EFFECTIVENSS OF CONTRACEPTIVE USED BEHAVIOR ENCOURAGEMENT MODEL TO PREVENT UNWANTED PREGNANCY AMONG YOUNG UNMARRIED MIGRANT WOMEN IN MAESOT,TAK PROVINCE, THAILAND

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ประสิทธิภาพของรูปแบบการกระตุ้นพฤติกรรมการใช้วิธีการคุมกำเนิดเพื่อป้องกันการตั้งครรภ์ที่ไม่พึงปรารถนาของหญิงโสดอพยพ อำเภอแม่สอด จังหวัดตาก ประเทศไทย

นายตอ ทเว มิน

วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาสาธารณสุขศาสตรดุษฎีบัณฑิต
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นายตอ ทเว มิน: ประสิทธิภาพของรูปแบบการกระตุ้นพฤติกรรมการใช้วิธีการคุมกำเนิดเพื่อป้องกันการตั้งครรภ์ที่ไม่พึงปรารถนาของหญิงโสดอพยพ อำเภอแม่สอด จังหวัดตาก ประเทศไทย (Effectiveness of contraceptive used Behaviour Encouragement Model to Prevent Unwanted Pregnancy among young Migrant Unmarried Women in Mae Sot, Tak Province, Thailand) อ.ที่ปรึกษาวิทยานิพนธ์หลัก: ศาสตราจารย์นายแพทย์สุรศักดิ์ ฐานีพานิชสกุล ,168 หน้า.

การศึกษาวิจัยกึ่งทดลอง มีวัตถุประสงค์เพื่อดูประสิทธิผลของการคุมกำเนิดโดยใช้หลักการส่งเสริมทางด้านพฤติกรรม เพื่อป้องกันการตั้งครรภ์ไม่พึงประสงค์ของผู้หญิงโสดอพยพที่มีอายุน้อย ในอำเภอแม่สอด จังหวัด ตาก ประเทศไทย กลุ่มทดลองและกลุ่มเปรียบเทียบแบ่งกลุ่มละ 70 คน โดยเริ่มทำการศึกษาตั้งแต่วันที่ 1 กันยายน 2554 ถึง 30 เมษายน 2555 กลุ่มทดลองได้เข้าร่วมโปรแกรมตามทฤษฎีความสามารถของตน และร่วมกระบวนการกลุ่ม (CUBE) ทำการเก็บข้อมูลโดยการตอบแบบสอบถามด้วยตนเอง และการสัมภาษณ์จากผู้ช่วยวิจัยที่ได้รับการอบรม ทั้งก่อนและหลังการทดลอง การวิเคราะห์ข้อมูลทางสถิติ โดยใช้ความถี่แบบแจกแจง ร้อยละ ค่าเฉลี่ย ค่าเบี่ยงเบนมาตรฐาน การทดสอบไคร์สแควร์ นอนพาราเมตริกส์กับตัวแปรอิสระ 2 ตัวแปร (Mann Whitney U test) เพื่อเปรียบเทียบ 2 กลุ่ม ส่วนการเปรียบเทียบภายในกลุ่มใช้การทดสอบ Friedman และ สถิติเครื่องหมายอันดับของ Wilcoxon

หลังจากการทดลอง พบว่า ค่าคะแนนเฉลี่ยของความรู้เรื่องการคุมกำเนิดประสิทธิผลของการคุมกำเนิดด้วยตนเอง และผลของความคาดหวังในกลุ่มทดลองมีค่าสูงอย่างมีนัยสำคัญทางสถิติ สูงกว่ากลุ่มทดลองและสูงกว่ากลุ่มเปรียบเทียบหลังจากทำการทดลอง ($p < .001$) นอกจากนี้ยังพบการคุมกำเนิดอย่างตั้งใจ ในกลุ่มทดลองอย่างมีนัยสำคัญด้วยค่า $p < .001$ หลังจากการทดลอง จึงแสดงให้เห็นว่า โปรแกรม CUBE สามารถช่วยในการส่งเสริมพฤติกรรมการคุมกำเนิดอย่างได้ผล ในกลุ่มของหญิงโสดอพยพชาวพม่า

สาขาวิชา.....สาธารณสุขศาสตร์..... ลายมือชื่อนิสิต.....

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THAW HTWE MIN

EFFECTIVNESS OF CONTRACEPTIVE USED BEAHVIOR ENCOURAGEMENT MODEL TO PREVENT UNWANTED PREGNANCY AMONG YOUNG MIGRANT UNMARRIED WOMEN IN MAESOT,TAK PROVINCE,THAILAND.THESIS ADVISOR :PROF.SURASAK TANEEPANICHSKUL,M.D.,168 pp.

This research was a quasi-experimental design study, aiming to determine the effectiveness of contraceptive used behavior encouragement (CUBE) intervention to prevent unwanted pregnancy among young unmarried migrant women in Maesod, Tak province, Thailand.

The intervention group and the comparison group comprised 70 cases each. The experiment was conducted from 1st September 2011 to 30th April 2012. The intervention group participated in the application of self-efficacy theory and group process (CUBE intervention). Data were collected by using a self response questionnaire and interview by trained research assistant before and after the experiment.

Data analysis used the following statistic: frequency, percentage distribution, mean, standard deviation, Chi square test,Non parametric 2 independent sample tests (Mann Whitney U test) for comparison of 2 groups, Friedman test and Wilcoxon Signed-Rank Test for within group comparison.

After the experiment, it was found that the score for contraceptive knowledge, contraceptive self efficacy and outcome expectations in the intervention group was statistically significant higher than before experiment and also higher than the comparison group after experiment (p-value < .001). There is also significant consistent contraceptive use in the intervention group with p value <0.001 after experiment. The application of CUBE intervention can promote the consistent contraceptive use behavior among unmarried Myanmar migrant women.

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INTRODUCTION

1.1Background and significant of problem

1.1.1Contraceptive use and unplanned pregnancy globally

Worldwide, the burden of disability and premature death due to sexual and reproductive health (SRH) problems is enormous and growing. Unsafe sex is the second most important cause of morbidity or untimely mortality among the world's poorest populations, and the ninth most important cause in developed countries. Despite spectacular increases in access to contraceptives globally, more than 120 million couples have an unmet need for modern contraception and an estimated 80 million women have unintended or unwanted pregnancies, with 45 million ending in abortion annually. Pregnancy-related complications kill more than half a million women every year, and leave approximately 210 million women with disabilities, including obstetric fistula.(WHO, 2006)

The increased permissiveness of sexual attitudes and the increased incidence of teenage sexual activity in the decades following World War II have been well documented in both North America and Western Europe. Concomitant with these changes has been the pervasive neglect of effective and consistent contraception. Among the deleterious consequences is an alarmingly high frequency of unintended and unwanted teenage pregnancies especially in the United States.(Byrne, Kelley, & Fisher, 1993)

In Asia, Traditional norm prohibit premarital sex, but young people's sexual attitude and behavior have been rapidly changing. Premarital sex behavior is not only being widely accepted by young people but is also increasing among them. Of concern is the finding that most sexual intercourse among adolescents and unmarried youth take place without the use of condoms or other contraceptive method in China. Most of the women lacked basic information about reproduction and contraception, and did not know where or how to obtain contraception.(Zheng et al., 2001) and also

in Lao PDR,evidence is emerging of considerable sexual activity among unmarried youth, but contraceptive services remain inadequate to meet their needs.(Sychareun, 2004)

1.1.2 Contraceptive use and unplanned pregnancy (Thailand)

Surveys from Thailand have found that a significant minority of unmarried adolescents are sexually active. Although premarital sex is considered normal behaviour for males, it is not always regarded as such for females. Most Thai youth reported that their first sexual experience occurs without contraception.25% of women admitted to hospitals in Thailand for complications of induced abortion are students. The Thai government has undertaken measures to inform the nation's youth about the prevention of sexually transmitted diseases and unplanned pregnancy.(Suman Mehta, 1998)

1.1.3 Contraceptive use and unplanned pregnancy (Myanmar migrant)

An estimated 1 to 2 million Myanmar migrants have settled in Thailand as a result of the social and political problems engulfing Burma. They are mostly employed in farming, garment making, domestic service and construction industries in the ten provinces of Thailand .There is also a significant number of Burmese which is about 73,026 living in camps.(UNHCR 2007).In Thailand's Tak province there are 60,520 registered migrant workers and an estimated 150,000 unregistered migrant workers from Burma. Despite Thailand's developed public health system and infrastructure, Burmese women face language and cultural barriers and marginal legal status as well as a lack of access to culturally appropriate and qualified reproductive health information and services. Unplanned pregnancy is one of the more common reproductive health issues among migrant women. Many migrants coming into Thailand to work are adolescents who are unmarried. With an absence of traditional social controls, and for reasons related to loneliness or personal security, they may have sex at an early age. Many of these young migrants have low knowledge about contraception methods, which results in high rates of unplanned pregnancies. The Mae Tao Clinic for example, the proportion of teen pregnancies among Burmese migrants rose from 18.8 percent in the first half of 2000, to 26 percent in 2002. (Ekachai, 2003) Due to the high rate of unplanned pregnancies and the threat of being laid off for being pregnant, abortion is a serious concern, especially among women

from Burma. In many cases, the woman will try to abort using unsafe methods prescribed or administered by traditional birth attendants, or on their own. At Mae Tao clinic in Mae Sot, 26 percent of IPD admissions and 10 percent of all Obstetric and Gynecological cases were related to post-abortion care. 13 percent were between the ages of 15 and 20, and 26 percent had a prior history of abortion. (Maung, 2004)In Mahachai, where numerous migrant women from Burma work in seafood processing factories, over 30 percent of migrant respondents indicated that they had ever had an abortion, with most having had a self-induced abortion. (Tin, 2000) In Ranong and Chiang Mai, approximately 17 percent of respondents indicated that they had had an unwanted pregnancy and 55 percent of those had reported having an unsuccessful abortion or complications. (Caouette, 2000) In Ranong, over 50 percent were self-induced with 25 percent through a midwife and only five percent through a health personnel; while in Chiang Mai, 72 percent crossed back into Burma for an abortion, with 60 percent being performed by a TBA, eight percent self-induced, and 28 percent by a health personnel. (Caouette, 2000)In another survey done in Ranong in 2003, over 40 percent of unwanted pregnancies were terminated through abortion, over 20 percent of those were self-induced and over 70 percent were done by a TBA. (Isarabhakdi, 2004)

Unintended pregnancy, induce abortion and sexual transmitted diseases among these individual have become a major public health problems. Although induced abortion has declined among married women, it has continued to rise among unmarried women.(Zheng, et al., 2001)These can be prevented and reduced by expanding and improving family planning services and choices, reaching out to communities and underserved population groups, for example sexually active teenagers and unmarried women.(WHO, 2007)

1.2Research question

Can the self efficacy theory and group process promote contraceptive use among youth migrant unmarried women?

1.3 Research Objectives

1.3.1 General objective

To study the effectiveness of self efficacy theory and group process for promote the contraceptive used behavior among youth migrant unmarried women

1.3.2 Specific objective

1. To compare the mean score of knowledge about sexual and reproductive health, contraceptive method and its benefit and side effect of experiment group and comparison group before experiment
2. To compare the mean score of knowledge about sexual and reproductive health, contraceptive method and its benefit of experiment group and comparison group after experiment
3. To compare the mean score of perceived self efficacy on contraceptive use of experiment group and comparison group before experiment
4. To compare the mean score of perceived self efficacy on contraceptive use of experiment group and comparison group after experiment
5. To compare the mean score of outcome expectation on contraceptive use of experiment group and comparison group before experiment
6. To compare the mean score of outcome expectation on contraceptive use of experiment group and comparison group after experiment
7. To compare the contraceptive practice of experiment group and comparison group before experiment
8. To compare the contraceptive practice of experiment group and comparison group after experiment

9. To compare the percentage of unwanted pregnancy of experiment group and comparison group after experiment
10. To compare the percentage of induced abortion of experiment group and comparison group after experiment

1.4 Research hypothesis

1. There is no significant difference of mean score knowledge about sexual and reproductive health, contraceptive method and its benefit and side effect of experiment group and comparison group after application of self efficacy theory and group process
2. There is no significant difference mean score of self efficacy on contraceptive use of experiment group and comparison group after application of self efficacy theory and group process
3. There is no significant difference mean score of outcome expectation on contraceptive use of experiment group and comparison group after application of self efficacy theory and group process
4. There is no significant difference contraceptive practice between experiment group and comparison group after application of self efficacy theory and group process
5. There is no significant difference percentage of unwanted pregnancy of experiment group and comparison group after application of self efficacy theory and group process
6. There is no significant difference percentage of induced abortion of experiment group and comparison group after application of self efficacy theory and group process

CHAPTER II

Literature review

This study will be carried out the effect of contraception use behavior encouragement intervention by application of self efficacy theory and group process among young unmarried migrant women in Maesot Township, Tak province. In this extent of study has been organized as follows:

1. Concept of human behavior
2. Concept of contraceptive
3. Concept of practice behavior
4. Relation of contraceptive practice behavior and unplanned pregnancy and abortion
5. Related research

2.1 Concept of human behavior

2.1.1 Definition of Human behavior

It is the population of behaviors exhibited by humans and influenced by culture, attitudes, emotions, values, ethics, authority, rapport, hypnosis, persuasion, coercion and/or genetics.(Encyclopedia, 2009)

The behavior of people (and other organisms or even mechanisms) falls within a range with some behavior being common, some unusual, some acceptable, and some outside acceptable limits. In sociology, behavior is considered as having social behavior, which is more advanced action, as social behavior is behavior specifically directed at other people. The acceptability of behavior is evaluated relative to social norms and regulated by various means of social control.(Encyclopedia, 2009)

2.1.2 Factor affecting the human behaviour

1. Attitude - It is the degree to which the person has a favourable or unfavourable evaluation of the behaviour in question.
2. Social Norms - This is the influence of social pressure that is perceived by the individual (normative beliefs) to perform or not perform certain behaviour.
3. Perceived Behavioural Control - the individual's belief concerning how easy or difficult performing the behaviour will be.

2.2.1 Concept of contraception

Contraception" means prevention of conception or pregnancy. Contraception enables people to have sexual intercourse without unintended pregnancy. Contraception is useful for spacing between two children. Three years of spacing is thought to be ideal. Any method used to prevent conception is called a "Contraceptive".**(**Prabhu, 2010)

2.2.2 The aim of contraception

It is not merely restricting members of the family, but also keeping reasonable age distance between two children, prevention of unwanted pregnancies.

