7 (19.4)	0 (0)	36 (100)
	B20	1 (2.8)	8 (21.6)	18 (48.6)	6 (16.2)	4 (10.8)	37 (100)

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Table G 4 Social and environmental factors in using condoms and the emergency contraceptive pill of intervention group and comparison group at baseline (continue)

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
Social Media influence							
8. Media help you to learn how to use a condom.	A0	12 (33.3)	20 (55.6)	4 (11.1)	0 (0)	0 (0)	36 (100)
	B0	14 (37.8)	20 (54.1)	0 (0)	3 (8.1)	0 (0)	37 (100)
	A8	28 (77.8)	8 (22.2)	0 (0)	0 (0)	0 (0)	36 (100)
	B8	13 (35.1)	16 (43.2)	6 (16.2)	2 (5.4)	0 (0)	37 (100)
	A20	36 (100)	0 (0)	0 (0)	0 (0)	0 (0)	36 (100)
	B20	29 (78.3)	5 (13.6)	3 (8.1)	0 (0)	0 (0)	37 (100)
9. Media help you to learn how to use the emergency contraceptive pill.	A0	6 (16.7)	19 (52.8)	7 (19.4)	3 (8.3)	1 (2.8)	36 (100)
	B0	12 (32.4)	17 (46.0)	6 (16.2)	2 (5.4)	0 (0)	37 (100)
	A8	24 (66.6)	11 (30.6)	1 (2.8)	()	()	36 (100)
	B8	15 (40.5)	15 (40.5)	2 (13.5)	2 (5.5)	0 (0)	37 (100)
	A20	36 (100)	0 (0)	0 (0)	0 (0)	0 (0)	36 (100)
	B20	25 (67.6)	8 (21.6)	4 (10.8)	0 (0)	0 (0)	37 (100)

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Table G 4 Social and environmental factors in using condoms and the emergency contraceptive pill of intervention group and comparison group at baseline (continue)

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
Social Media influence							
10. Media do not make you embarrassed to buy condoms or the emergency contraceptive pill.	A0	5 (13.9)	13 (36.1)	15 (41.7)	3 (8.3)	0 (0)	36 (100)
	B0	7 (18.9)	15 (40.5)	9 (24.3)	5 (13.5)	1 (2.8)	37 (100)
	A8	16 (44.4)	13 (36.1)	4 (11.1)	2 (5.6)	1 (2.8)	36 (100)
	B8	14 (37.8)	12 (32.4)	9 (24.4)	2 (5.4)	0 (0)	37 (100)
	A20	35 (97.2)	1 (2.8)	0 (0)	0 (0)	0 (0)	36 (100)
	B20	24 (64.8)	7 (19.0)	5 (13.5)	1 (2.7)	0 (0)	37 (100)
11. After receiving information from the media, you have the courage to take condoms and the emergency contraceptive pill with you.	A0	8 (22.2)	18 (50.0)	9 (25.0)	1 (2.8)	0 (0)	36 (100)
	B0	6 (16.2)	19 (51.4)	8 (21.6)	3 (8.1)	1 (2.7)	37 (100)
	A8	21 (58.3)	11 (30.6)	4 (11.1)	0 (0)	0 (0)	36 (100)
	B8	11 (29.7)	17 (46.0)	8 (21.6)	1 (2.7)	0 (0)	37 (100)
	A20	36 (100)	0 (0)	0 (0)	0 (0)	0 (0)	36 (100)
	B20	24 (64.8)	9 (24.4)	4 (10.8)	0 (0)	0 (0)	37 (100)

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Table G 4 Social and environmental factors in using condoms and the emergency contraceptive pill of intervention group and comparison group at baseline (continue)

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
Access to contraceptives/pill							
12. Condoms are easily accessible.	A0	24 (66.6)	10 (27.8)	1 (2.8)	1 (2.8)	0 (0)	36 (100)
	B0	22 (59.5)	14 (37.8)	1 (2.7)	0 (0)	0 (0)	37 (100)
	A8	29 (80.6)	7 (19.4)	0 (0)	0 (0)	0 (0)	36 (100)
	B8	29 (78.4)	8 (21.6)	0 (0)	0 (0)	0 (0)	37 (100)
	A20	35 (97.2)	1 (2.8)	0 (0)	0 (0)	0 (0)	36 (100)
	B20	33 (89.2)	3 (8.1)	1 (2.7)	0 (0)	0 (0)	37 (100)
13. Condoms are affordable for me.	A0	3 (8.3)	6 (16.7)	12 (33.3)	13 (36.1)	2 (5.6)	36 (100)
	B0	2 (5.4)	6 (16.2)	16 (43.2)	7 (19.0)	6 (16.2)	37 (100)
	A8	6 (16.7)	15 (41.7)	8 (22.2)	6 (16.7)	1 (2.8)	36 (100)
	B8	1 (2.7)	6 (16.2)	19 (51.4)	8 (21.6)	3 (8.1)	37 (100)
	A20	6 (16.7)	3 (8.3)	8 (22.2)	6 (16.7)	13 (36.1)	36 (100)
	B20	2 (5.4)	3 (8.1)	13 (35.1)	8 (21.6)	11 (29.8)	37 (100)

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Table G 4 Social and environmental factors in using condoms and the emergency contraceptive pill of intervention group and comparison group at baseline (continue)

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
Access to contraceptives/pill							
14. I can always find a condom when I need it.	A0	15 (41.7)	16 (44.4)	4 (11.1)	0 (0)	1 (2.8)	36 (100)
	B0	19 (51.4)	11 (29.7)	6 (16.2)	1 (2.7)	0 (0)	37 (100)
	A8	25 (69.4)	10 (27.8)	1 (2.8)	0 (0)	0 (0)	36 (100)
	B8	15 (40.5)	18 (48.6)	3 (8.2)	1 (2.7)	0 (0)	37 (100)
	A20	32 (88.9)	1 (2.8)	3 (8.3)	0 (0)	0 (0)	36 (100)
	B20	15 (40.5)	8 (21.6)	12 (32.4)	2 (5.4)	0 (0)	37 (100)
15. The emergency contraceptive pill is easily accessible.	A0	13 (36.1)	16 (44.4)	6 (16.7)	1 (2.8)	0 (0)	36 (100)
	B0	16 (43.2)	16 (43.2)	5 (13.6)	0 (0)	0 (0)	37 (100)
	A8	20 (55.6)	16 (44.4)	0 (0)	0 (0)	0 (0)	36 (100)
	B8	18 (48.6)	16 (43.2)	3 (8.1)	0 (0)	0 (0)	37 (100)
	A20	35 (97.2)	1 (2.8)	0 (0)	0 (0)	0 (0)	36 (100)
	B20	30 ()	()	()	()	()	37 (100)