2.2.3 Contraceptive methods(Boston, 2009)

1. Condom

Minimum effectiveness is 86%.Its pros are lowers risk of STDs and effective against pregnancy. Its cons are that it have to use a new one every time you have sexual intercourse (can only be used once), may disrupt/interrupt lovemaking, can break. Women may be allergic to latex.(Boston, 2009)

2. Combined oral Contraceptive pill

Minimum effectiveness is 95%.Its pros are it is very effective against pregnancy if used correctly, it makes menstrual periods more regular and lighter, it decreases menstrual cramps and acne and makes you less likely to get ovarian and

uterine cancer, pelvic inflammatory disease, ovarian cysts, and anaemia. Its cons are it doesn't protect against STDs, it need to remember to take every day at the same time. It can occasionally cause side effects such as nausea and headache.(Boston, 2009)

3. Implants

Its minimum effectiveness is 99%.Its pros are long-term method of birth control (protects against pregnancy from 24 hours to 3 years (or even 5 years)
Its cons are there is no protection against sexually transmitted diseases .It requires minor surgery and insertion of the tiny rod(s) underneath the skin and need minor surgery to remove capsules. It can cause side effects such as irregular menstrual periods, depression, nervousness, hair loss, and weight gain. It could have infection at area where capsules implanted.(Boston, 2009)

4. Depot injection

Its minimum effectiveness is 99%.Each injection provides 3 months of protection against pregnancy and very effective. It helps protect against the uterine cancer. Their cons are that it doesn't protect against STDs. Its side effects such as weight gain, tiredness, and possibly a decrease in bone density. Many women may top getting their menstrual period while getting injections or very irregular menstrual bleeding or spotting for the first 3 to 6 months and sometimes longer.(Boston, 2009)

5. IUD

It s is very effective against pregnancy (99%). Provide protection against pregnancy as long as in place in your uterus- protects as soon as inserted (so don't need to remember to use contraception if you have sexual intercourse).Its cons are doesn't protect against STDs and needs to be inserted by a health care provider. There will be menstrual cramping, longer and/or heavier menstrual periods, and spotting between menstrual periods due to copper IUD.(Boston, 2009)

6. Vaginal barrier method

Its effectiveness is 80%.Its cons are it doesn't protect against sexually transmitted diseases and need to get fitted by a health care provider and need a prescription. It can't take out until 6 hours after intercourse. It may get moved out of place during sexual intercourse. Sometimes woman can get allergy to it and increase risk of urinary tact infection.(Boston, 2009)

7. Withdrawal

Its effectiveness is 70% .it is natural, so no side effects. But, the man to be an active part of preventing pregnancy and it is difficult for male to always predict ejaculation.(Boston, 2009)

8. Calendar method (fertility awareness)

Minimum effectiveness is 76%.Its pros are it is natural, and approved by many religions. Its cons are o protection against STDs, it need to figure out when ovulating for each month, since different from one month to the next and young women often have irregular periods .It requires a lot of work- need careful instruction and the woman needs to figure out when ovulating .partner can't have sexual intercourse for at least a week each month (during ovulation and several days before and after)(Boston, 2009)

9. Sterilization

Its effectiveness is 99%.However, surgery is needed to do sterilization and it prevents permanent against pregnancy.(Boston, 2009)

2.2.4 Factor affecting the contraceptive use among Myanmar migrant(Soe, 2008a)

1. Age
2. Education
3. Occupation

4. Status in Thailand
5. Knowledge about reproductive health
6. Attitude towards contraception
7. Accessibility to contraceptive services
8. Received Information of contraception status

2.3 Concept of contraceptive used behavior encouragement

This intervention core process will be used the self efficacy theory and group process to promote the contraceptive used behaviour among young unmarried migrant women age 18-25 years.

There are many theory related to human behaviour change.

1. Learning Theories
2. Health Belief Model
3. Tran theoretical Model
4. Relapse Prevention Model
5. Reasoned Action and Planned Behaviour
6. Social Learning/Social Cognitive Theory
7. Social Support

Among these theory, the researcher want to present the Learning Theory .Bloom demonstrated that a behavior refers to all observable or unobservable activities of human which cab is classified into 3 parts as follows: (Bloom, 1956)

1.1 Cognitive domain

Cognitive domain involves several processes related self-capabilities related to knowledge, thinking and intelligence development which can be classified into six process including knowledge, comprehension, application, analysis, synthesis and evaluation.

1.2. Affective domain

Affective domain is the behaviors related to feeling for example like or dislike, interesting, appraising. The acceptance in affective domain to be personal behavior needs certain device to measure such behaviors.

1.3. Psychomotor Domain

Psychomotor Domain is the behaviors related to ability of physical expression including observable action or behaviors. Psychomotor Domain can be measured

easily when perform; however, process generating psychomotor Domain required certain time and several process of decision-making.

Self-Efficacy Theory and health behavior

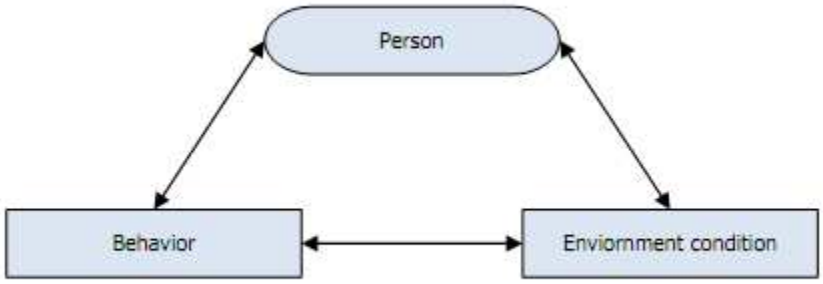
Albert Bandura, the American psychologist, has researched and developed self-efficacy theory based on the Skinner's theoretical frameworks. At first stage, Bandura are interested in the theoretical design and then he reported about the personal belief in self-efficacy to do something with their own abilities which is called Bandura's self-efficacy theory. (Bandura, 1977)Bandura presented this theory to those with the belief in self-efficacy that could result in the changes in health promoting behaviors or in particular issues accordingly.

The fundamental concept of Bandura's self-efficacy theory is to study and analyze the condition and stimulus supporting such condition. Human learning behaviors have been created by the learning process which required several components such as genetic, environment, social factors, experiences and personal abilities. All components have been included together to create behaviors. It is hard to identify that behaviors has been created by which specific factors mostly.

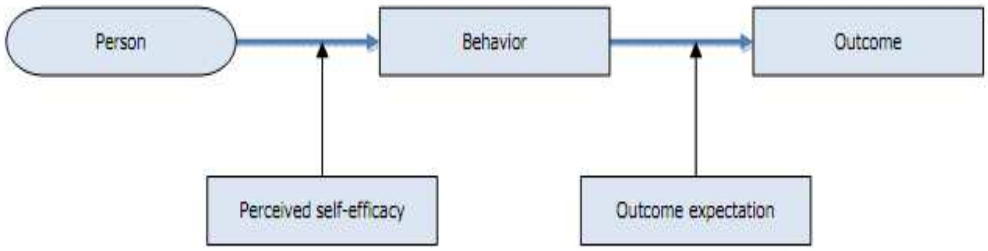
Therefore causation of behaviors requires reciprocal determinism between three factors as follows:

1. Personal factors (P)
2. Behavioural condition (B)
3. Environmental condition (E)

The relationship between three factors can be illustrated as diagram as shown below and it is the presentation of reciprocal determinism between 3 components.



Bandura has explained efficacy and outcome expectations are distinguished. An outcome expectation is defined here as a person's estimate that a given behavior will lead to certain outcome. An efficacy expectation is the conviction that one can successfully execute the behavior required to produce the outcomes. Outcome and efficacy expectations are differentiated because individuals can come to believe that a particular course of action will produce certain outcome but question whether they can perform those actions. The difference between perceived and outcome expectation as show schematically in following figure.



According to the above concept, Bandura developed and tested self-efficacy theory by setting hypothesis that if person expected or believed in their self-efficacy in which they know what they are going to do could help them achieve their objective and expectation, they will do it immediately. The theoretical structure can be explained as follows:

		Outcome expectation	
		High	Low
Perceived self efficacy	High	Most likely to perform	Likely to not perform
	Low	Likely to not perform	Surely to not perform

This figure presented that the existence of the relationship between perceived self-efficacy and outcome expectation is possible if each individual has strong perceived self-efficacy and outcome expectation. With the strong perceived self-efficacy and outcome expectation, individual will have greater motivation and effort to follow their decision for their mastery accomplishments. In the other hand, one with the weak perceived self-efficacy and outcome expectation will act otherwise.

In addition, Bendura has further mentioned about people with strong self-efficacy beliefs exert greater efforts to master a challenge while those with weak self-efficacy beliefs are likely to reduce their efforts or even quit.

Perceived self-efficacy and outcome expectation are highly inter-related since people will evaluate the appropriateness of the behaviors they has done or even make the decision whether or not to perform behaviors or to continue the next behaviors by basing on the consequence of such action. The results of statistical analysis has shown that If external factors can be controlled, perceived self-efficacy is often a better predictor of personal health behavior than is outcome expectation.

To summarize, self-efficacy theory relies on the social leaning theory by sharing the concept that people with the proper skills will have sufficient encouragement to perform behaviors appropriately. Therefore, self-efficacy is necessary for predicting and identifying if individual will alter unhealthy behaviors and follow the guidance regularly. Bandura said that there are 4 sources for developing self efficacy, as follows: (Bandura, 1978)

1. Mastery experiences
2. Vicarious experiences, by using modelling
3. Verbal persuasion
4. Emotion arousal

Details of these are as follows:

Mastery experiences defined as past successes or failures. These experiences form expectations that are generalized to other situations that may be similar or substantially different from the original experience. For example, strong efficacy expectations are developed through repeated success of a behavior, and reduced efficacy expectations can result from failures. We can increase personal mastery for a behavior through participant modeling, performance exposure, self-instructed performances, and performance desensitization, the process through which aversive behavior is paired with a pleasant or relaxing experience.

2) Vicarious experience, which is observing others perform threatening activities without adverse consequences, can also enhance personal self-efficacy by demonstrating that the activity is “do-able” with a little effort and persistence. Vicarious experience can be enhanced through live modeling (observing others perform an activity), or symbolic modeling.

3) Verbal persuasion. People are led to believe they can successfully accomplish a task or behavior through the use of suggestion, exhortation, or self-instruction. However, because verbal persuasion is not grounded in personal experience, it is a weaker inducer of efficacy and may be extinguished by histories of past failures.

4) Emotional arousal. We can enhance perceived self-efficacy by diminishing emotional arousals such as fear, stress, and physical agitation since they are associated with decreased performance, reduced success, and other avoidance behaviors. Emotional arousal can be mitigated with repeated symbolic exposure that allows people to practice dealing with stress, relaxation techniques, and symbolic

desensitization (the process through which symbolic representation of stressors are paired with a relaxing or pleasant experience).

Group process

Edward E .Sampson defined the definition of “group” as the situation that 2 person and more have come together and have some interaction to perform activities with the mutual objectives. During the interaction of these people, there is the communication among the members including the change of behaviors of the group members in order to get to the mutual goal set by the members. The interaction between the group members will push the group move step by step in accordance with the group’s goal. The interaction changes occurred is called “group process”. (Edward E. Sampson, 1990)

2.4.1 Relation of self efficacy and contraceptive use

One study investigate the relationship between contraceptive self efficacy and contraceptive use among adolescents by bowling Green state university(Longmore, Manning, Giordano, & Rudolph, 2003).This study reveal that contraceptive users had higher self efficacy. There was also found that demographic characteristics had influence on contraceptive self efficacy.

Another study is that the path analysis was used to test a model of relationship among condom use knowledge, coping and self efficacy for condom use. This study reveal that there had significant relation between condom use knowledge and self efficacy, between self efficacy and condom use, and between self efficacy and problem focus coping.(Lindberg, 2000)

One cross sectional study to contraceptive self efficacy demonstrated that there was no relationship between contraceptive self efficacy and contraceptive knowledge among unplanned pregnancy in Hong Kong, China(Ip, Sin, & Chan, 2009)

2.4.2 Relation of contraceptive use and unplanned pregnancy, abortion

One study was conducted to assess risk factors for contraceptive nonuse among a nationally representative sample of US women and explored the influence of future pregnancy intentions on contraceptive nonuse. It was using data from the 2002 National Survey of Family Growth analyzed 12 months of contraceptive used behavior among 3687 women at risk for unplanned pregnancy. The research found no significant association between future pregnancy intentions and contraceptive used behavior. (Wu, Meldrum, Dozier, Stanwood, & Fiscella, 2008)

Another study was conducted to examine access to contraception and change in contraceptive methods before and after the disaster in Bantul area, and to evaluate the prevalence of unplanned pregnancy. The prevalence of unplanned pregnancy was significantly higher in a group of participants who had difficulty accessing contraceptive methods compared to a group that did not.(Hapsari et al., 2009)

National Research Institute for Family Planning studied the rates of repeated abortion and contraceptive use among unmarried young women seeking an abortion in China. In this method they used anonymous self-administered questionnaire at abortion clinics in Beijing, Changsha, and Dalian from January to September 2000. Results showed that 4547 unmarried young women seeking an abortion, 33.0% reported having had one previous induced abortion. Of those who had had more than one abortion. Although 65.0% of the young women had used condoms at least once, only 9.6% did so consistently and correctly; 47.7% of the current pregnancies were associated with non-use of any contraceptive. In conclusion, the rate of unmarried young women seeking repeated abortions was high in China on 2000. The rate of consistent condom use was low.**(**Cheng et al., 2004)

Another China study conducted to determine the prevalence of unintended pregnancy, induced abortion and contraceptive use, and factors associated with unintended pregnancy among Chinese university students. A self-administered questionnaire survey with cross-sectional design was administered among students in two universities in Ningbo, China, in November–December 2003. Socio-demographic and behavioral factors associated with unintended pregnancy were identified in both genders Of sexually active students, 11.6% of female students they had a history of pregnancy; 11.3% of female students reported their partner or they had a history of induced abortion. The risk factors for unintended pregnancy identified among these students were reported lack of condom use in first sexual activity. In conclusion, the high prevalence of unintended pregnancies and induced abortions in this population indicates a need for better and targeted sex education and family planning services.(Ma et al., 2008)

2.5 Related researches

Relation of self efficacy, contraceptive knowledge and contraceptive use research

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al., 2003).This study revealed that contraceptive users had higher self efficacy. There was also found that demographic characteristics had influence on contraceptive self efficacy.

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The explore study of Kaoshiung County, Taiwan found that higher contraceptive attitude and previous contraceptive education increase the probability of consistently using contraceptives.(Wang, Jian, & Hsu, 2004)

Effect of Intervention on contraceptive knowledge, contraceptive use, contraceptive self efficacy, unplanned pregnancy and abortion related research

One related study was conducted which encourage the contraceptive use among sexually active unmarried youth in Shanghai, China. This study evaluated the long term effect of community based program for contraceptive use. A nonrandomized community trial with one intervention and one control group was conducted in two comparable towns of a suburban area of Shanghai. The intervention program was developed and implemented to increase knowledge and access to sexual and reproductive health services among unmarried youth aged 15-24 years. Baseline surveys were conducted in both sites before implementation of the intervention, and similar surveys were conducted in both sites 20 months after the launch of the intervention and 28 months after the end of the intervention.

Results are statistically significant differences between the respondents surveyed at baseline in 2000 and at the long-term follow up in 2004 were observed in

some age categories and in some educational groups. In the post project period, there was a major improvement in all indicators in the control group. Among the sub-set of respondents interviewed both in 2000 and 2004 who were exposed to the intervention program, the interventions were associated with a significant increase in the frequency of contraceptive use among participants initiating sexual relations over the period of the intervention, as well as with significant reduction in use ever of the withdrawal method of contraception among all sexually active respondents compared with the control group during long-term follow-up period. No long-term effects on contraceptive practice were observed among new respondents who were not exposed to the intervention program.(Xiaowen Tu, Chaohua Lou, Ersheng Gao, & Iqbal H. Shah, 2008)

In this conclude that comprehensive community-based interventions appear to have limited long-term effects on contraceptive use among unmarried youth in suburban Shanghai. It is necessary to provide sex and reproductive health education and services to all unmarried young people on a regular basis.(Xiaowen Tu, et al., 2008)

Another related study was to determined effectiveness of the per-led sex education which was conducted among 800 pupils from schools in England. In this research, 29 schools were randomized to either peer-led sex education (intervention) or to continue their usual teacher-led sex education (control). In intervention schools, peer educators aged 16-17 years delivered three sessions of sex education to 13-14 year-old pupils from the same schools. Primary outcome was unprotected (without condom) first heterosexual intercourse by age 16 years. Analysis was by intention to treat. (Stephenson et al., 2004)

There were significantly fewer girls reported intercourse in the peer-led arm than in the control arm, but proportions were similar for boys. The proportions of pupils reporting unprotected first sex did not differ for girls (8·4% intervention vs 8·3% control) or for boys (6·2% vs 4·7%).At follow-up, girls in the intervention arm reported fewer unintended pregnancies.(Stephenson, et al., 2004)

It concluded that peer-led sex education was effective in some ways, but broader strategies are needed to improve young people's sexual health. The role of single-sex sessions should be investigated further.(Stephenson, et al., 2004)

One PLA based reproductive health education program in Garment factories In Phnom Penh, Cambodia find that PLA sessions successfully raised participants' knowledge about fecundity and contraception.(CARE, 2000) Only 18% of baseline respondents were able to correctly identify the fertile period in the menstrual cycle. In the evaluation survey, this rose to 24%, but as many as 62% of PLA participants provided a correct response. At the baseline survey, 75% of young garment workers knew that pregnancy can be avoided, while in the evaluation this rose to 92%.Spontaneous knowledge of at least one modern contraceptive method also increased significantly (from 71% to 89%). Almost all participants could name at least one modern method and, on average, knew three methods. No significant differences were found between PLA participants and others regarding knowledge about the risks of having a baby at a young age.(CARE, 2000)

One study of nurse home visit intervention, including provision of 3 months of contraceptives and contraceptive counseling**, was** done to assess contraceptive use and contraceptive self efficacy in Oregon, USA. It was randomized controlled trial of contraceptive dispensing and family planning counseling during home visit. The data collection was at baseline and 12 months. There was significant increase in contraceptive self efficacy at 12 months compared to base line. It concludes that nurse home visit might be effective it increase contraceptive use self efficacy.(Melnick, Rdesinski, Creach, Choi, & Harvey, 2008)

2.6 Scope of study

The experiment group in this research will be youth unmarried migrant women whose has boyfriend in Ban Maepa village (north), Maesot township. The comparison group in this research will be youth unmarried migrant women whose has boyfriend in Ban Maepa village (south), Maesot township.

2.7 Operational definition

Contraceptive used behavior encouragement process (CUBE) refer to a process of self efficacy and group process application

Self efficacy refer to as the belief that one is capable of performing in a certain manner to attain certain goals

Perceived self efficacy refer to people beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives

Outcome expectation refer to estimation of benefit acquiring from using contraceptive method

Mastery experience refers to past successes or failures. These experiences form expectations that are generalized to other situations that may be similar or substantially different from the original experience

Vicarious experience refer to which is observing others perform threatening activities without adverse consequences, can also enhance personal self-efficacy by demonstrating that the activity is “do-able” with a little effort and persistence.

Verbal persuasion refer to eople are led to believe they can successfully accomplish a task or behavior through the use of suggestion, exhortation, or self-instruction.

Emotional arousal refer to enhance perceived self-efficacy by diminishing emotional arousals such as fear, stress, and physical agitation since they are associated with decreased performance, reduced success, and other avoidance behaviors.

Group process refers to 2 persons and more come together and have some interaction to perform activities with mutual objectives

Likert scale refer to a psychometric scale commonly used in questionnaires**, and is the most widely used scale in survey research, such that the term is often used interchangeably with rating scale even though the two are not synonymous**

Unmarried: It means not married
Unplanned pregnancy: Unintended, unwanted pregnancy

Abortion: it is the termination of a pregnancy by the removal or expulsion of a foetus or embryo from the uterus, resulting in or caused by its death.

Induced abortion: A pregnancy can be intentionally aborted in many ways.

Ovulation: the process in a female's menstrual cycle by which a mature ovarian follicle ruptures and discharges an ovum

Refresher activities: Short term course aim at recall and reinforcement of previously acquired knowledge and skills.

Contraception: It is the use various devices, drugs, agents, sexual practices, or surgical procedures to prevent conception or impregnation (pregnancy).

Pregnancy: It is the carrying of one or more offspring, known as a foetus or embryo, inside the womb of a female.

Contraceptive prevalence: It is the mean percentage of women of reproductive age of who are using any form of contraception at the time of interview or at the time of research (UNFPA)

Reproductive age: It refers to all women age 15-to 49 year (WHO)

Knowledge: It means (i) expertise, and skills acquired by a person through experience or education; the theoretical or practical understanding of a subject; (ii) what is known in a particular field or in total; facts and information; or (iii) awareness or familiarity gained by experience of a fact or situation. (Encyclopedia, 2010)

2.8 Variable in research

Independent variable:

1. Application of self efficacy theory and group process
2. Socio-demographic facts
    a) Age
    b) Religion
    c) Education
    d) Occupation
    e) Total family income
    f) Thai langue skill
    g) Duration of stay in Thailand
    h) Migrant status in Thailand
3. Other factors
    a) Knowing of available family services
    b) Information

Dependent variable:

Knowledge of sexual and reproductive health, contraceptive method and its benefit and side effect

Perceived self efficacy of contraceptive method use

Outcome expectation on contraceptive method use

Contraceptive used behavior

Unwanted pregnancy

Induced abortion

Contraceptive prevalence rate

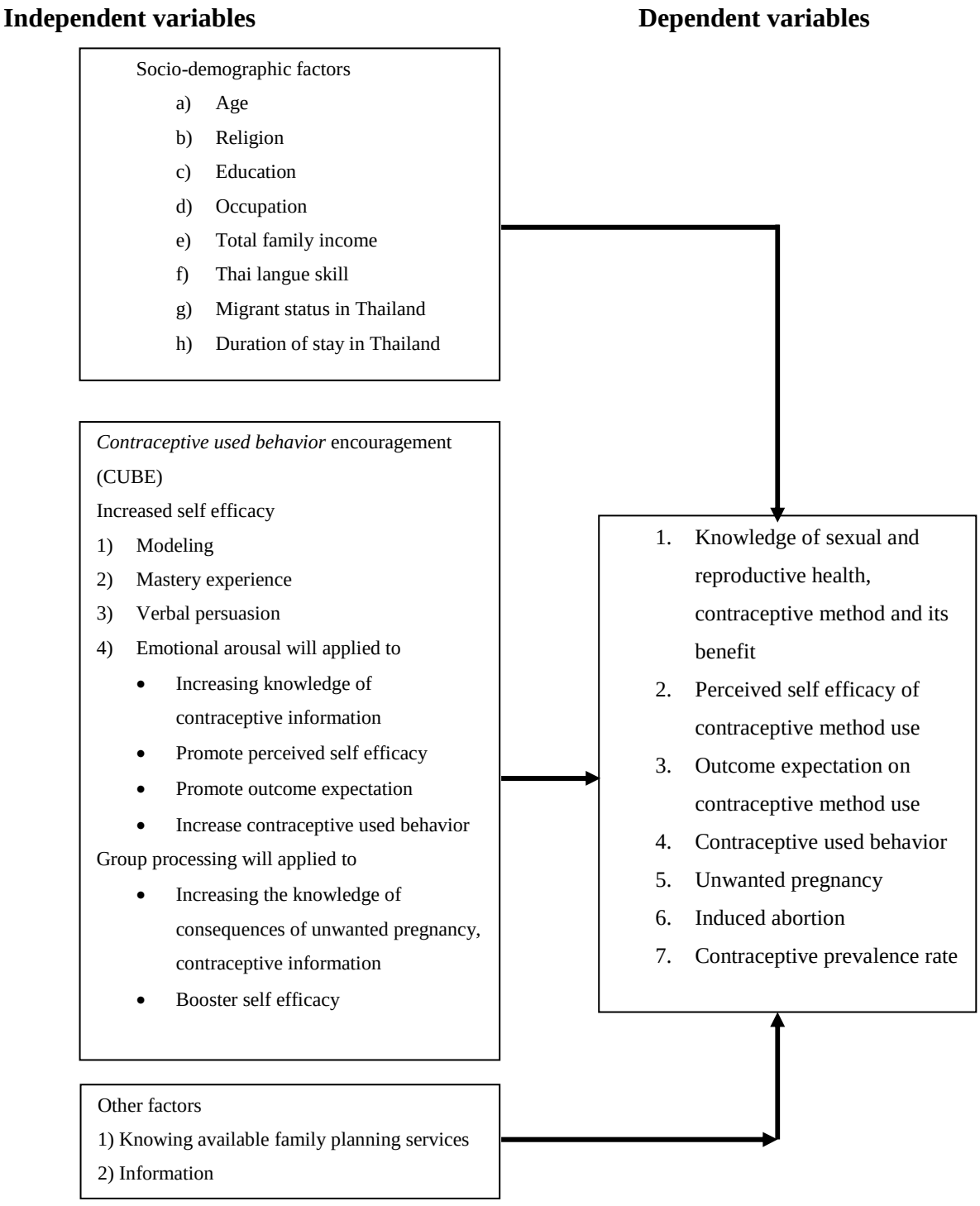

FIGURE (1): CONSEPTUAL FRAMEWORK

Logic Model Framework

Inputs	Process	Output	Outcome	Impact
■Unmarried women age 18 to 25 years ■Researcher and research team ■Community leaders/members ■Factory managers/owners ■Resources of sexual reproductive health(contraceptive pills, condoms, reproductive health brochures, aids material for interventions) ■Financial resources ■Places for intervention process	Contraceptive used behavior encouragement (CUBE) ■Self efficacy theory application a) Modeling b) Mastery experience c) Verbal persuasion d) Emotional arousal ■Group processing ■ Refresher activities	■Knowledge of sexual reproductive health, contraceptive methods and its information ■Perceived self efficacy on contraceptive use ■Outcome expectation on contraceptive use	■Reduce number of unplanned pregnancy/unwanted pregnancy ■Reduce the number of induced abortion ■ increase contraceptive use prevalence	■reduce the maternal morbidity and mortality(Can not study in this research)

This logical framework show that the causal relationship of inputs and research objectives. It is also forms the basis for monitoring and evaluation activities of all stages at the research.

CHAPTER III

METHODOLOGY

The study will be quasi experimental research of application of self efficacy theory and group process on promote the contraceptive used behavior among young unmarried migrant women whose has boyfriend with experimental and comparison group.

This chapter is arrange as follows

1. Research design
2. Population and sample
3. Research instrument
4. Data collection procedure
5. Data analysis

3.1Research design

The study will be quasi experimental research .This design will be before-after two group design. The experiment group will be received application of self efficacy theory and group process on promote the contraceptive used behavior. The comparison group will not be received any application like experiment group. Nevertheless, both group will received three brochures of sexual and reproductive health, contraceptive information. Data will be collected before the experiment and after experiment. The pattern of study is presented as follows:

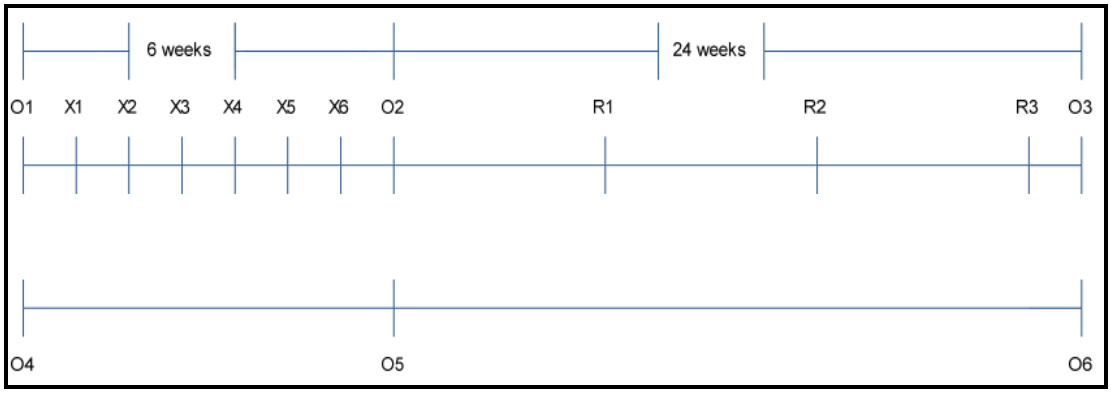

Figure (2) Research design

O1, O4 refer to gathering data before implementing on knowledge of reproductive and contraceptive information, perceived self efficacy, outcome expectation on contraceptive use and contraceptive used behavior between experiment group and comparison group before experiment

O2, O5 refer to gathering data after implementing on knowledge of reproductive and contraceptive information, perceived self efficacy, outcome expectation on contraceptive use, and contraceptive used behavior between experiment group and comparison group after experiment

O3, O6 refer to gathering data after implementing on knowledge of sexual reproductive and contraceptive information, perceived self efficacy, and outcome expectation on contraceptive use, contraceptive used behavior, number of unwanted pregnancy and induced abortion between experiment group and comparison group during follow up period.