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Table G 4 Social and environmental factors in using condoms and the emergency contraceptive pill of intervention group and comparison group at baseline (continue)

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
Access to contraceptives/pill							
16. The emergency contraceptive pill is affordable.	A0	3 (8.3)	7 (19.4)	16 (44.4)	7 (19.4)	3 (8.3)	36 (100)
	B0	3 (8.1)	4 (10.8)	20 (54.1)	6 (16.2)	4 (10.8)	37 (100)
	A8	3 (8.3)	14 (38.9)	9 (25.0)	6 (16.7)	4 (11.1)	36 (100)
	B8	0 (0)	7 (18.9)	22 (59.5)	6 (16.2)	2 (5.4)	37 (100)
	A20	16 (44.4)	1 (2.8)	3 (8.3)	3 (8.3)	13 (36.2)	36 (100)
	B20	30 (81.1)	5 (13.5)	2 (5.4)	0 (0)	0 (0)	37 (100)
17. I can find the emergency contraceptive pill when I need it.	A0	3 (8.3)	0 (0)	17 (47.3)	12 (33.3)	4 (11.1)	36 (100)
	B0	1 (2.7)	0 (0)	20 (54.1)	9 (24.3)	7 (18.9)	37 (100)
	A8	0 (0)	6 (16.6)	11 (30.6)	8 (22.2)	11 (30.6)	36 (100)
	B8	1 (2.7)	2 (5.4)	15 (40.5)	10 (27.0)	9 (24.4)	37 (100)
	A20	1 (2.8)	11 (30.6)	9 (25.0)	11 (30.6)	4 (11.0)	36 (100)
	B20	4 (10.8)	2 (5.4)	7 (19.0)	16 (43.2)	8 (21.6)	37 (100)

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Part 5: Health literacy in use of condoms and ECPs

Table G 5.1 Access to health information and health services to prevent unintended pregnancy of intervention group and comparison group at baseline

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
1. If you wish to access information about condoms or the emergency contraceptive pill, you can select the appropriate source of information immediately.	A0	3 (8.3)	21 (58.3)	9 (25.0)	2 (5.6)	1 (2.8)	36 (100)
	B0	8 (21.6)	24 (64.9)	5 (13.5)	0 (0)	0 (0)	37 (100)
	A8	15 (41.1)	17 (47.2)	3 (8.3)	1 (2.8)	0 (0)	36 (100)
	B8	19 (51.4)	14 (37.8)	4 (10.8)	0 (0)	0 (0)	37 (100)
	A20	21 (58.3)	13 (36.1)	1 (2.8)	1 (2.8)	0 (0)	36 (100)
	B20	1 (2.7)	2 (5.4)	6 (16.2)	5 (13.5)	23 (62.2)	37 (100)
2. You have been taught by experts about selecting reliable sources of information on condoms and the emergency contraceptive pill.	A0	2 (5.6)	17 (47.2)	11 (30.6)	5 (13.8)	1 (2.8)	36 (100)
	B0	6 (16.2)	24 (64.9)	4 (10.8)	3 (8.1)	0 (0)	37 (100)
	A8	24 (66.7)	11 (30.6)	1 (2.8)	0 (0)	0 (0)	36 (100)
	B8	11 (29.7)	17 (45.9)	5 (13.5)	3 (8.2)	1 (2.7)	37 (100)
	A20	28 (77.8)	7 (19.4)	0 (0)	1 (2.8)	0 (0)	36 (100)
	B20	15 (40.5)	11 (29.7)	8 (21.6)	3 (8.1)	0 (0)	37 (100)

*Represents negative statement

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Table G 5.1 Access to health information and health services to prevent unintended pregnancy of intervention group and comparison group at baseline (continue)

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
3. When you need to obtain information on condoms and the emergency contraceptive pill, you are able to search for accurate and up-to-date information from reliable rources.	A0	7 (19.4)	19 (52.8)	5 (13.9)	5 (13.9)	0 (0)	36 (100)
	B0	14 (37.8)	16 (43.2)	6 (16.2)	1 (2.8)	0 (0)	37 (100)
	A8	21 (58.3)	10 (27.8)	4 (11.1)	1 (2.8)	0 (0)	36 (100)
	B8	15 (40.4)	16 (43.2)	3 (8.1)	2 (5.4)	0 (0)	37 (100)
	A20	25 (69.4)	10 (27.8)	0 (0)	1 (2.8)	0 (0)	36 (100)
	B20	10 (27.0)	20 (54.1)	3 (8.1)	3 (8.1)	1 (2.7)	37 (100)
4. You have verified the accuracy of information about condoms and the emergency contraceptive pill to confirm your own understanding.	A0	6 (16.7)	18 (50.0)	4 (11.1)	7 (19.4)	1 (2.8)	36 (100)
	B0	14 (37.8)	16 (43.2)	6 (16.2)	1 (2.8)	0 (0)	37 (100)
	A8	21 (58.3)	15 (41.7)	0 (0)	0 (0)	0 (0)	36 (100)
	B8	14 (37.8)	17 (46.0)	4 (10.8)	2 (5.4)	0 (0)	37 (100)
	A20	24 (66.6)	11 (30.6)	0 (0)	1 (2.8)	0 (0)	36 (100)
	B20	12 (32.4)	12 (32.4)	11 (29.8)	1 (2.7)	1 (2.7)	37 (100)

*Represents negative statement

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Table G 5.1 Access to health information and health services to prevent unintended pregnancy of intervention group and comparison group at baseline (continue)

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
5.When you need information about condoms and the emergency contraceptive pill, you ask an expert for correct and up-to-date information.	A0	6 (16.6)	11 (30.6)	8 (22.2)	9 (25.0)	2 (5.6)	36 (100)
	B0	13 (35.1)	11 (29.8)	10 (27.0)	3 (8.1)	0 (0)	37 (100)
	A8	20 (55.6)	14 (38.9)	2 (5.6)	0 (0)	0 (0)	36 (100)
	B8	11 (29.7)	13 (35.2)	10 (27.0)	2 (5.4)	1 (2.7)	37 (100)
	A20	23 (63.9)	12 (33.3)	0 (0)	0 (0)	1 (2.8)	36 (100)
	B20	11 (29.8)	16 (43.2)	7 (18.9)	3 (8.1)	0 (0)	37 (100)
6. You usually have difficulty in searching for information from different sources about condoms and the emergency contraceptive pill.	A0	4 (11.1)	9 (25.0)	8 (22.2)	14 (38.9)	1 (2.8)	36 (100)
	B0	4 (10.8)	5 (13.5)	11 (29.8)	15 (40.5)	2 (5.4)	37 (100)
	A8	6 (16.7)	17 (47.2)	4 (11.1)	4 (11.1)	5 (13.9)	36 (100)
	B8	4 (10.8)	6 (16.2)	12 (32.4)	12 (32.4)	3 (8.2)	37 (100)
	A20	3 (8.3)	1 (2.8)	1 (2.8)	14 (38.9)	17 (47.2)	36 (100)
	B20	13 (35.2)	14 (37.8)	4 (10.8)	6 (16.2)	0 (0)	37 (100)