X1, X3, X5 refer to application of self efficacy theory for knowledge of reproductive and contraceptive information, perceived self efficacy, outcome expectation on contraceptive use and contraceptive used behavior between experiment group and comparison group

X2, X4, X6 refer to application of group for knowledge of reproductive and contraceptive information, perceived self efficacy, outcome expectation on contraceptive use and contraceptive used behavior between experiment group and comparison group .R1, R2, R3 refer to refresher activities sessions

There will be distributed 3 brochures of sexual reproductive health, contraceptive information and its usefulness for both comparison and intervention group. There will be once a time of activities per week and each session will be taken about 2 hr. The process study as follows:

Inclusion criteria for selecting live model

For calendar method use

1. Unmarried
2. If possible, it should be same age of participants
3. Use calendar method consistently or combination with other method
4. Never had unplanned pregnancy or induced abortion before
5. Voluntarily and willingly to sharing her experiences
6. Should be informative to participants

For OC pills use

1. Unmarried
2. If possible, it should be same age of participants
3. Use OC pills consistently for more than 1 year
4. Never had unplanned pregnancy or induced abortion before
5. Voluntarily and willingly to sharing her experiences
6. Should be informative to participants

For condom use

1. Unmarried
2. If possible, it should be same age of participants
3. Use condom consistently for more than 1 year
4. Never had unplanned pregnancy or induced abortion before
5. Voluntarily and willingly to sharing her experiences
6. Should be informative to participants

Unplanned pregnancy live model

1. Unmarried
2. If possible, it should be same age of participants
3. History of unplanned pregnancy before
4. Voluntarily and willingly to sharing her experiences
5. Should be informative to participants

Live model with history induced abortion

1. Unmarried
2. If possible, it should be same age of participants
3. History of induced abortion before
4. Voluntarily and willingly to sharing her experiences
5. Should be informative to participants

Intervention process

Intervention process e intervention is designed to increase the contraceptive method use to prevent unwanted pregnancy among young unmarried women. This process composed of 6 activities. A brief overview of these activities is given below. This intervention process has been approved by

1) Prof Surasak Taneepanichskul (Colleague of Public health Science, Chulalongkorn University, Bangkok, Thailand)

2) Assoc.Prof.Sathirakorn Pongpanich(Colleague of Public health Science ,Chulalongkorn University, Bangkok, Thailand)

3) Dr Nanta Auamkul (Colleague of Public health Science, Chulalongkorn University, Bangkok, Thailand)

4) Dr Rose Mcgready (Shoklo Malaria Research Unit, Maesot ,Tak, Thailand)

Training place

There is one place which is owned by local NGO in Maesot, which is not far away from intervention group. This place will be to give weekly training. This place will be use on Sunday and time will be between 6 pm to 8 pm. There will be 2hourly session for 9 sessions.

Procedure

The researcher and research assistant introduce themselves to the group and informed the group about research objectives, procedures, activities, roles and responsibility of group member, step, time and the next schedule including answering

the questions. Establishing the relation of group member by introduce themselves to group in order to built friendship and readiness for next activities.

The researcher introduce about female reproductive system, menstrual cycle, ovulation and fertility and fertility-awareness knowledge.

First session A

The modeling

Symbolic model

A picture of menstrual cycle, anatomy female reproductive system and fertility period table will be shown. It will be used to lesson presentation and let the group know how importance and usefulness of fertility period to prevent being pregnant.

Live model

An unmarried woman, who uses calendar method consistently, has boyfriend and risk of being pregnant will be invited to session class. She prevented being pregnant by using calendar method consistently.

The mastery experience

In this process, after symbolic model finish the demonstration of menstrual cycle and fertility period calculation. The researcher let the experiment group to calculate the fertility period .After that there will be clear understanding of fertility period by the experiment group. This activity will be the mastery experience.

The verbal persuasion

The researcher use description to give knowledge to the experiment group. Therefore, group will know and understand about how to avoid fertility period from being pregnant. They will be persuading to know usefulness of calculation of fertility period.

The emotional arousal

The form’s activity that is used with the experiment group doesn’t make them feel fear. It will be easy a way as group can calculate fertility period themself and can avoid unwanted pregnancy by using fertility avoiding method.

Group process

This session will be summarized of first session (A) and using group process as follows: There will be establishing the good relation of group member by greeting in order to built friendship and readiness for next activities. The researcher let the groups to focus on the objectives for the activity.

The research will give lecture about cause and complication of unwanted pregnancy. A negative model of unmarried pregnant women who doesn't want pregnancy and its consequences will be presented to group, aiming to tell the group about their experience, feel and loss that occurred to her. After the group member exchange their opinions and experiences, the conclusion will be made including solving for preventing unwanted pregnancy.

The researcher will propose question to group relating to how to avoid unwanted pregnancy. The group will discuss the questions presented according they have learned previous session and their experiences. Then it will be monitored the different groups during discussion, observing participant actions and intervening if necessary to improve a group's learning. The researcher expected to discuss about the use of calendar method that they have learned previous session.

The researcher will ask to group to summarize the main issues discuss by group regarding unwanted pregnancy and its consequences in order to motivate and emphasized the group to be afraid of unplanned pregnancy. Opportunity to ask questions will be open. There will be added some important contents and next appointment will be next week.

The second session A

The verbal persuasion

The researcher will persuade the experiment group about oral contraceptive pill by describing the advantages and disadvantages of oral contraceptive pills and them to weight the pro and cons of OC pills. Let them know how usefulness and necessary to have them to prevent unwanted pregnancy.

The modeling

Live model

An unmarried woman who use OC pill consistently, has boyfriend and risk of being pregnant will be invited to session class. She prevented being pregnant by using OC pills consistently.

Symbolic model

A picture of pregnant women who has boy friend and risk of being pregnant, doesn't take OC pills and non pregnant women who take OC pills consistently. It will be used to lesson presentation and let the group know how necessary and usefulness of OC pills to prevent being pregnant.

The mastery experience

She will explain the experimental group where OC pills are available. She shows them how easy to take OC pills. She will also demonstrate how to take OC pills and let group to find out and take the OC pills from available place. Then, let them look the OC pills and ask questions to invited unmarried women. After that, let them feel it will be very easy to take OC pills and to use contraceptive pills. During this period, the researcher adds some important and correct content of OC pills.

The emotional arousal

This method happens from the group activity. The researcher arouses them to know that getting and taking OC pill is very easy and usefulness of OC pill from being pregnant. After that the group will not be feared anymore and nervous from being pregnant.

Group process

Establishing a good relationship and making the group relax by singing a song together and greet each other.The researcher led the group members reviewed the main concepts from last two sessions (X1, X3) and giving chance to ask questions. The researcher let the groups to focus again on the objectives for the activity.

The researcher will give lecture about the cause and complication of induced abortion. A negative model of unmarried women who experienced induced abortion and its consequences will be presented to group, aiming to tell the group about their experience, feel and loss that occurred to her. After the group member exchange their opinions and experiences each other, the conclusion will be made including solving for preventing unwanted pregnancy.

The research proposed question again to group relating to induced abortion. The group will discuss the questions presented according they have learned two previous sessions and their experiences. Then it will be monitored the different groups during discussion, observing participant actions and intervening if necessary to improve a group's learning. The researcher expected to discuss about the plan of using any of calendar method and contraceptive pills that they have learned two previous sessions.

The researcher will ask to group to summarize the main issues discuss by group regarding induced abortion and its consequences in order to motivate and emphasized the group to be afraid of unplanned pregnancy. Opportunity to ask questions will be open. There will be added some important contents and next appointment will be next week.

Third session A

The modeling

Live model

A picture of pregnant women didn't use condom consistently whenever she had sex with her boyfriend and non pregnant women who used condom consistently. It will be used to lesson presentation and let the group know how necessary and usefulness of condom to prevent being pregnant.

The mastery experiences

She will explain the experimental group where male condom is available. She shows them how easy to take male condom. She will also demonstrate how to fit condom in male penis model and let group to find out and take the condom from available place. Then, let them practice to fit in male penis model and ask questions to invited unmarried women. After that, let them feel it will be very easy to get condom and to use condom. During this period, the researcher adds some important and correct steps of fitting condom.

The emotional arousal

This method happens from the group activity. The researcher arouses them to know that getting and taking condom very easy and usefulness of condom from being pregnant. After that the group will not be feared anymore and nervous from being pregnant. It is very easy and everyone can do it.

The verbal persuasion

The researcher will persuade the experiment group about condom by describing its effectiveness, the advantages and disadvantages of condom and them to weight the pro and cons of condom. Let them know how usefulness and necessary to have them to prevent unwanted pregnancy.

Group process

Establishing a good relationship and making the group relax by having tea/coffee together and greet each other. The researcher led the group members reviewed the main concepts from last two sessions (X1, X3,X5) and giving chance to ask questions.

The researcher let the groups to focus again on the objectives for the activity. The researcher present the three positive model of unmarried women who has boyfriend, risk of being pregnant and use contraceptive use (calendar, OC pills and condom)consistently .The positive models will be asked to inform the group about experience, problems/obstacles ,measures for preventing from being pregnant. The group members will be asked to express their opinions and exchange their knowledge, experiences each other. The researcher praise and add some important issues and information.

The research proposed question again to group relating to benefits of contraceptive method and hoe to avoid unwanted pregnancy. The group will discuss the questions presented according they have learned three previous sessions(X1, X3, X5) and their experiences. Then it will be monitored the different groups during discussion, observing participant actions and intervening if necessary to improve a group's learning. The researcher expected to discuss each other about the plan of using of any of calendar method, contraceptive pills and condom that they have learned two previous sessions.

The researcher will ask to group to summarize the main issues discuss by group regarding consistently use of contraceptive method, aims to motivate and encourage the group to use contraceptive method. Opportunity to ask questions will be open.

Finally, groups celebrate the hard work and contributions of the members as well as the success of the group. Celebrations provide group with encouragement to continue improving their group work.

If some participants attend the class, there will be training session for these participants. This training will be occurred between 2 normal training session. I f they absent 3 or more, they will be exclude from research and will not be in analysis.

3.2.1 Population and sample group

The study population consist of young unmarried migrant women whose has boyfriend in Ban Mae Tao village and Phra that phra daeng, Maesot Township, Tak province.

3.2.2 Selection of sample and sample size

The study is a quasi experimental design as the researcher could not able to allocate all the factories in Mae Sot area randomly. After communication with the factory owners or managers, the researcher able to conduct research in 12 factories where Migrant workers form Myanmar are employed. Six factories or clusters will be assigned into intervention group and another six factories will be assigned into comparison group. As this study will be quasi experiment research, the research will control some factors that affect the sampling knowledge. These factors will be perceived self efficacy of contraceptive method use, outcome expectation of contraceptive method use and contraceptive using behavior scores.

Choosing same characteristics of two sample group, the researcher will select the sample from same age range, same education range background, same socio economic statue and same environment.

Process of screening potential participant

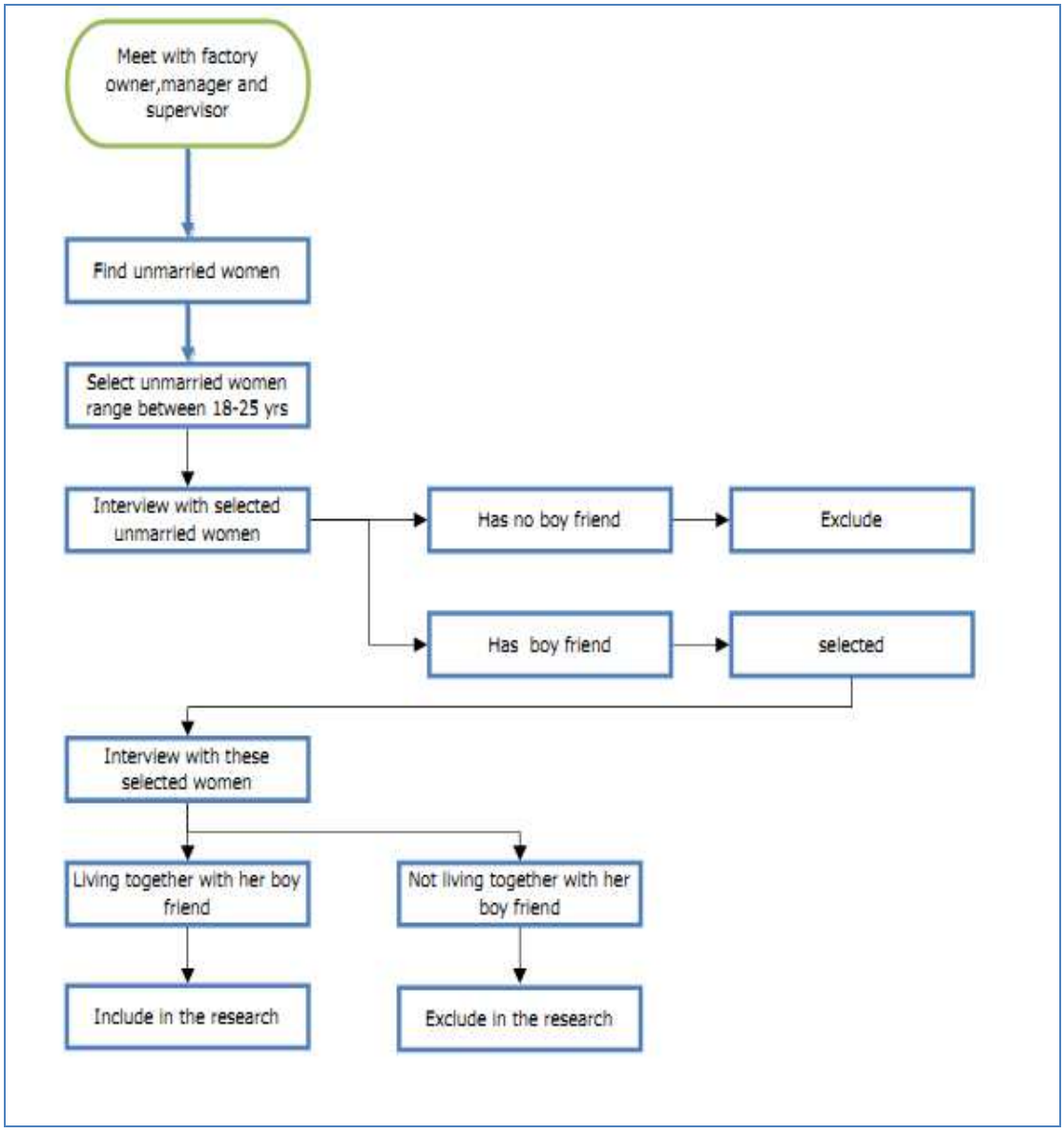

Figure (3) Process of screening potential participants

Inclusion criteria

1. Unmarried woman who has boyfriend and live together
2. Age 18-25 year
3. Have boyfriend ,regular menstruation

4. Willing to participate in all activities
5. Have to be present during research 30 weeks period and giving consent

Exclusion criteria

1. Can not participate through out research
2. Have plan to move outside

Both intervention factories and control factories have similar socio-economic and demographic condition, age range, and same education background.There will be two distant sites to prevention research intervention contamination and carefully monitoring both groups to avoid contamination.

Factories in intervention group

No	Factory name	Quarter	Population	Unmarried percentage	Unmarried population
1.	C.N.S	MaeTao Mai	400	60%	240
2.	Thai sun	MaeTao Mai	550	60%	330
3.	Anna	MaeTao Mai	350	60%	210
4.	ACR	MaeTao Mai	250	60%	150
5.	KBC	MaeTao Mai	250	60%	150
6.	Bike pu	MaeTao Mai	150	60%	90
	Total unmarried population				1170

*50% of these unmarried women are age 18-25 year. Therefore, there are 585 unmarried women are age 18-25 year in comparison group. Among them, 50% have boyfriends. Participant who met the inclusion criteria are 293.

Factories in comparison group

No	Factory name	Quarter	Population	Unmarried percentage	Unmarried population
1.	Supo(SR)	MaeTao Tike	300	60%	180
2.	Kifound	MaeTao Tike	400	60%	240
3.	TK	MaeTao Tike	3500	60%	2100
4.	PP	MaeTao Tike	250	60%	150
5.	Uniocean	MaeTao Tike	250	60%	150
6.	Northstar	MaeTao Tike	200	60%	120
	Total unmarried population				2940

*50% of these unmarried women are age 18-25 year. Therefore, there are 1470 unmarried women are age 18-25 year in intervention group. Among them, 50% have boyfriend. Participant who meet the inclusion criteria are 735.

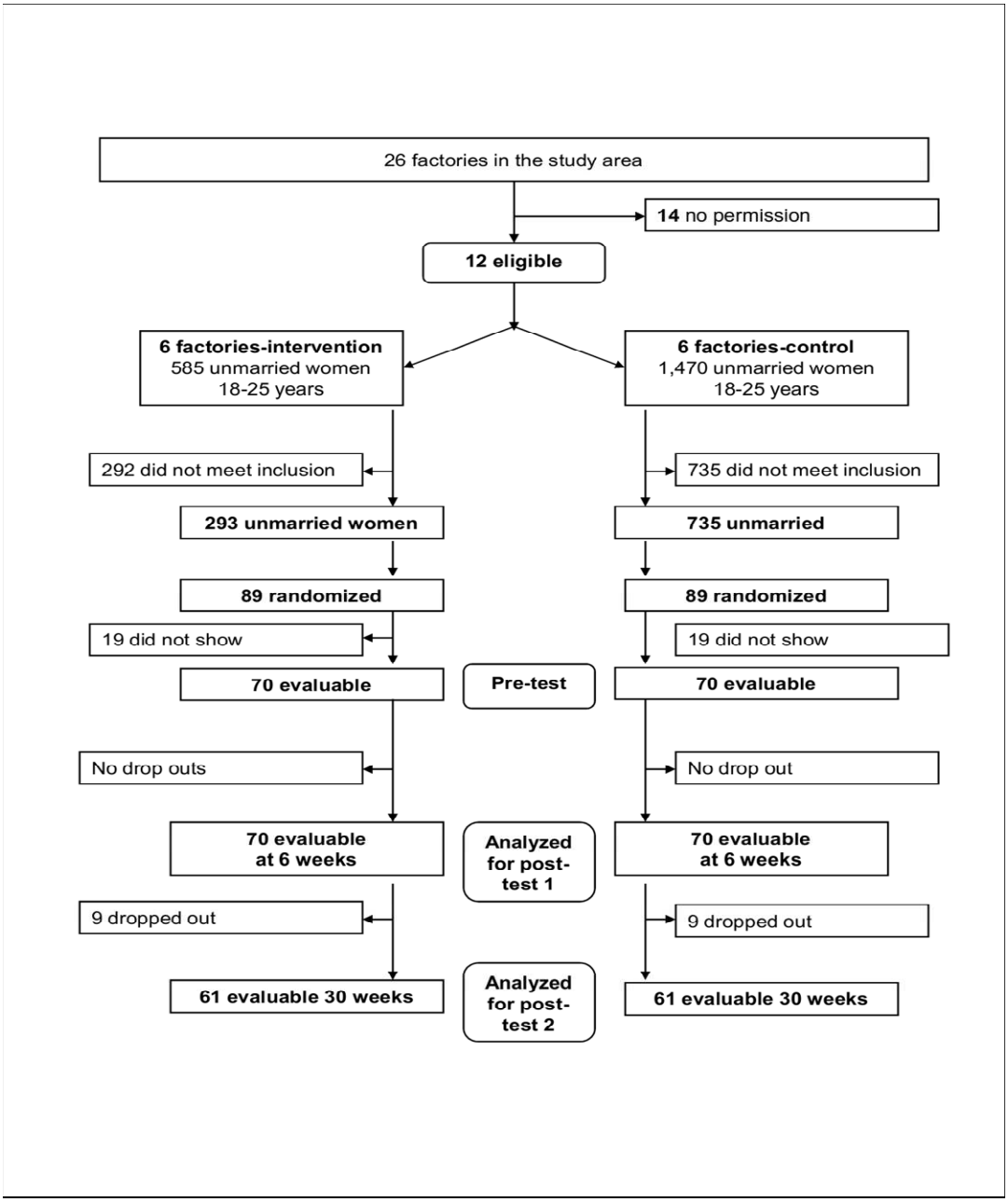

Figure (4) Research process

3.2.3 Sample size

In this research, to obtain sample size that will be capable of predicting the result of experiment, following formula will be used.(Kelsey J.L., 1996)

$$N = \frac{(Z\%_2 + Z_\beta)^2 \overline{P}(1-\overline{P})(r+1)}{(d)^2 r}$$

$$\overline{P} = \frac{P_1 + P_0}{2}$$

$Z\alpha_{/2}$ = Standard score for type I error (1-α) = (1.96)

Z β = Standard score for type 2 error (β=.2) =.845

N = Sample size

P1 = Estimate contraceptive consuming rate among exposed group (0.185)

P0 =Contraceptive consuming rate among unexposed group (0.035) (Soe, 2008a)P-68

d = mean difference (.0.15)

r= Ratio between exposed group and unexposed (1)

$$\overline{P} = \frac{0.185 + 0.035}{2}$$

$$\overline{P} = 0.11$$

$$N = \frac{(1.96 + 0.845)^2 (0.11)(1-0.11)(1+1)}{(0.15)^2 1}$$

$$N = 68$$

The sample size of this study is calculated by using formula to compare means of dependent sample between the two groups. The sample size should be at least 68 persons. Thus, this research determined the size of experiment and comparison group at 89 each (After adjusting 30% drop out). This is accepted as appropriated because it is higher than the size as calculated.

3.3 Research instruments

1. Research experimental instrument
    A. Application of self efficacy theory
    B. Group processing method
2. Instrument used for data collection

Part 1: Questionnaires for socio demographic data of participant

Socio-demographics data of students, consisting of 12 items related to age, religion, education, occupation, income, status in Thailand, duration of stay in Thailand...Etc

Part 2: Questionnaires for knowledge on contraceptive method and its usage data of participant. This part that has 3 choices correct, incorrect and no response or missing value form. This part contained 16 items. The highest score will be 16 and the lowest score will be 0.The level of knowledge will be categorized into three groups.

High knowledge	>80%
Moderate knowledge	>60-80%
Low knowledge	≤60% (Win, 2002)

Correct 1 point

Incorrect 0 point

Part 3: Questionnaires for perceived self efficacy on contraceptive use that inquiring from derived from the attitude test of Likert's Scale .This part contained 11 items. The questions items in the questionnaires contain both positive and negative questions. The positive questions are listed in items .the number

1, 2, 3,4,5,6,8,9,10,11 are positive statement and 7, 8 are arranged for negative statement. A Five-point scale was used for positive and negative statements as follow:

Choice	positive statements	negative statements
Extremely confident	5 points	1 point
Strong confident	4 points	2 points
Moderately confident	3 points	3 points
A little confident	2 points	4 points
Not at all	1 point	5 points

Part 4: Questionnaires for outcome expectation on contraceptive that inquiring from derived from the attitude test of Likert's Scale .This part contained 4 items. A Five-point scale was used as follow:

Choice	positive statements	negative statements
Extremely confident	5 points	1 point
Strong confident	4 points	2 points
Moderately confident	3 points	3 points
A little confident	2 points	4 points
Not at all	1 point	5 points

Part 1, part 2, part 3 and part 4 questionnaires are self-administering questionnaires.

Part 5: Questionnaires for contraceptive used behavior that inquires the contraceptive practice and contains 3 questionnaires.

Part 6: Questionnaires for number of unwanted pregnancy data that inquire the any unwanted pregnancy last 9 months

Part 7: Questionnaires for number of abortion data that inquire any induced abortion last 9 months

Part 5, part 6, and part 7 questionnaires will be obtained by interviewing method.

3.4 Data collection procedure

Upon gaining ethical approval from the ethics committee of Chulalongkorn University, the researcher provided a briefing on purpose and objective of the study to two researcher assistants.

Verbal and written information of the purpose and procedures of study was explained by researcher to all selected participants. The confidentiality and anonymity of the participant's information were ensured. After signing the written consent the participant were asked to complete the social-demographic characteristics, knowledge, contraceptive self efficacy and outcome expectation questions at a convenient time for them without the presence of the researcher. Contraceptive use, planned pregnancy and abortion question were asked by research assistant to all selected participants.

The data was collected at 0 week,6 weeks and 30 weeks of post intervention in comparison group and experiments group.

3.5 Data analysis

Quantitative data:

Before entering data into computer, all the questionnaires were coded and double checkmate reviewing the data for completeness, they were then processed for statically analysis by using SPSS.

Descriptive analysis of frequency, mean, standard deviation, percentage were use for analyzing data of socio-demographic variable.

2 Independent sample tests (Mann Whitney U test) were applied for analyzing the mean score of knowledge, contraceptive self efficacy and outcome expectation between intervention and comparison group because the data were not normally distributed.

Friedman test were applied for within group comparison .If test result was statistically significant then it was analyzed and run *post-hoc* tests to examine where the differences actually occur. Therefore, separated Wilcoxon Signed-Rank Tests (2 related sample test) run on the different combinations of related groups

Chi square test were used for analysis of contraceptive practice and consistent contraceptive use within/between intervention and comparison group.

If the participants leave or loss during intervention process or study from both arms, the researcher will not considered to be part of the trial. Statistically significant at P-values < .05

3.6: Validity and reliability of questionnaires

3.6.1: Reliability

The researcher trialed the questionnaire on knowledge on sexual reproductive health, contraceptive method and its use , perceived self-efficacy, outcome expectations on contraceptive use for reliability with 30 cases , selected by random sample, who had same criteria similar to the sample group from female factory workers in Maesot ,Tak province. Cronbach's coefficient Alpha was used to assess the reliability of the questionnaire. The Cronbach's coefficient value was 1) 0.91 for fifteen knowledge questions pre-test 2)0.923 for eleven self efficacy question pre-test 3) 0.799 for four outcome expectation question pre-test 4) 0.844 for three contraceptive practice questions pre-test 5) 0.924 for unplanned pregnancy and abortion question.

3.6.2 Content Validity

The questionnaire was given to 3 thesis advisors and 5 specialists at Chulalongkorn University to check for content validity and to improve it to be valid and appropriate in terms of language, concepts and the suggestions of the mentioned specialists.

3.7 Ethical consideration

Before the interview, the purpose of the study was explained to the respondents. Then oral consent as well as written consent was taken from each respondent. The name of respondent was not recorded and data was coded. The respondents were feel free to participate or withdrawal any time throughout the interview. Privacy was maintained throughout the interview. All the data was kept confidentially except for the further research for migrant none of the questionnaires could be traced back to the respondents. Ethical approval for this study was provided by Chulalongkorn University, Department of Public Health Science: **COA: 097/2011**

CHAPTER IV

RESULTS

This research, of quasi-experimental design, aimed to determine the application of CUBE (contraceptive use behavior encouragement) to promote contraceptive method use behavior. The study sample was comprised of factory worker (140case) split into two groups, a comparison groups and an experimental, of 70 cases each. The results are presented according to the research objectives, as follows:

Part I Socio-demographic characteristics of comparison group and experiment group

Part II Relationship of socio-demographic characteristics and knowledge, contraceptive self efficacy, outcome expectation, contraceptive practice of comparison group and experiment group at baseline

Part III Comparison of the mean score on knowledge, perceived self-efficacy, outcome expectations , practice of contraceptive method , number of unplanned pregnancy and abortion in the comparison group and the experiment group at baseline, after 6 week of intervention and 30 weeks of intervention

Part IV Comparison of the mean score on knowledge, perceived self-efficacy, outcome expectations , practice of contraceptive method , number of unplanned pregnancy and abortion within group in the comparison group and experiment group

4.1 Part I Socio-demographic characteristics of comparison group and experiment group

Table describe the socio-demographic factors (age, religion, education, occupation, income, living in Thailand and Thai language skill).The majority of respondents (41.4% in the comparison group and 44.3% in experiment group) were 24-26 years old and median age 22.33 in comparison group and 22.47 in experiment group. More than 90% of respondents were Buddhist in both groups. All of participants were

factory workers. More than 50% of respondents earned 2500-3500 baht monthly with the median income of 3475 baht per month in comparison group and 3090 bahts per month in experiment group.

Majority of the respondents had attended primary and middle school 75.7 in comparison group and 64.3% in experiment group. A few % (2.9% and 4.3%, in comparison and experiment group respectively) had never attended school. Details were shown in Table 4.1(A)

More than half (61.4 % and.68.1 %.comparison and experiment group) of the respondents had been in Thailand for less than 5 years.

Regarding language skills, more than half (54.3% and 64.3%) of them could not understand speak Thai .A very few % can speak Thai language. Details were shown in Table 4.1(A)

The respondents' unplanned pregnancy and abortion background was described in Table.8.6% in comparison group and 4.3% in experiment group had history of unplanned pregnancy.5.7 % in comparison group had experience of abortion and 1.7% ,comparison group.

More than half of respondents in both groups didn't know where to obtain contraceptive drugs, condom and didn't receive contraceptive IEC materials and training. Only one third of responds knew where to get and received sexual reproductive health education and training.

Table 4.1(A**)** Socio-demographic factors of respondents

General characteristics	Category	N	Comparison group	N	Intervention group	P Value
		70	%	70	%	
Age						0.393
	18-20	14	20.0	19	27.1	
	21-23	27	38.6	20	28.6	
	24-26	29	41.4	31	44.3	
Religion						0.227
	Buddhist	66	94.3	67	95.7%	
	Christian	3	4.3	0		
	Islam	0	0	1	1.4%	
	Other religion	1	1.4	2	2.9%	
Education						0.337
	No education	2	2.9	3	4.3	
	Primary and middle	53	75.7	45	64.3	
	High school and higher	15	21.4	22	31.4	
Income						**0.01**
	<2500 bahts/month	9	12.9		27.1	
	2500-3500 bahts/month	36	57.4		57.1	
	>3500 bahts/month	25	35.7		15.7	
Duration of stay in Thailand						0.19
	<5 years	43	61.4	48	68.6	
	>5 years	27	38.6	20	28.6	
	Not answer	0		2	2.9	
Thai Language skill						0.192
	Can't understand all	38	54.3	45	64.3	
	Can speak a few	18	25.7	8	11.4	
	Can speak well but can't read	1	1.4	2	2.9	
	Can speak and read well	1	1.4	0	0	
	Not answer	12	17.1	15	21.4	

Chi square test

Table 4.1(B) Socio-demographic factors of respondents

General characteristics	Category	N	Comparison group	N	Intervention group	P Value
		70	%	70	%	
History of previous pregnancy						0.362
	Yes	6	8.6	3	4.3	
	No	64	91.4	66	94.3	
	Not answer	0	0	1	1.4	
History of previous abortion						0.243
	Yes	4	5.7	1	1.4	
	No	66	94.3	68	97.1	
	Not answer	0	0	1	1.4	
Know where to get contraceptive drugs and condom						0.758
	Yes	23	32.9%	25	35.7	
	No	37	52.9%	45	64.3	
Had any type health education/materials of sexual reproductive health						0.342
	Yes	20	28.6%	29	41.4	
	No	40	57.1%	41	58.6	

Chi square test

4.2 Part II Relationship of socio-demographic characteristics and knowledge, contraceptive self efficacy, outcome expectation, contraceptive practice of comparison group and experiment group at baseline

Table 4.2 showed the relationship between socio-demographic factors and contraceptive knowledge in both groups at baseline. Statistical significance was also found between the duration of the respondents' stay in Thailand and their contraceptive knowledge with P-value 0.015 in comparison group. Those who stayed for less than five years have higher knowledge than others.