*Represents negative statement

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Table G 5.1 Access to health information and health services to prevent unintended pregnancy of intervention group and comparison group at baseline (continue)

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
7. You tend to believe information about condoms and the emergency contraceptive pill even though you have not verified the reliability of the source.	A0	4 (11.1)	9 (25.0)	12 (33.3)	6 (16.7)	5 (13.9)	36 (100)
	B0	0 (0)	5 (13.5)	12 (32.4)	17 (46.0)	3 (8.1)	37 (100)
	A8	17 (47.2)	12 (33.3)	2 (5.6)	5 (13.9)	0 (0)	36 (100)
	B8	2 (5.4)	4 (10.8)	13 (35.2)	12 (32.4)	6 (16.2)	37 (100)
	A20	1 (2.8)	1 (2.8)	6 (16.6)	11 (30.6)	17 (47.2)	36 (100)
	B20	11 (29.8)	5 (13.5)	9 (24.3)	10 (27.0)	2 (5.4)	37 (100)
6. You usually have difficulty in searching for information from different sources about condoms and the emergency contraceptive pill.	A0	4 (11.1)	9 (25.0)	8 (22.2)	14 (38.9)	1 (2.8)	36 (100)
	B0	4 (10.8)	5 (13.5)	11 (29.8)	15 (40.5)	2 (5.4)	37 (100)
	A8	6 (16.7)	17 (47.2)	4 (11.1)	4 (11.1)	5 (13.9)	36 (100)
	B8	4 (10.8)	6 (16.2)	12 (32.4)	12 (32.4)	3 (8.2)	37 (100)
	A20	3 (8.3)	1 (2.8)	1 (2.8)	14 (38.9)	17 (47.2)	36 (100)
	B20	13 (35.2)	14 (37.8)	4 (10.8)	6 (16.2)	0 (0)	37 (100)

*Represents negative statement

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Part 5: Health literacy in use of condoms and ECPs

Table G 5.2 Cognitive health to prevent unintended pregnancy of intervention group and comparison group at baseline

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
1.When a condom has slipped or broken during sexual intercourse, it is advisable to take the emergency contraceptive pill immediately to prevent pregnancy.	A0	24 (66.7)	9 (25.0)	3 (8.3)	0 (0)	0 (0)	36 (100)
	B0	21 (56.8)	12 (32.4)	3 (8.1)	1 (2.7)	0 (0)	37 (100)
	A8	30 (83.3)	4 (11.1)	1 (2.8)	1 (2.8)	0 (0)	36 (100)
	B8	23 (62.2)	8 (21.6)	5 (13.5)	1 (2.7)	0 (0)	37 (100)
	A20	26 (72.2)	9 (25.0)	1 (2.8)	0 (0)	0 (0)	36 (100)
	B20	16 (43.2)	16 (43.2)	4 (10.8)	0 (0)	1 (2.7)	37 (100)
2. Double condoms used during sexual intercourse will be easily torn and broken.	A0	12 (33.3)	6 (16.7)	18 (50.0)	0 (0)	0 (0)	36 (100)
	B0	16 (43.2)	5 (13.6)	14 (37.8)	1 (2.7)	1 (2.7)	37 (100)
	A8	31 (86.1)	3 (8.3)	1 (2.8)	1 (2.8)	0 (0)	36 (100)
	B8	19 (51.4)	4 (10.8)	9 (24.3)	3 (8.1)	2 (5.4)	37 (100)
	A20	28 (77.8)	6 (16.6)	1 (2.8)	1 (2.8)	0 (0)	36 (100)
	B20	15 (40.4)	14 (37.8)	4 (10.8)	4 (10.8)	0 (0)	37 (100)

*Represents negative statement

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Table G 5.2 Cognitive health to prevent unintended pregnancy of intervention group and comparison group at baseline (continue)

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
3. Using a condom can prevent pregnancy and sexually transmitted diseases.	A0	20 (55.6)	14 (38.8)	2 (5.6)	0 (0)	0 (0)	36 (100)
	B0	18 (48.6)	14 (37.8)	4 (10.8)	1 (2.8)	0 (0)	37 (100)
	A8	31 (86.1)	5 (13.9)	0 (0)	0 (0)	0 (0)	36 (100)
	B8	21 (56.8)	12 (32.4)	3 (8.1)	1 (2.7)	0 (0)	37 (100)
	A20	26 (72.2)	9 (25.0)	1 (2.8)	0 (0)	0 (0)	36 (100)
	B20	12 (32.4)	19 (51.4)	4 (10.8)	2 (5.4)	0 (0)	37 (100)
4. Condom allergy can happen to any woman.	A0	7 (19.4)	9 (25.0)	14 (38.9)	4 (11.1)	2 (5.6)	36 (100)
	B0	3 (8.1)	5 (13.5)	25 (67.6)	3 (8.1)	1 (2.7)	37 (100)
	A8	12 (3.3)	5 (13.9)	8 (22.2)	6 (16.7)	5 (13.9)	36 (100)
	B8	5 (13.5)	7 (18.9)	21 (56.8)	3 (8.1)	1 (2.7)	37 (100)
	A20	12 (33.3)	12 (33.3)	6 (16.7)	5 (13.9)	1 (2.8)	36 (100)
	B20	12 (32.4)	13 (35.2)	5 (13.5)	6 (16.2)	1 (2.7)	37 (100)

*Represents negative statement

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Table G 5.2 Cognitive health to prevent unintended pregnancy of intervention group and comparison group at baseline (continue)

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
5. The emergency contraceptive pill must be taken 12 hours before sexual intercourse.	A0	3 (8.3)	4 (11.1)	18 (50.0)	2 (5.6)	9 (25.0)	36 (100)
	B0	3 (8.1)	7 (19.0)	18 (48.6)	3 (8.1)	6 (16.2)	37 (100)
	A8	3 (8.3)	2 (5.6)	4 (11.1)	4 (11.1)	23 (63.9)	36 (100)
	B8	2 (5.4)	3 (8.1)	17 (46.0)	5 (13.5)	10 (27.0)	37 (100)
	A20	0 (0)	2 (5.6)	3 (8.3)	7 (19.4)	24 (66.7)	36 (100)
	B20	3 (8.1)	11 (29.8)	12 (32.4)	5 (13.5)	6 (16.2)	37 (100)
6. Emergency contraceptive pills can prevent pregnancy in 100% of cases.	A0	1 (2.8)	6 (16.6)	15 (41.7)	12 (33.3)	2 (5.6)	36 (100)
	B0	1 (2.8)	2 (5.4)	15 (40.5)	10 (27.0)	9 (24.3)	37 (100)
	A8	1 (2.8)	3 (8.3)	1 (2.8)	9 (25.0)	22 (61.1)	36 (100)
	B8	1 (2.7)	6 (16.2)	12 (32.4)	7 (18.9)	11 (29.8)	37 (100)
	A20	0 (0)	3 (8.3)	1 (2.8)	10 (27.8)	22 (61.1)	36 (100)
	B20	3 (8.1)	5 (13.5)	14 (37.8)	9 (24.4)	6 (16.2)	37 (100)

*Represents negative statement

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Table G 5.2 Cognitive health to prevent unintended pregnancy of intervention group and comparison group at baseline (continue)

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
7. Taking more than 4 pills per month will adversely affect women's health.	A0	20 (55.6)	9 (25.0)	6 (16.6)	0 (0)	1 (2.8)	36 (100)
	B0	19 (51.4)	6 (16.2)	12 (32.4)	0 (0)	0 (0)	37 (100)
	A8	31 (86.1)	4 (11.1)	1 (2.8)	0 (0)	0 (0)	36 (100)
	B8	19 (51.4)	4 (10.8)	13 (35.1)	1 (2.7)	0 (0)	37 (100)
	A20	24 (66.6)	10 (27.8)	0 (0)	2 (5.6)	0 (0)	36 (100)
	B20	17 (46.0)	6 (16.2)	10 (27.0)	1 (2.7)	3 (8.1)	37 (100)

*Represents negative statement

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Part 5: Health literacy in use of condoms and ECPs

Table G 5.3 Communication skills for preventing unintended pregnancy of intervention group and comparison group at baseline

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
1. You do not quite understand when reading material about the use of condoms and the emergency contraceptive pill.	A0	4 (11.1)	8 (22.2)	11 (30.6)	10 (27.8)	3 (8.3)	36 (100)
	B0	2 (5.4)	6 (16.2)	10 (27.0)	16 (43.2)	3 (8.2)	37 (100)
	A8	3 (8.3)	1 (2.8)	19 (52.8)	13 (36.1)	()	36 (100)
	B8	1 (2.7)	5 (13.6)	15 (40.5)	14 (37.8)	2 (5.4)	37 (100)
	A20	0 (0)	2 (5.6)	3 (8.3)	15 (41.7)	16 (44.4)	36 (100)
	B20	3 (8.1)	14 (37.8)	9 (24.3)	6 (16.2)	5 (13.6)	37 (100)

*Represents negative statement

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Table G 5.3 Communication skills for preventing unintended pregnancy of intervention group and comparison group at baseline (continue)

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
2. You speak openly with friends and try to make others understand about pregnancy prevention in relation to taking the emergency contraceptive pill, side effects of taking the emergency contraceptive pill, and how to use the emergency contraceptive pill.	A0	9 (25.0)	14 (38.8)	2 (5.6)	10 (27.8)	1 (2.8)	36 (100)
	B0	10 (27.0)	9 (24.4)	12 (32.4)	4 (10.8)	2 (5.4)	37 (100)
	A8	16 (44.4)	16 (44.4)	0 (0)	3 (8.3)	1 (2.8)	36 (100)
	B8	9 (24.3)	19 (51.4)	7 (18.9)	1 (2.7)	1 (2.7)	37 (100)
	A20	16 (44.4)	18 (50.0)	2 (5.6)	0 (0)	0 (0)	36 (100)
	B20	7 (18.9)	18 (48.6)	3 (8.1)	9 (24.4)	0 (0)	37 (100)
3. You can convey information about the use of condoms and the emergency contraceptive pill through speaking and writing to make others understand.	A0	2 (5.6)	9 (25.0)	14 (38.8)	5 (13.9)	6 (16.7)	36 (100)
	B0	7 (18.9)	6 (16.2)	17 (45.9)	6 (16.2)	1 (2.8)	37 (100)
	A8	10 (27.8)	17 (47.2)	3 (8.3)	5 (13.9)	1 (2.8)	36 (100)
	B8	5 (13.5)	18 (48.6)	9 (24.4)	4 (10.8)	1 (2.7)	37 (100)
	A20	12 (33.2)	20 (55.6)	2 (5.6)	2 (5.6)	0 (0)	36 (100)
	B20	4 (10.8)	10 (27.0)	14 (37.8)	9 (24.4)	0 (0)	37 (100)

*Represents negative statement

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Table G 5.3 Communication skills for preventing unintended pregnancy of intervention group and comparison group at baseline (continue)

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
4. You can convince others to accept advice about the use of condoms and the emergency contraceptive pill.	A0	2 (5.6)	14 (38.9)	10 (27.8)	7 (19.4)	3 (8.3)	36 (100)
	B0	5 (13.5)	17 (6.0)	11 (27.0)	3 (8.1)	2 (5.4)	37 (100)
	A8	15 (41.7)	13 (36.0)	6 (16.7)	2 (5.6)	0 (0)	36 (100)
	B8	5 (13.5)	13 (35.2)	17 (45.9)	1 (2.7)	1 (2.7)	37 (100)
	A20	12 (33.3)	23 (63.9)	1 (2.8)	0 (0)	0 (0)	36 (100)
	B20	6 (16.2)	10 (27.0)	15 (40.6)	6 (16.2)	0 (0)	37 (100)
5. You can convince others to see the significance of using condoms and the emergency contraceptive pill.	A0	6 (16.7)	17 (47.2)	5 (13.9)	6 (16.7)	2 (5.6)	36 (100)
	B0	8 (21.6)	17 (45.9)	8 (21.6)	3 (8.1)	1 (2.8)	37 (100)
	A8	18 (50.0)	13 (36.1)	4 (11.1)	1 (2.8)	0 (0)	36 (100)
	B8	8 (21.6)	15 (40.6)	14 (37.8)	0 (0)	0 (0)	37 (100)
	A20	19 (52.8)	15 (41.6)	1 (2.8)	1 (2.8)	0 (0)	36 (100)
	B20	7 (18.9)	13 (35.1)	9 (24.4)	8 (21.6)	()	37 (100)