Contraceptive knowledge was found significantly difference between the respondents' educational status with P-vale 0.002.The respondents who attended primary and middle school had high contraceptive knowledge than other group in comparison group. There is no significant difference in experiment group.

It was also found significance between their religion and with whom the respondents' contraceptive knowledge with p-value 0.018 in comparison group. There was also significant relationship between Thai language skill and contraceptive knowledge in comparison group with p- value 0.001 while no significant relation in experiment group.

There were no significant difference between contraceptive knowledge and other socio-demographic factors such as age, monthly income in both comparison and experiment group.

Table 4.2(A) Relationship between the knowledge and socio-demographic variable

General characteristic	Category	n	Comparison group			P Value	n	Intervention group			P Value
			G	M	L			G	M	L	
Age		70	11	8	51	0.21	70	7	27	36	0.204
	18-20		2	3	9			3	4	12	
	21-23		2	4	21			0	10	10	
	24-26		7	1	21			4	13	14	
Religion		70	11	8	51	**0.018**	70	7	27	36	0.478
	Buddhist		8	8	50			7	26	34	
	Christian		2	0	1			0	0	0	
	Islam		0	0	0			0	1	0	
	Other religion		1	0	0			0	0	2	
Education		70	11	8	51	**0.002**	70	7	27	36	0.896
	No education		2	0	0			0	1	2	
	Primary and middle		9	8	36			5	16	24	
	High school and higher		0	0	15			2	10	10	
Income		70	11	8	51	0.215	70	7	27	36	0.159
	<2500 bahts/month		1	2	6			3	6	10	
	2500-3500 bahts/month		7	1	28			4	19	17	
	>3500 bahts/month		3	5	17			0	2	9	
Duration of stay in Thailand		70	11	8	51	**0.015**	68	7	26	35	
	>5 years		0	3	24			1	10	9	0.363
	<5 years		11	5	27			6	16	26	

Chi square test

G=Good,M=Moderate,L=Low

Table 4.2 (B) Relationship between the knowledge and socio-demographic variable

General characteristic	Category	n	Comparison group			P Value	n	Intervention group			P Value
			G	M	L			G	M	L	
Thai Language skill		58	9	7	42	**0.001**	55	4	21	30	0.603
	Can't understand all		4	1	33			3	19	23	
	Can speak a few		4	5	9			1	2	5	
	Can speak well but can't read		0	1	0			0	0	2	
	Can speak and read well		1	0	0			0	0	0	
Know where to get contraceptive drugs and condom		60	11	7	42	0.422	70	7	27	36	0.303
	Yes		5	4	14			1	12	12	
	No		6	3	28			6	15	24	
Had any type health education/materials of sexual reproductive health		60	11	7	42	0.323	70	7	27	36	0.092
	Yes		4	4	12			1	15	13	
	No		7	3	30			6	12	23	

Chi square test

G=Good,M=Moderate,L=Low

Table 4.3 showed the relationship between socio-demographic factors and contraceptive self efficacy scale in both groups at baseline. Statistical significance was also found between religion and their self efficacy scale with P-value 0.003 in comparison group. However, there was no significant relation in experiment group.

It was also surprisingly found significance between contraceptive self efficacy and the respondents who had receive different contraceptive IEC material and health education wit p-value 0.022 in comparison group. In this relation, respondents who had not have any type of contraceptive IEC material and training had higher contraceptive self efficacy scale while there was no significant relation in experiment group.

There were no significant difference between contraceptive self efficacy scale and other socio-demographic factors such as age, education, monthly income, duration of stay in Thailand, Thai language skill in both comparison and experiment group.

Table 4.3(A) Relationship between self efficacy scale and socio-demographic variable

General characteristic	Category	**n**	Comparison group			P Value	**n**	Intervention group			P Value
		70	H	M	L		70	H	M	L	
Age						0.313					0.222
			16	11	43			34	2	34	
	18-20		4	0	10			9	0	10	
	21-23		5	4	18			18	2	10	
	24-26		7	7	15			17	0	14	
Religion			16	11	43	**0.003**		34	2	34	0.526
	Buddhist		13	10	43			33	2	32	
	Christian		3	0	0			0	0	0	
	Islam		0		0			1	0	0	
	Other religion		0	1	0			0	0	2	
Education			16	11	43	0.17		34	2	34	0.791
	No education		0	2	0			1	0	2	
	Primary and middle		13	8	32			21	2	22	
	High school and higher		3	1	11			12	0	20	
Income			16	11	43	0.98		34	2	34	0.557
	<2500 bahts/month		2	1	6			8	0	11	
	2500-3500 bahts/month		9	6	21			20	1	19	
	>3500 bahts/month		5	4	16			6	1	4	

Chi square test

H=High,M=Moderate,L=Low

Table 4.3(B) Relationship between self efficacy scale and socio-demographic variable

General characteristics	Category	(**n**)	Comparison group			P Value	n	Intervention group			P Value
			H	M	L			H	M	L	
Duration of stay in Thailand		70	16	11	43	0.399	68	32	2	34	0.26
	<5 years		12	7	24			20	1	27	
	>5 years		4	4	19			12	1	7	
Thai Language skill		58	15	9	34	0.331	55	26	1	28	0.593
	Can't understand all		9	6	23			21	1	23	
	Can speak a few		6	2	10			5	0	3	
	Can speak well but can't read		0	0	1			0	0	2	
	Can speak and read well		0	1	0			0	0	0	
Know where to get contraceptive drugs and condom		60	15	10	35	0.59	70	34	2	34	0.423
	Yes		6	7	10			14	0	11	
	No		9	3	25			20	2	23	
Had any type health education/material of sexual reproductive health		60	15	10	35	**0.02**	70	34	2	34	0.468
	Yes		3	7	10			15	0	14	
	No		12	3	25			19	2	20	

Chi square test

H=High,M=Moderate,L=Low

Table 4.4 (A) Relationship between the outcome-expectation and social-demographic variable

General characteristic	Category	(**n**)	Comparison group			P Value	(**n**)	Intervention group			P Value
		70	H	M	L		70	H	M	L	
Age			23	17	30	0.345		19	13	38	0.936
	18-20		3	2	9			5	3	11	
	21-23		8	7	12			5	5	10	
	24-26		12	8	9			9	5	17	
Religion			23	17	30	0.318		19	13	38	0.469
	Buddhist		20	16	30			17	13	37	
	Christian		2	1	0			0	0	0	
	Islam		0	0	0			1	0	0	
	Other religion		1	0	0			1	0	1	
Education			23	17	30	0.299		19	13	38	0.106
	No education		2	0	0			0	2	1	
	Primary and middle		17	14	22			14	5	26	
	High school and higher		4	3	8			5	6	11	
Income			23	17	30	0.775		19	13	38	0.254
	<2500 bahts/month		2	2	5			4	4	11	
	2500-3500 bahts/month		14	9	13			14	8	18	
	>3500 bahts/month		7	6	12			1	1	9	
Duration of stay in Thailand			23	17	30	0.108					0.288
	>5 years		5	7	15			3	4	13	
	<5 years		18	10	15			16	9	23	

Chi square test

H=High,M=Moderate,L=Low

Table 4.4 (B) Relationship between the outcome-expectation and social-demographic variable

General characteristic	Category	(**n**)	Comparison group			P Value	(**n**)	Intervention group			P Value
			H	M	L			H	M	L	
Thai Language skill		58	19	14	25	0.6	55	14	9	32	0.319
	Can't understand all		12	10	16			13	6	26	
	Can speak a few		5	4	9			1	3	4	
	Can speak well but can't read		1	0	0			0	0	2	
	Can speak and read well		1	0	0			0	0	0	
Know where to get contraceptive drugs and condom		60	21	13	26	0.498	70	19	13	38	0.773
	Yes		10	5	8			6	4	15	
	No		11	8	18			13	9	23	
Had any type health education/materials of sexual reproductive health		60	21	13	26	0.3	70	19	13	38	0.591
	Yes		8	6	6			6	6	17	
	No		13	7	20			13	7	21	

Chi square test

H=High,M=Moderate,L=Low

A shown is table 4.4,There were no significant difference between outcome expectation and other socio-demographic factors such as age, education, religion, monthly income, duration of stay in Thailand, Thai language skill in both comparison and experiment group.

Contraceptive usage in comparison group was found significantly difference which depends upon the respondents' background receiving status of contraceptive educational material and training (Table 4.5). It was with P-vale 0.025. More than 75% of respondents who receive education material and training use contraceptive method in comparison group. There was no significant relation in experiment group.

Table 4.5(A) Relationship between the contraceptive practice and socio-demographic variables

General characteristics	Category	(**n**)	Controlled group		P Value	(**n**)	Intervention group		P Value
		70	Yes	No		70	Yes	No	
Age			43	27	0.168		44	26	0.19
	18-20		6	8			11	8	
	21-23		16	11			10	10	
	24-26		21	8			23	8	
Religion			43	27	0.174		44	26	0.396
	Buddhist		40	26			41	26	
	Christian		3	0			0	0	
	Islam		0	0			1	0	
	Other religion		0	1			2	0	
Education			43	27	0.78		44	26	0.38
	No education		1	1			3	0	
	Primary and middle		34	19			27	18	
	High school and higher		8	7			14	8	
Income			43	27	0.46		44	26	0.543
	<2500 bahts/month		4	5			10	9	
	2500-3500 bahts/month		22	14			27	13	
	>3500 bahts/month		17	8			7	14	
Duration of stay in Thailand			43	27	0.85		44	24	0.88
	>5 years		20	7			16	4	
	<5 years		23	20			28	20	

Chi square test

Table 4.5(B) Relationship between the contraceptive practice and socio-demographic variables

General characteristics	Category	(**n**)	Controlled group		P Value	(**n**)	Intervention group		P Value
			Yes	No			Yes	No	
Thai Language skill		58	36	22	0.667	55	35	20	0.612
	Can't understand all		24	14			30	15	
	Can speak a few		10	8			4	4	
	Can speak well but can't read		1	0			1	1	
	Can speak and read well		1	0					
Know where to get contraceptive drugs and condom		60	36	24	0.914	70	44	26	0.546
	Yes		14	9			16	9	
	No		22	15			28	17	
Had any type health education/materials of sexual reproductive health		60	36	24	**0.025**	70	44	26	0.374
	Yes		16	4			20	9	
	No		20	20			24	17	

Chi square test

Table 4.6 (A): Relationship between the contraceptive consistent use and socio-demographic variables

General characteristics	Category	(**n**)	Controlled group		P Value	(**n**)	Intervention group		P Value
		70	Yes	No		70	Yes	No	
Age			14	56	0.664		16	54	0.895
	18-20		4	10			5	14	
	21-23		5	22			4	16	
	24-26		5	24			7	24	
Religion			14	56	0.107		16	54	0.113
	Buddhist		12	54			14	53	
	Christian		2	1			0	0	
	Islam		0	0			1	0	
	Other religion		0	1			1	1	
Education			14	56	0.563		16	545	0.77
	No education		0	2			1	2	
	Primary and middle		12	41			11	34	
	High school and higher		2	13			4	18	
Income			14	52	0.093		16	54	0.559
	<2500 bahts/month		0	9			3	16	
	2500-3500 bahts/month		6	30			11	29	
	>3500 bahts/month		8	17			2	9	
Duration of stay in Thailand					0.713		16	52	0.284
	>5 years		6	21			13	35	
	<5 years		8	35			3	17	

Chi square test

Table 4.6(B): Relationship between the contraceptive consistent use and socio-demographic variable

General characteristics	Category	(**n**)	Controlled group		P Value	(**n**)	Intervention group		P Value
			Yes	No			Yes	No	
Thai Language skill		58	10	48	0.734	55	14	53	0.719
	Can't understand all		8	30			11	36	
	Can speak a few		2	16			2	6	
	Can speak well but can't read		0	1			1	1	
	Can speak and read well		0	1			0	0	
Know where to get contraceptive drugs and condom		60	14	46	0.058	70	16	54	0.456
	Yes		2	21			5	20	
	No		12	25			11	34	
Had any type health education/materials of sexual reproductive health		60	14	46	0.535	70	16	54	0.474
	Yes		5	15			6	23	
	No		9	31			10	31	

Chi square test

As show in table 4.6, there were no significant difference between consistent use of contraceptive method and socio-demographic factors such as age, education, religion, monthly income, duration of stay in Thailand, Thai language skill, know how to obtain contraceptive material and background receiving status of contraceptive educational material and training in both comparison and experiment group with p-value >0.05

4.3 Part III

Comparison of the mean rank on knowledge, perceived self-efficacy, outcome expectations , practice of contraceptive method , number of unplanned pregnancy and abortion in the comparison group and the experiment group at baseline, after 6 week of and 30 weeks of post intervention

Table 4.7(A) The respondents who can answer the knowledge questions correctly (n=70) at base-line. Among 15 questions, No 8 and 13 were negative statement.

No	Questions	n	Comparison group(%)	n	Intervention group(%)
1	Using male condom properly can prevent the women being pregnant	45	64.3	50	71.4
2	Using condom can prevent sexual transmitted diseases and AIDS	57	81.4	44	62.9
3	Condom can break when having sex	15	21.4	28	40.0
4	Women who take oral contraceptive pill should take a pill daily to avoid being pregnant	59	84.3	57	81.4
5	If woman miss the pill, she can continue taking the pill and should have sex with condom for 1 week	41	58.6	47	67.1
6	Using contraceptive pill can prevent unplanned/unwanted pregnancy	58	82.9	50	71.4
7	If woman want to start to use contraceptive pill, it should be take 1st day of menstrual cycle	32	45.7	39	55.7
8	Contraceptive pill increase the risk of cervical cancer	7	10.0	14	20.0
9	A woman cannot get the pregnancy when they have sex 7 days before and 7 days after their menstrual period(for 28 days menstrual cycle)	15	21.4	38	54.3
10	Ovulation can occur on the 14th day counting from 1st day of menstrual period(for 28 days menstrual cycle)	29	41.4	43	61.4
11	Woman can get pregnant when ovulation occurs.	34	48.6	25	35.7
12	Woman cannot get pregnant when she have sex 14 days after menstruation and 14 day before menstruation	36	51.4	44	62.9
13	Contraceptive pill can cause sometimes nausea and headache	33	47.1	26	37.1
14	Contraceptive pill can prevent STI diseases	53	75.7	53	75.7
15	*Contraceptive pill can cause vaginal bleeding*	19	27.1	21	30.0

As shown in table, the mean rank on knowledge about sexual reproductive health, contraceptive method use, its drug side effect and benefit in the comparison group 65.23 while mean rank 75.77 at the experimental group .It is found that the difference of knowledge between the experimental group and the comparison group is not statistically significant (p-value.0.123)

Table 4.7(B) Level of knowledge about Sexual reproductive health, contraceptive drug and its method at Base-line

Level of knowledge	Category	n	Comparison group	n	Intervention group
L	Poor knowledge (≤ 60%)	51	72.9%	36	51.4%
M	Moderate or fair knowledge (60%-80%)	8	11.4%	27	38.6%
G	Good knowledge (>80%)	11	15.7%	7	10%

G=Good,,M=Moderate,L=Low

Table 4.7(C) **Comparisons of knowledge mean rank between the comparison group and intervention group at base-line (Before intervention)**

Knowledge	Mean	Mean rank	Z	P-Value
Comparison group	7.61	65.23	-1.54	0.123
Intervention group	8.27	75.77		

Non Parametric 2 Independent sample test

After 6 weeks of the experiment(table 4.8 C) the mean rank on knowledge about sexual reproductive health, contraceptive method use, its drug side effect and benefit in the experimental group was mean rank 89.87 while 51.13 in the comparison group. It is found that the difference of knowledge between the experimental group and the comparison group is statistically significant (p-value<0.001).

Table 4.8(A) The respondents who can answer the knowledge questions correctly (n=70) after 6 weeks of post- intervention. Among 15 questions, No 8 and 13 were negative statement.

No	Questions	n	Comparison group (%)	n	Intervention group (%)
1	Using male condom properly can prevent the women being pregnant	58	82.9	69	98.6
2	Using condom can prevent sexual transmitted diseases and AIDS	63	90.0	67	95.7
3	Condom can break when having sex	23	32.9	60	85.7
4	Women who take oral contraceptive pill should take a pill daily to avoid being pregnant	62	88.6	69	98.6
5	If woman miss the pill, she can continue taking the pill and should have sex with condom for 1 week	57	81.4	70	100.0
6	Using contraceptive pill can prevent unplanned/unwanted pregnancy	61	87.1	69	98.6
7	If woman want to start to use contraceptive pill, it should be take 1st day of menstrual cycle	56	80.0	69	98.6
8*	Contraceptive pill increase the risk of cervical cancer	40	57.1	47	67.1
9	A woman cannot get the pregnancy when they have sex 7 days before and 7 days after their menstrual period(for 28 days menstrual cycle)	50	71.4	58	82.9
10	Ovulation can occur on the 14th day counting from 1st day of menstrual period(for 28 days menstrual cycle)	51	72.9	69	98.6
11	Woman can get pregnant when ovulation occurs.	50	71.4	60	85.7
12	Woman cannot get pregnant when she have sex 14 days after menstruation and 14 day before menstruation	55	78.6	66	94.3
13*	Contraceptive pill can prevent STI diseases	40	57.1	54	77.1
14	Contraceptive pill can cause sometimes nausea and headache	60	85.7	69	98.6
15	*Contraceptive pill can cause vaginal bleeding*	39	55.7	66	94.3

Table 4.8(B) Level of knowledge about Sexual reproductive health, contraceptive drug and its method after 6 week intervention

Level of knowledge	Category	N(Number)	Comparison group (%)	(n)	Intervention Group (%)
L	Poor knowledge (≤ 60%)	21	30 %	1	1.4 %
M	Moderate or fair knowledge (60%-80%)	14	20 %	12	20 %
H	Good knowledge (>80%)	35	50 %	57	78.6 %

H=High,M=Moderate,L=Low

Table 4.8(C) **Comparisons of knowledge mean rank between the comparison group and intervention group after 6weeks intervention**

Knowledge	Mean	Mean rank	Z	P-Value
Comparison group	10.93	51.13	-5.81	**<0.001**
Intervention group	13.74	89.87		

*Non Parametric 2 Independent sample test

After 30 weeks of intervention, the mean rank on knowledge about sexual reproductive health, contraceptive method use, its drug side effect and benefit in the experimental group was mean rank 88.98 while 34.02 in the comparison group. It is found that the difference of knowledge between the experimental group and the comparison group is statistically significant (p-value<0.001).

Table 4.9(A) The respondents who can answer the knowledge questions correctly (n=61) after 30 weeks intervention. Among 15 questions, No 8 and 13 were negative statement.

No	Questions	n	Comparison group (%)	n	Intervention group (%)
1	Using male condom properly can prevent the women being pregnant	51	83.6	61	100.0
2	Using condom can prevent sexual transmitted diseases and AIDS	52	85.2	60	98.4
3	Condom can break when having sex	23	37.7	60	98.4
4	Women who take oral contraceptive pill should take a pill daily to avoid being pregnant	58	95.1	61	100.0
5	If woman miss the pill, she can continue taking the pill and should have sex with condom for 1 week	56	91.8	61	100.0
6	Using contraceptive pill can prevent unplanned/unwanted pregnancy	54	88.5	61	100.0
7	If woman want to start to use contraceptive pill, it should be take 1st day of menstrual cycle	46	75.4	60	98.4
8	Contraceptive pill increase the risk of cervical cancer	21	34.4	54	88.5
9	A woman cannot get the pregnancy when they have sex 7 days before and 7 days after their menstrual period(for 28 days menstrual cycle)	34	55.7	60	98.4
10	Ovulation can occur on the 14th day counting from 1st day of menstrual period(for 28 days menstrual cycle)	33	54.1	60	98.4
11	Woman can get pregnant when ovulation occurs.	48	78.7	58	95.1
12	Woman cannot get pregnant when she have sex 14 days after menstruation and 14 day before menstruation	49	80.3	60	98.4
13	Contraceptive pill can cause sometimes nausea and headache	31	50.8	52	85.2
14	Contraceptive pill can prevent STI diseases	58	95.1	61	100.0
15	Contraceptive pill can cause vaginal bleeding	28	45.9	60	98.4

Table 4.9(B) Level of knowledge about Sexual reproductive health, contraceptive drug and its method after 2monthly recap x 3times activities (at 30 week)

Level of knowledge	Category	N	Comparison group	N	Intervention group
L	Poor knowledge (≤ 60%)	21	34.4	0	0
M	Moderate or fair knowledge (60%-80%)	24	39.3	1	1.6
G	Good knowledge (>80%)	16	26.2	60	98.4

G=Good,M=Moderate,L=Low

Table 4.9(C) Comparisons of knowledge mean rank between the comparison group and intervention group after 2monthly recap x 3times activities (at 30 week)

Knowledge	Mean	Mean rank	Z	P-Value
Comparison group	10.52	34.02	-8.82	<0.001
Intervention group	14.57	88.98		

*Non Parametric 2 Independent sample test

As shown in table **4.10**, the mean rank of contraceptive self efficacy scale in the comparison group was 63.96 while 77.04 in the experimental group .It is found that the difference of knowledge between the experimental group and the comparison group is not statistically significant (p-value.0.056)

Table 4.10(A) Level of Self Efficacy Scale toward contraceptive method at Base-line

Level of SE Scale	Category	N(Number)	Comparison group	N(Number)	Intervention group
L	Poor SE scale (≤ 60%)	43	61.4	34	48.6
M	Moderate or fair SE (60%-80%)	11	15.7	2	2.9
H	High SE scale (80%)	16	22.9	34	48.6

H=High,M=Moderate,L=Low

Table 4.10 (B) Comparison of Self-Efficacy mean rank between comparison group and intervention group at base-line

	Mean	Mean rank	Z	P-Value
Comparison group	29.1	63.96	-1.91	0.064
Intervention group	32.27	77.04		

*Non Parametric 2 Independent sample test

Table 4.10(C) Percentage of respondents' Self efficacy scale toward contraceptive methods at Base-line. Statement No 7 and 8 were negative statements.

No	Statements	Comparison group (%)						Intervention group (%)					
		Level of opinion scale						Level of opinion scale					
		n	EC	SC	MC	LC	NC	n	EC	SC	MC	LC	NC
1	I can ask my partner to use male condom consistently whenever I have sex with my boyfriend	69	10.0	1.4	11.4	1.4	74.3	68	25.7	8.6	8.6	14.3	40.0
2	I cannot have sex with my partner when I am in ovulation period	70	10	2,9	14.3	5.7	67.1	69	31.4	8.6	5.7	4.3	48.6
3	I could tell my partner that I am on OC pills for birth control.	70	31.4	11.4	7.1	1.4	48.6	68	32.9	5.7	10	4.3	44.3
4	I could easily stop the thing if I couldn't bring up the subject of protection.	70	11.4	18.6	7.1	10.0	52.9	64	24.3	8.6	5.7	7.1	45.7
5	I can deny to have sex if my partner does not use condom	69	11.4	21.4	4.3	2.9	58.6	64	28.6	4.3	4.3	12.9	41.4
6	I can excuse myself of taking OC pills for birth control because I have risk of being pregnancy	69	30	30	4.3	8.6	25.7	68	50	7.1	7.1	4.3	28.6
7*	I cannot take contraceptive pill because I am boring to take.	70	11.4	42.9	8.6	7.1	30	67	18.6	8.6	17.1	7.1	44.3
8*	I cannot ask my partner to use male condom because my partner does not want to use.	70	8.6	1.4	21.4	24.3	44.3	63	11.4	7.1	5.7	18.6	47.1
9	Having sex with or without male condom, I prefer to have sex with male condom.	70	12.9	5.7	12.9	18.6	50.0	63	31.4	7.1	15.7	10.0	25.7
10	Having sex with or without OC pills, I prefer to have sex with using OC pills	70	20	25.7	18.6	5.7	30.0	69	44.3	15.7	4.3	8.6	25.7
11	I can ask my partner to have sex with condom when I miss to take OC pills.	70	28.6	24.3	5.7	5.7	35.7	68	37.1	15.7	8.6	5.7	30.0

EC=Extremely confident, SC=Strongly confident, MC=Moderately confident, LC=Little confident, NC=No confident

After 6 weeks of the experiment, the mean rank of contraceptive self efficacy scale in the experimental group was 102.51 while the 38.49 in the comparison group. It is found that the difference of knowledge between the experimental group and the comparison group is t statistically significant (p-value<0.001).

Table 4.11(A) Level of Self Efficacy Scale toward contraceptive method between comparison group and intervention group after 6 weeks intervention

Level of SE Scale	Category	N	Comparison group	N	Intervention group
L	Poor SE scale (≤ 60%)	35	50.0	1	1.4
M	Moderate or fair SE (60%-80%)	29	41.4	12	17.1
H	High SE scale (80%)	6	8.6	57	81.4

H=High,M=Moderate,L=Low

Table 4.11(B) Comparison of Self-Efficacy mean rank between comparison group and intervention group after 6 weeks of intervention

	Mean	Mean rank	Z	P-Value
Comparison group	33.17	38.49	-9.372	<0.001
Intervention group	48.89	102.51		

*Non Parametric 2 Independent sample test

Table 4.11(C) Percentage of respondents' Self efficacy scale toward contraceptive methods between comparison group and intervention group after 6 weeks of intervention

No	Statements	Comparison group (%)						Intervention group (%)					
		Level of opinion scale						Level of opinion scale					
		n	EC	SC	MC	LC	NC	n	EC	SC	MC	LC	NC
1	I can ask my partner to use male condom consistently whenever I have sex with my boyfriend	70	8.6	8.6	20.0	35.7	27.1	70	82.9	8.6	7.1	0	1.4
2	I cannot have sex with my partner when I am in ovulation period	70	15.7	7.1	41.4	11.4	24.3	70	82.9	14.3	0	0	2.9
3	I could tell my partner that I am on OC pills for birth control.	68	10.0	17.1	17.1	38.6	14.3	70	87.1	8.6	1.4	0	2.9
4	I could easily stop the thing if I couldn't bring up the subject of protection.	70	12.9	37.1	14.3	15.7	20.0	68	78.6	8.6	7.1	0	2.9
5	I can deny to have sex if my partner does not use condom	68	8.6	40	12.9	12.9	22.9	69	84.3	10.0	4.3	0	0
6	I can excuse myself of taking OC pills for birth control because I have risk of being pregnancy	70	27.1	38.6	12.9	17.1	4.3	70	78.6	11.4	4.3	0	5.7
7	I cannot take contraceptive pill because I am boring to take.	68	18.6	37.1	14.3	14.3	12.9	69	34.3	2.9	2.9	5.7	52.9
8	I cannot ask my partner to use male condom because my partner does not want to use.	69	11.4	21.4	25.7	11.4	28.6	68	21.4	5.7	5.7	11.4	52.9
9	Having sex with or without male condom, I prefer to have sex with male condom.	70	17.1	47.1	17.1	10	8.6	66	5.7	75.7	11.4	2.9	4.3
10	Having sex with or without OC pills, I prefer to have sex with using OC pills	69	14.3	44.3	20.0	7.1	12.9	69	82.9	10.0	4.3	0	1.4
11	I can ask my partner to have sex with condom when I miss to take OC pills.	70	15.7	34.3	11.4	21.4	17.1	69	87.1	11.4	0	0	0

EC=extremely confident, SC=strongly confident, MC=moderately confident, LC=little confident, NC=No confident

After 30 weeks of intervention, the mean rank of contraceptive self efficacy in the experimental group was 89.62 while 33.38 in the comparison group. It is found that the difference of contraceptive self efficacy scale between the experimental group and the comparison group is statistically significant (p-value<0.001).