*Represents negative statement

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Table G 5.3 Communication skills for preventing unintended pregnancy of intervention group and comparison group at baseline (continue)

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
6. You can communicate in writing how to use condoms and the emergency contraceptive pill.	A0	1 (2.8)	6 (16.7)	15 (41.6)	10 (27.8)	4 (11.1)	36 (100)
	B0	5 (13.5)	8 (21.6)	20 (54.1)	3 (8.1)	1 (2.7)	37 (100)
	A8	15 (41.7)	15 (41.7)	2 (5.6)	4 (11.0)	0 (0)	36 (100)
	B8	4 (10.8)	13 (35.2)	18 (48.6)	1 (2.7)	1 (2.7)	37 (100)
	A20	14 (38.9)	16 (44.4)	5 (13.9)	1 (2.8)	0 (0)	36 (100)
	B20	3 (8.1)	7 (18.9)	14 (37.8)	9 (24.4)	4 (10.8)	37 (100)

*Represents negative statement

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Part 5: Health literacy in use of condoms and ECPs

Table G 5.4 Decision-making skills in choosing appropriate practices to prevent unintended pregnancy of intervention group and comparison group at baseline

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
1.When your boyfriend/lover does not use a condom while having sexual intercourse, you would agree.	A0	1 (2.8)	7 (19.4)	3 (8.3)	12 (33.3)	13 (36.2)	36 (100)
	B0	3 (8.1)	3 (8.1)	6 (16.2)	6 (16.2)	19 (51.4)	37 (100)
	A8	0 (0)	0 (0)	3 (8.3)	9 (25.0)	24 (66.7)	36 (100)
	B8	1 (2.7)	1 (2.7)	8 (21.6)	8 (21.6)	19 (51.4)	37 (100)
	A20	1 (2.8)	1 (2.8)	4 (11.1)	12 (33.3)	18 (50.0)	36 (100)
	B20	5 (13.5)	5 (13.5)	7 (18.9)	11 (29.7)	9 (24.4)	37 (100)
2. If your boyfriend/lover asked you to have sex without a condom, you would refuse.	A0	15 (41.7)	10 (27.8)	6 (16.6)	3 (8.3)	2 (5.6)	36 (100)
	B0	20 (54.1)	6 (16.2)	5 (13.5)	4 (10.8)	2 (5.4)	37 (100)
	A8	24 (66.6)	9 (25.0)	1 (2.8)	1 (2.8)	1 (2.8)	36 (100)
	B8	18 (48.6)	11 (29.8)	5 (13.5)	2 (5.4)	1 (2.7)	37 (100)
	A20	21 (58.3)	9 (25.0)	2 (5.6)	3 (8.3)	1 (2.8)	36 (100)
	B20	16 (43.2)	15 (44.6)	4 (10.8)	1 (2.7)	1 (2.7)	37 (100)

*Represents negative statement

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Table G 5.4 Decision-making skills in choosing appropriate practices to prevent unintended pregnancy of intervention group and comparison group at baseline (continue)

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
3. You have assessed the benefits and disadvantages of the condom before use.	A0	6 (16.6)	15 (41.7)	8 (22.2)	5 (13.9)	2 (5.6)	36 (100)
	B0	13 (35.2)	15 (40.5)	5 (13.5)	2 (5.4)	2 (5.4)	37 (100)
	A8	16 (44.4)	15 (41.7)	1 (2.8)	3 (8.3)	1 (2.8)	36 (100)
	B8	9 (24.4)	17 (45.9)	6 (16.2)	3 (8.1)	2 (5.4)	37 (100)
	A20	18 (50.0)	17 (47.2)	1 (2.8)	0 (0)	0 (0)	36 (100)
	B20	6 (16.2)	17 (46.0)	10 (27.0)	4 (10.8)	0 (0)	37 (100)
4. Following unplanned sexual intercourse, you would take the emergency contraceptive pill immediately to prevent pregnancy.	A0	13 (36.1)	11 (30.6)	6 (16.6)	2 (5.6)	4 (11.1)	36 (100)
	B0	19 (51.4)	13 (35.1)	2 (5.4)	1 (2.7)	2 (5.4)	37 (100)
	A8	19 (52.6)	11 (30.6)	2 (5.6)	2 (5.6)	2 (5.6)	36 (100)
	B8	15 (40.6)	14 (37.8)	6 (16.2)	1 (2.7)	1 (2.7)	37 (100)
	A20	22 (61.1)	13 (36.1)	1 (2.8)	0 (0)	0 (0)	36 (100)
	B20	10 (27.0)	14 (37.8)	9 (24.4)	2 (5.4)	2 (5.4)	37 (100)

*Represents negative statement

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Table G 5.4 Decision-making skills in choosing appropriate practices to prevent unintended pregnancy of intervention group and comparison group at baseline (continue)

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
5. If your boyfriend/lover recommended using a condom, you would refuse and explain.	A0	15 (41.8)	7 (19.4)	8 (22.2)	3 (8.3)	3 (8.3)	36 (100)
	B0	1 (2.7)	3 (8.1)	3 (8.1)	9 (24.3)	21 (56.8)	37 (100)
	A8	2 (5.6)	0 (0)	1 (2.8)	8 (22.2)	25 (69.4)	36 (100)
	B8	2 (5.4)	5 (13.5)	4 (10.8)	7 (18.9)	19 (51.4)	37 (100)
	A20	1 (2.8)	1 (2.8)	1 (2.8)	4 (11.0)	29 (80.6)	36 (100)
	B20	4 (10.8)	7 (19.0)	4 (10.8)	14 (37.8)	8 (21.6)	37 (100)
6. If your friend said that using the emergency contraceptive pill is common, you would require your friend to explain and discuss the reasons for using the emergency contraceptive pill.	A0	4 (11.1)	16 (44.4)	11 (30.6)	3 (8.3)	2 (5.6)	36 (100)
	B0	11 (29.8)	12 (32.4)	12 (32.4)	1 (2.7)	1 (2.7)	37 (100)
	A8	17 (47.2)	13 (36.1)	3 (8.3)	1 (2.8)	2 (5.6)	36 (100)
	B8	3 (8.1)	15 (40.6)	13 (35.1)	3 (8.1)	3 (8.1)	37 (100)
	A20	20 (55.6)	16 (44.4)	0 (0)	0 (0)	0 (0)	36 (100)
	B20	9 (24.4)	18 (48.6)	8 (21.6)	1 (2.7)	1 (2.7)	37 (100)

*Represents negative statement

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Part 5: Health literacy in use of condoms and ECPs

Table G 5.5 Self-management for preventing unintended pregnancy of intervention group and comparison group at baseline

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
1.You have never planned your lifestyle in terms of condom/emergency contraceptive pill use.	A0	1 (2.8)	10 (27.8)	8 (22.2)	11 (30.6)	6 (16.6)	36 (100)
	B0	2 (5.4)	4 (10.8)	11 (29.8)	16 (43.2)	4 (10.8)	37 (100)
	A8	2 (5.6)	3 (8.3)	2 (5.6)	16 (44.4)	13 (36.1)	36 (100)
	B8	2 (5.4)	3 (8.1)	5 (13.5)	20 (54.1)	7 (18.9)	37 (100)
	A20	1 (2.8)	1 (2.8)	3 (8.3)	15 (41.7)	16 (44.4)	36 (100)
	B20	3 (8.1)	6 (16.2)	13 (35.1)	8 (21.6)	7 (19.0)	37 (100)
2. You have set your goals in terms of condom/emergency contraceptive pill use.	A0	15 (41.7)	15 (41.7)	4 (11.0)	2 (5.6)	0 (0)	36 (100)
	B0	14 (37.8)	16 (43.2)	5 (13.6)	2 (5.4)	0 (0)	37 (100)
	A8	17 (47.2)	17 (47.2)	1 (2.8)	1 (2.8)	0 (0)	36 (100)
	B8	15 (40.6)	14 (37.8)	4 (10.8)	2 (5.4)	2 (5.4)	37 (100)
	A20	15 (41.6)	19 (52.8)	2 (5.6)	0 (0)	0 (0)	36 (100)
	B20	13 (35.1)	17 (46.0)	6 (16.2)	1 (2.7)	0 (0)	37 (100)

*Represents negative statement

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Table G 5.5 Self-management for preventing unintended pregnancy of intervention group and comparison group at baseline (continue)

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
3. You have controlled and managed yourself in terms of condom/ emergency contraceptive pill use.	A0	9 (25.0)	18 (50.0)	7 (19.4)	2 (5.6)	0 (0)	36 (100)
	B0	15 (40.5)	13 (35.1)	7 (19.0)	7 (5.4)	0 (0)	37 (100)
	A8	16 (44.4)	15 (41.7)	3 (8.3)	2 (5.6)	0 (0)	36 (100)
	B8	16 (43.2)	17 (46.0)	2 (5.4)	1 (2.7)	1 (2.7)	37 (100)
	A20	16 (44.4)	17 (47.2)	2 (5.6)	1 (2.8)	0 (0)	36 (100)
	B20	13 (35.1)	13 (35.1)	8 (21.7)	3 (8.1)	0 (0)	37 (100)
4. You have never reviewed your actions in relation to your goals for using condoms/emergency contraceptive pill as planned.	A0	1 (2.8)	4 (11.1)	12 (33.3)	14 (38.9)	5 (13.9)	36 (100)
	B0	0 (0)	0 (0)	12 (32.4)	18 (48.6)	7 (9.0)	37 (100)
	A8	0 (0)	1 (2.8)	6 (16.6)	19 (52.8)	10 (27.8)	36 (100)
	B8	1 (2.7)	2 (5.4)	12 (32.5)	11 (29.7)	11 (29.7)	37 (100)
	A20	2 (5.6)	3 (8.3)	2 (5.6)	14 (38.9)	15 (41.6)	36 (100)
	B20	2 (5.4)	7 (18.9)	15 (40.5)	9 (24.4)	4 (10.8)	37 (100)

*Represents negative statement

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Table G 5.5 Self-management for preventing unintended pregnancy of intervention group and comparison group at baseline (continue)

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
5. You prepare for condom/emergency contraceptive pill use every time.	A0	5 (13.9)	9 (25.0)	12 (33.3)	5 (13.9)	5 (13.9)	36 (100)
	B0	9 (24.4)	13 (35.1)	8 (21.6)	2 (5.4)	5 (13.5)	37 (100)
	A8	7 (19.4)	18 (50.0)	5 (13.9)	5 (13.9)	1 (2.8)	36 (100)
	B8	8 (21.6)	14 (37.8)	11 (29.8)	1 (2.7)	3 (8.1)	37 (100)
	A20	8 (22.2)	15 (41.76)	10 (27.8)	2 (5.6)	1 (2.8)	36 (100)
	B20	7 (19.0)	14 (37.8)	8 (21.6)	6 (16.2)	2 (5.4)	37 (100)
6. You have taken action as planned to use a condom/emergency contraceptive pill.	A0	5 (13.9)	16 (44.4)	9 (25.0)	4 (11.1)	2 (5.6)	36 (100)
	B0	14 (37.8)	17 (45.9)	5 (13.5)	1 (2.8)	0 (0)	37 (100)
	A8	18 (50.0)	15 (41.7)	3 (8.3)	0 (0)	0 (0)	36 (100)
	B8	10 (27.0)	18 (48.6)	5 (13.6)	1 (2.7)	3 (8.1)	37 (100)
	A20	18 (50.0)	16 (44.4)	2 (5.6)	0 (0)	0 (0)	36 (100)
	B20	11 (29.8)	17 (45.9)	5 (13.5)	2 (5.4)	2 (5.4)	37 (100)

*Represents negative statement

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Part 5: Health literacy in use of condoms and ECPs

Table G 5.6 Media and information literacy to prevent unintended pregnancy of intervention group and comparison group at baseline

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
1. You have not verified the accuracy of information on the condom or emergency contraceptive pill package before buying.	A0	1 (2.8)	5 (13.9)	13 (36.1)	10 (27.8)	7 (19.4)	36 (100)
	B0	1 (2.7)	1 (2.7)	10 (27.0)	12 (32.4)	13 (35.2)	37 (100)
	A8	0 (0)	0 (0)	3 (8.3)	15 (41.7)	18 (50.0)	36 (100)
	B8	2 (5.4)	0 (0)	7 (18.9)	17 (45.9)	11 (29.8)	37 (100)
	A20	0 (0)	3 (8.3)	2 (5.6)	14 (38.9)	17 (47.2)	36 (100)
	B20	2 (5.4)	8 (21.6)	4 (10.8)	16 (43.2)	7 (19.0)	37 (100)
2. When you see an advertisement for condoms or the emergency contraceptive pill, you search for additional information to verify accuracy before buying.	A0	5 (13.9)	18 (50.0)	5 (13.9)	5 (13.9)	3 (8.3)	36 (100)
	B0	9 (24.3)	14 (37.8)	9 (24.3)	4 (10.8)	1 (2.8)	37 (100)
	A8	14 (38.9)	18 (50.0)	3 (8.3)	1 (2.8)	0 (0)	36 (100)
	B8	12 (32.4)	12 (32.4)	8 (21.6)	3 (8.2)	2 (5.4)	37 (100)
	A20	20 (55.6)	13 (36.1)	3 (8.3)	0 (0)	0 (0)	36 (100)
	B20	8 (21.6)	10 (27.0)	9 (24.4)	10 (27.0)	0 (0)	37 (100)

*Represents negative statement

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Table G 5.6 Media and information literacy to prevent unintended pregnancy of intervention group and comparison group at baseline continue)

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
3. You would consider the benefits and negative consequences before accepting information about condoms and the emergency contraceptive pill from the media.	A0	8 (22.2)	22 (61.1)	3 (8.3)	2 (5.6)	1 (2.8)	36 (100)
	B0	13 (35.2)	16 (43.2)	6 (16.2)	2 (5.4)	0 (0)	37 (100)
	A8	23 (63.9)	13 (36.1)	0 (0)	0 (0)	0 (0)	36 (100)
	B8	14 (37.8)	14 (37.8)	7 (19.0)	1 (2.7)	1 (2.7)	37 (100)
	A20	16 (44.4)	17 (47.2)	1 (2.8)	2 (5.6)	0 (0)	36 (100)
	B20	8 (21.6)	21 (56.8)	6 (16.2)	2 (5.4)	0 (0)	37 (100)
4. You would evaluate messages received from the media regarding condom and emergency contraceptive pill use before transferring that information to others.	A0	6 (16.6)	19 (52.8)	8 (22.2)	2 (5.6)	1 (2.8)	36 (100)
	B0	13 (35.2)	17 (45.9)	5 (13.5)	2 (5.4)	0 (0)	37 (100)
	A8	18 (50.0)	16 (44.4)	0 (0)	2 (5.6)	0 (0)	36 (100)
	B8	12 (32.4)	18 (48.6)	4 (10.8)	2 (5.4)	1 (2.8)	37 (100)
	A20	21 (58.3)	14 (38.9)	0 (0)	1 (2.8)	0 (0)	36 (100)
	B20	9 (24.3)	15 (40.6)	9 (24.3)	4 (10.8)	0 (0)	37 (100)

*Represents negative statement

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Table G 5.6 Media and information literacy to prevent unintended pregnancy of intervention group and comparison group at baseline continue)

Issue	Group	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total n(%)
5. You would analyze the content and accuracy of information received from the media before deciding to use condoms or the emergency contraceptive pill.	A0	6 (16.6)	22 (61.2)	5 (13.9)	3 (8.3)	0 (0)	36 (100)
	B0	14 (37.8)	17 (45.9)	5 (13.5)	1 (2.8)	0 (0)	37 (100)
	A8	20 (55.6)	14 (38.9)	1 (2.8)	1 (2.8)	0 (0)	36 (100)
	B8	15 (40.6)	14 (37.8)	6 (16.2)	1 (2.7)	1 (2.7)	37 (100)
	A20	24 (66.6)	11 (30.6)	1 (2.8)	0 (0)	0 (0)	36 (100)
	B20	9 (24.4)	14 (37.8)	9 (24.3)	3 (8.1)	2 (5.4)	37 (100)
6. You would conduct a comparative analysis based on information from the media about condoms and the emergency contraceptive pill before deciding to buy.	A0	9 (25.0)	17 (47.2)	7 (19.4)	2 (5.6)	1 (2.8)	36 (100)
	B0	15 (40.5)	12 (32.4)	7 (19.0)	3 (8.1)	0 (0)	37 (100)
	A8	18 (50.0)	17 (47.2)	1 (2.8)	0 (0)	0 (0)	36 (100)
	B8	11 (29.7)	21 (56.8)	2 (5.4)	1 (2.7)	2 (5.4)	37 (100)
	A20	24 (66.6)	11 (30.6)	0 (0)	1 (2.8)	0 (0)	36 (100)
	B20	9 (24.4)	12 (32.4)	10 (27.0)	3 (8.1)	3 (8.1)	37 (100)

*Represents negative statement

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Part 6: Intentions in relation to condoms and the emergency contraceptive pill

Table G 6 Intentions in relation to condoms and the emergency contraceptive pill of intervention group and comparison group at baseline

Issue	Group	Very likely	Likely	Neutral	Unlikely	Very unlikely	Total n(%)
1. In the future, if you have sexual intercourse, you intend to use a condom.	A0	24 (66.6)	11 (30.6)	1 (2.8)	0 (0)	0 (0)	36 (100)
	B0	26 (70.3)	9 (24.3)	1 (2.7)	1 (2.7)	0 (0)	37 (100)
	A8	34 (94.4)	2 (5.6)	0 (0)	0 (0)	0 (0)	36 (100)
	B8	24 (65.0)	0 (0)	10 (27.0)	1 (2.7)	2 (5.4)	37 (100)
	A20	33 (91.6)	2 (5.6)	1 (2.8)	0 (0)	0 (0)	36 (100)
	B20	16 (43.2)	14 (37.8)	5 (13.6)	2 (5.4)	0 (0)	37 (100)
2. If it is impossible for your boyfriend to use a condom, you intend to refrain from having sex with him.	A0	10 (27.8)	11 (30.6)	9 (25.0)	5 (13.8)	1 (2.8)	36 (100)
	B0	13 (35.2)	10 (27.0)	12 (32.4)	1 (2.7)	1 (2.7)	37 (100)
	A8	19 (52.8)	5 (13.9)	8 (22.2)	4 (11.1)	0 (0)	36 (100)
	B8	11 (29.7)	9 (24.3)	12 (32.4)	2 (5.4)	3 (8.1)	37 (100)
	A20	14 (38.9)	13 (36.1)	6 (16.6)	2 (5.6)	1 (2.8)	36 (100)
	B20	11 (29.7)	12 (32.4)	11 (29.7)	3 (8.2)	0 (0)	37 (100)

*Represents negative statement

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Table G 6 Intentions in relation to condoms and the emergency contraceptive pill of intervention group and comparison group at baseline (continue)

Issue	Group	Very likely	Likely	Neutral	Unlikely	Very unlikely	Total n(%)
3. When your boyfriend does not want to use a condom, you would insist that he must use it.	A0	0 (0)	7 (19.4)	4 (11.1)	8 (22.2)	17 (47.2)	36 (100)
	B0	3 (8.1)	1 (2.7)	7 (19.0)	9 (24.3)	17 (45.9)	37 (100)
	A8	1 (2.8)	4 (11.1)	8 (22.2)	0 (0)	23 (63.9)	36 (100)
	B8	1 (2.7)	4 (10.8)	6 (16.2)	9 (24.4)	17 (45.9)	37 (100)
	A20	0 (0)	1 (2.8)	2 (5.6)	8 (22.2)	25 (69.4)	36 (100)
	B20	2 (5.4)	6 (16.2)	7 (19.0)	11 (29.7)	11 (29.7)	37 (100)
4. In the future, if you have unexpected sexual intercourse, you intend to take the emergency contraceptive pill.	A0	14 (38.9)	5 (13.9)	8 (22.2)	4 (11.1)	5 (13.9)	36 (100)
	B0	28 (75.7)	7 (18.9)	1 (2.7)	0 (0)	1 (2.7)	37 (100)
	A8	21 (58.4)	3 (8.3)	3 (8.3)	7 (19.4)	2 (5.6)	36 (100)
	B8	19 (51.4)	3 (8.1)	9 (24.3)	2 (5.4)	4 (10.8)	37 (100)
	A20	18 (50.0)	10 (27.8)	5 (13.9)	3 (8.3)	0 (0)	36 (100)
	B20	15 (40.6)	16 (43.2)	3 (8.1)	2 (5.4)	1 (2.7)	37 (100)

*Represents negative statement

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Table G 6 Intentions in relation to condoms and the emergency contraceptive pill of intervention group and comparison group at baseline (continue)

Issue	Group	Very likely	Likely	Neutral	Unlikely	Very unlikely	Total n(%)
5. If it is impossible to take the emergency contraceptive pill, you intend to refrain from having sex with your boyfriend.	A0	13 (36.1)	10 (27.8)	6 (16.7)	3 (8.3)	4 (11.1)	36 (100)
	B0	18 (48.6)	7 (18.9)	9 (24.3)	2 (5.4)	1 (2.8)	37 (100)
	A8	24 (66.7)	3 (8.3)	5 (19.3)	3 (8.3)	1 (2.8)	36 (100)
	B8	16 (43.2)	12 (32.4)	7 (19.0)	0 (0)	2 (5.4)	37 (100)
	A20	20 (55.6)	10 (27.8)	3 (8.3)	3 (8.3)	0 (0)	36 (100)
	B20	10 (27.0)	14 (37.9)	8 (21.6)	2 (5.4)	3 (8.1)	37 (100)
6. Even when your boyfriend does not want you to take the emergency contraceptive pill, you intend to take it.	A	2 (5.6)	6 (16.6)	4 (11.1)	6 (16.7)	18 (50.0)	36 (100)
	B	3 (8.1)	2 (5.4)	6 (16.2)	2 (5.4)	24 (64.9)	37 (100)
	A8	0 (0)	1 (2.8)	1 (2.8)	4 (11.1)	30 (83.3)	36 (100)
	B8	0 (0)	5 (13.5)	3 (8.1)	6 (16.2)	23 (62.2)	37 (100)
	A20	1 (2.8)	2 (5.6)	1 (2.8)	8 (22.2)	24 (66.6)	36 (100)
	B20	2 (5.4)	9 (24.4)	6 (16.2)	4 (10.8)	16 (43.2)	37 (100)

*Represents negative statement

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

Part 7: Practice in relation to condom and emergency contraceptive pill use

Table G 7 Practice in relation to condom and emergency contraceptive pill use of intervention group and comparison group at baseline

Issue	Group	Always	Very often	Some times	Rarely	Never	Total n(%)
How often did you use these contraceptive methods in the last three months?							
1.Condom	A0	12 (33.3)	8 (22.2)	2 (5.6)	1 (2.8)	13 (36.1)	36 (100)
	B0	14 (37.8)	9 (24.3)	1 (2.8)	0 (0)	13 (35.1)	37 (100)
	A8	24 (66.7)	9 (25.0)	1 (2.8)	0 (0)	2 (5.6)	36 (100)
	B8	19 (51.4)	8 (21.6)	4 (10.8)	2 (5.4)	4 (10.8)	37 (100)
	A20	27 (75.0)	8 (22.2)	1 (2.8)	0 (0)	0 (0)	36 (100)
	B20	21 (56.8)	13 (35.1)	3 (8.1)	0 (0)	0 (0)	37 (100)
2. Emergency contraceptive pill	A0	0 (0)	5 (13.9)	1 (2.8)	6 (16.6)	24 (66.7)	36 (100)
	B0	0 (0)	8 (21.6)	2 (5.4)	4 (10.8)	23 (62.2)	37 (100)
	A8	1 (2.8)	3 (8.3)	1 (2.8)	12 (33.3)	19 (52.8)	36 (100)
	B8	1 (2.7)	12 (32.4)	4 (10.8)	12 (32.4)	8 (21.6)	37 (100)
	A20	1 (2.8)	7 (19.4)	1 (2.8)	12 (33.3)	15 (41.7)	36 (100)
	B20	0 (0)	9 (24.3)	9 (24.3)	15 (40.6)	4 (10.8)	37 (100)

A0 = Intervention group at baseline, B0 = Comparison group at baseline

A8 = Intervention group at week 8, B8 = Comparison group at week 8

A20 = Intervention group at week 20, B20 = Comparison group at week 20

VITA

Name Saowanee Thongnopakun

Date of Birth April 5, 1980

Education

2018	Doctor of Philosophy in Public Health, College of Public Health Sciences, Chulalongkorn University
2006	Master of Public Health (M.P.H), Faculty of Public Health, Burapha University, Thailand
2001	Bachelor of Science (Health Education), Faculty of Public Health, Burapha University, Thailand

Professional Experience

2007- Present	Assistance Professor, Department of Health Education, Faculty of Public Health, Burapha University, Thailand
2001 - 2007	A research assistant, The Prime-Boost HIV Vaccine Phase III Trial, Vaccine Trial Center (VTC), Faculty of Tropical Medicine, Mahidol University, Thailand
1999 - 2001	A volunteer, Pearl S. Buck Foundation Incorporation, Thailand