Table 4.12(A) Level of Self Efficacy Scale toward contraceptive method between comparison group and intervention group after 2monthly recap x 3times activities (at 30 week)

Level of SE Scale	Category	(n)	Comparison group	(n)	Intervention group
L	Poor SE scale (≤ 60%)	28	45.9	1	1.6
M	Moderate or fair SE (60%-80%)	28	45.9	3	4.9
H	High SE scale (80%)	5	8.2	57	93.4

H=High,M=Moderate,L=Low

Table 4.12(B) Comparison of Self-Efficacy mean rank between comparison group and intervention group after 30 weeks of intervention

	Mean	Mean rank	Z	P-Value
Comparison group	35.72	33.38	-8.87	**<0.001**
Intervention group	52.48	89.62		

*Non Parametric 2 Independent sample test

Table 4.12(C) Percentage of respondents' Self efficacy scale between comparison group and intervention group *at 30 weeks*

No	Statements	Comparison group (%)						Intervention group (%)					
		Level of opinion scale						Level of opinion scale					
		n	EC	SC	MC	LC	NC	n	EC	SC	MC	LC	NC
1	I can ask my partner to use male condom consistently whenever I have sex with my boyfriend	61	19.7	19.7	31.1	19.7	9.8	61	95.1	1.6	3.3	0	0
2	I cannot have sex with my partner when I am in ovulation period	60	9.8	21.3	45.9	14.8	6.6	61	95.1	3.3	1.6	0	0
3	I could tell my partner that I am on OC pills for birth control.	60	19.7	23	37.7	18	4.9	61	96.7	1.6	1.6	0	0
4	I could easily stop the thing if I couldn't bring up the subject of protection.	61	14.8	27.9	27.9	23	6.6	61	90.2	4.9	4.9	0	0
5	I can deny to have sex if my partner does not use condom	60	8.2	23	42.6	18	6.6	61	93.4	3.3	3.3	0	0
6	I can excuse myself of taking OC pills for birth control because I have risk of being pregnancy		16.4	31.1	36.1	0	16.4	61	93.4	3.3	1.6	0	1.6
7*	I cannot take contraceptive pill because I am boring to take.	61	13	21.3	23	24.6	21.3	61	11.5	1.6	13.1	3.3	70.5
8*	I cannot ask my partner to use male condom because my partner does not want to use.	61	24	39.3	39.3	23	19.7	61	9.8	9.8		6.6	73.8
9	Having sex with or without male condom, I prefer to have sex with male condom.	61	14.8	19.7	37.7	14.8	13,1	61	91.8	3.3	3.3	1.6	0
10	Having sex with or without OC pills, I prefer to have sex with using OC pills	61	16.4	24.6	41	11.5	6.6	61	91.8	3.3	1.6	1.6	1.6
11	I can ask my partner to have sex with condom when I miss to take OC pills.	61	19.7	23	32.8	18	6.6	61	93.4	1.6	1.6	1.6	1.6

EC=extremely confident, SC=strongly confident, MC=moderately confident, LC=little confident, NC=No confident

As shown in table **4.13**, the mean rank of outcome expectation towards contraceptive practice in the comparison group was 74.66 while 66.34 in the experimental group .It is found that the difference of outcome expectation between the experimental group and the comparison group is not statistically significant (p-value.0.213)

Table 4.13(A) Level of Outcome expectation at baseline

Level of OE	Category	n	Comparison group	n	Intervention group
L	Poor OE (≤ 60%)	30	42.9 %	38	54.3 %
M	Moderate or fair OE (60%-80%)	17	24.3 %	13	18.6 %
H	High OE (>80%)	23	32.9 %	19	27.1 %

H=High,M=Moderate,L=Low

Table 4.13(B) Comparisons of Outcome Expectation mean rank toward Contraceptive method use at Baseline

Knowledge	Mean	Mean rank	Z	P-Value
Comparison group	2.5	74.66	-1.247	0.213
Intervention group	2.19	66.34		

*Non Parametric 2 Independent sample test

Table 4.13(C) Percentage of Outcome Expectation toward Contraceptive Method use at Base-line

No	Statements	n	Comparison group			n	Intervention group		
			A	DA	DK		A	DA	DK
1	Taking contraceptive pill make freeing of being pregnant	70	74.3	2.9	22.9	68	70.0	4.3	22.9
2	Using condom make me freeing of STI and AIDS	70	78.6	2.9	18.6	67	62.9	12.9	20
3	Using condom make me freeing of being pregnant	70	45.7	18.6	35.7	67	47.1	11.4	37.1
4	Using calendar method make freeing of being pregnant 87%	70	51.4	8.6	40.0	68	38.6	11.4	47.1

A=Agreed,DA=Disagreed,DK=Don’t know

After 6 weeks of the experiment the mean rank of outcome expectation towards in the experimental group was 81.39 while 59.61 in the comparison group. It is found that

the difference of outcome expectation between the experimental group and the comparison group is statistically significant (p-value<0.001).

Table 4.14(A) Level of Outcome expectation toward contraceptive method use between comparison group and intervention group after 6 weeks of intervention

Level of OE	Category	n	Comparison group	n	Intervention group
L	Poor OE (≤ 60%)	20	28.6	4	5.7
M	Moderate or fair OE (>60%-80%)	20	28.6	18	25.7
H	High OE (>80%)	30	42.9	48	68.6

H=High,M=Moderate,L=Low

Table 4.14(B) Comparisons of Outcome Expectation mean rank toward Contraceptive method use between comparison group and intervention group after 6 weeks of intervention

Knowledge	Mean	Mean rank	Z	P-Value
Comparison group	2.97	59.61	-3.537	**<0.001**
Intervention group	3.57	81.39		

*Non Parametric 2 Independent sample test

Table 4.14(C) Percentage of Outcome Expectation toward Contraceptive Method use between comparison group and intervention group after 6 weeks of intervention

No	Statements	n	Comparison group			n	Intervention group		
			A	DA	U		A	DA	U
1	Taking contraceptive pill make freeing of being pregnant	70	88.6	0	11.4	68	94.3	1.4	1.4
2	Using condom make me freeing of STI and AIDS	70	87.1	5.7	7.1	69	94.3	4.3	0
3	Using condom make me freeing of being pregnant	70	74.3	15.7	10.0	69	94.3	2.9	1.4
4	Using calendar method make freeing of being pregnant 87%	70	47.1	20.0	32.9	69	74.3	1.4	22.9

A=Agreed,DA=Disagreed,DK=Don’t know

After 30 weeks of intervention, the mean rank of outcome expectation towards contraceptive method use in the experimental group was 76.36 while 46.64 in the comparison group. It is found that the difference of outcome expectataion between the experimental group and the comparison group is statistically significant (p-value<0.001).

Table 4.15(A) Comparisons of Outcome Expectation mean score toward Contraceptive method use between comparison group and intervention group after 2monthly recap x 3times activities (at 30 week)

Level of OE	Category	n	Comparison group	n	Intervention group
1	Poor OE (≤ 60%)	15	24.6	0	0
2	Moderate or fair OE (60%-80%)	20	32.8	7	11.5
3	Good OE (>80%)	26	42.6	54	88.5

H=High,M=Moderate,L=Low

Table 4.15(B) Comparisons of Outcome Expectation mean rank toward Contraceptive method use between comparison group and intervention group after 8 weekly recap x 3times activities (at 30 week)

Knowledge	Mean	Mean rank	Z	P-Value
Comparison group	3.05	46.64	-5.521	**<0.001**
Intervention group	3.89	76.36		

*Non Parametric 2 Independent sample test

Table 4.15(C) Percentage of Outcome Expectation toward Contraceptive Method use between comparison group and intervention group after 2monthly recap x 3times activities (at 30 week)

No	Statements	n	Comparison group			n	Intervention group		
			A	DA	U		A	DA	U
1	Taking contraceptive pill make freeing of being pregnant	61	96.7	0	3.3	61	100	0	0
2	Using condom make me freeing of STI and AIDS	61	85.2	1.6	13.1	61	98.4	1.6	0
3	Using condom make me freeing of being pregnant	61	77	8.2	14.8	61	96.7	1.6	1.6
4	Using calendar method make freeing of being pregnant 87%	61	45.9	14.8	39.3	61	93.4	1.6	4.9

A=Agreed,DA=Disagreed,DK=Don't know

As shown in table, the percentage of contraceptive method practice in comparison group is 61.4% while 62.9% at 1.497 in the experimental group .It is found that the contraceptive practice between the experimental group and the comparison group is not statistically significant (p-value.0.862).Furthermore, percentage of consistent contraceptive method use was 20% in comparison group and 22.9% in experiment. There was not statistically significant (p-value.0.680). More than 50 %of respondent use OC pills (53.48 %in comparison and 70.45 % in experiment group).The second most common use was contraceptive injection while condom was at third common use.

Table 4.16(A) Frequency and percentage of contraceptive use when last sex relation and comparison of contraceptive practice when having last sex at base line

		n	Comparison group	n	Intervention group	P-Value
Usage of contraceptive when last sex relation		70		70		0.862
	Yes	43	61.4	44	62.9	
	No	27	38.6	26	37.1	
Type of contraception method		70		70		
	OC pills	23	32.9	31	44.3	
	Injection	6	8.6	10	14.3	
	Condom	8	11.4	2	2.9	
	Calendar method	4	5.7	0	0	
	Sexual interruption	2	2.9	0	0	
	>1 contraceptive	0	0	0	0	
	Other	0	0	1	1.4	
	Not answer	27	38.6	26	37.1	
Behavior of contraceptive method use when having sex		70		70		0.680
	Ever use	14	20.0	16	22.9	
	Not ever use	29	41.4	28	40	
	Not answer	27	38.6	26	37.1	

Chi square test

Table 4.16(B) Frequency and percentage of contraceptive use when having last sex relation and comparison of contraceptive practice when having last sex after 6 weeks of intervention

		n	Comparison group	n	Intervention group	P-Value
Usage of contraceptive when last sex relation		70		70		0.300
	Yes	42	60	46	65.7	
	No	28	40.0	24	34.3	
	Not answer					
Type of contraception method		70		70		
	OC pills	23	32.9	24	34.3	
	Injection	6	8.6	3	4.3	
	Condom	10	14.3	14	20.0	
	Calendar method	3	4.3	5	7.1	
	Sexual interruption	0	0	0	0	
	>1 contraceptive method	0	0	0	0	
	Other	0	0	0	0	
	Not answer	28	40.0	24	34.3	
Behavior of contraceptive method use when having sex		70		70		**0.002**
	Ever use	16	22.9	33	47.1	
	Not ever use	26	37.1	13	18.6	
	Not answer	28	40.0	24	34.3	

Chi square test

Table 4.16(C) Frequency and percentage of contraceptive use when last sex relation and comparison of contraceptive practice when having last sex at 30 weeks of intervention

		n	Comparison	n	Intervention group	P-Value
		61	group	61		
Usage of contraceptive when last sex relation						0.262
	Yes	46	75.4	51	83.6	
	No	15	24.6	10	16.4	
	Not answer					
Type of contraception method						
	OC pills	33	54.1	32	52.5	
	Injection	11	18.0	7	11.5	
	Condom	2	3.3	11	18.0	
	Calendar method	33	54.1	1	1.6	
	Sexual interruption					
	>1 contraceptive method					
	Other					
	Not answer	28	40.0	10	16.4	
Behavior of contraceptive method use when having sex						**<0.001**
	Ever use	20	32.8	46	75.4	
	Not ever use	41	67.2	15	24.6	
	Not answer					

Chi square test

After 6 weeks of the experiment as shown in table4.16 (B), the percentage of contraceptive method practice in comparison group is 60%(42) while 65.7 %(46) in the experimental group .It is found that the contraceptive practice between the experimental group and the comparison group is not statistically significant (p-value.0.862).However, percentage of consistent contraceptive method use was 22.9 %(16) in comparison group and 47.1%(33) in experiment. There was statistically significant (p-value.0.002). After the experiment, condom use was become 2nd most contraceptive method in experiment group.

After 30 weeks of experiment As shown in table4.16 (C), the percentage of contraceptive method practice in comparison group is 75.4%(46) while 83.6 %(51) in the experimental group .It is found that the contraceptive practice between the experimental group and the comparison group is not statistically significant (p-value.0.262).However, percentage of consistent contraceptive method use was 32.8 %(20) in comparison group and 75.4%(46) in experiment. There was statistically significant (p-value<0.001). After the experiment, condom use (22%) was become 2nd most contraceptive method in experiment group while contraceptive use 62.74(32) in the experiment group.

Table 4.17(A) Frequency and percentage of unplanned pregnancy and abortion last 9 months between comparison group and intervention group at base line

		n	Comparison group	n	Intervention group	P-Value
Pregnancy	Yes	0	0%	0	0%	****
	No	70	100%	70	100%	
Abortion						
	Yes	0	0%	0	0%	***
	No	70	100%	70	100%	

Chi square test

Table 4.17(B) Frequency and percentage of unplanned pregnancy and abortion last 9 months between comparison group and intervention group after 6 week of intervention

		n	Comparison group	n	Intervention group	P-Value
Pregnancy	Yes	0	0%	0	0%	****
	No	70	100%	70	100%	
Abortion						
	Yes	0	0%	0	0%	***
	No	70	100%	70	100%	

Chi square test

Table 4.17(C) Frequency and percentage of unplanned pregnancy and abortion last 9 months between comparison group and intervention group after 2monthly recap x 3times activities (at 30 week)

		n	Comparison group	n	Intervention group	P-Value
Pregnancy	Yes	3	4.91 %	0	0 %	0.079
	No	61	95.08 %	61	100 %	
Abortion						
	Yes	0	0 %	0	0 %	***
	No	61	100 %	61	100 %	

Chi square test

As shown in table 4.17 (A), there was no pregnancy and abortion last 9 month at baseline.

As shown in table 4.17(B), there was no pregnancy and abortion last 9 month after 6 weeks of intervention in both groups.

At 30 weeks of experiment, there were no unplanned pregnancies in the intervention group which compared to 4.9% (3/60) in the control group, P=0.242(Table 4.17 C)

4.4 **Within the group comparison of knowledge for comparison group**

As shown in table 4.18 , before the experiment, the mean score on knowledge about sexual reproductive health, contraceptive method use, its drug side effect and benefit 7.65 with standard deviation 4.064 at baseline while the mean score of 10.85 with standard deviation 3.492 after the 6 week of experiment with group. It is found that the difference of knowledge between before the experiment and the after experiment statistically significant (p-value < 0.001)

There is also found that the difference of knowledge between before the experiment and the after 30 weeks of experiment is statistically significant (p-value < 0.001).However, there is no difference in knowledge between after 6 weeks of experiment and 30 weeks of experiment within group(p-value0.539)

Table4.18 Within group comparison of knowledge for comparison group

	n	Mean	P Value
Baseline	61	7.69	**<0.001**
Intervention 1 at weeks 6	61	10.85	
Baseline	61	7.69	**<0.001**
Intervention 2 at weeks 30	61	10.5246	
Intervention1	61	10.85	0.539
Intervention 2	61	10.5246	

2 related sample test

As shown in table 4.19, before the experiment, the mean score on contraceptive self efficacy scale at 29.1 with standard deviation 9.022 at baseline while the mean score of 33.44 with standard deviation 7.595 after the 6 week of experiment within group in comparison arm. It is found that the difference of knowledge between before the experiment and after experiment statistically significant (p-value 0.004)

There is also found that the difference of knowledge between before the experiment and the after 30 weeks of experiment is statistically significant (p-value< 0.001).Furthermore, there is also difference in mean score of contraceptive self efficacy scale between after 6 weeks of experiment and 30 weeks of experiment within group(p-value0.042)

Table4.19 Within group comparison of self efficacy scale for comparison group

	n	Mean	P Value
Baseline	61	29.1	**0.004**
Intervention 1 at weeks 6	61	33.44	
Baseline	61	29.1	**<0.001**
Intervention 2 at weeks 30	61	35.721	
Intervention1	61	33.44	**0.042**
Intervention 2	61	35.721	

2 related sample test

As shown in table 4.20, before the experiment, the mean score on outcome expectation toward contraceptive use at 2.508 at baseline while the mean score of 3.082 after the 6 week of experiment within group in the comparison group. It is found that the difference of outcome expectoration between before the experiment and the after experiment statistically significant (p-value 0.015)

There is also found that the difference of outcome expectation between before the experiment and the after 30 weeks of experiment is statistically significant (p-value 0.031).However, there is no difference in knowledge between after 6 weeks of experiment and 30 weeks of experiment within group (p-value0.894)

Table4.20 Within group comparison of expected outcome for comparison group

	n	Mean	P Value
Baseline	61	2.508	**.015**
Intervention 1 at weeks 6	61	3.082	
Baseline	61	2.508	**.031**
Intervention 2 at weeks 30	61	3.049	
Intervention1	61	3.082	.894
Intervention 2	61	3.049	

2 related sample test

Table4.21 Within group comparison of contraceptive practice and consistent use of contraception in comparison group

	n	Contraceptive practice	P-Value	n	Consistent use of contraception	P-Value
Baseline	70	43	0.73	70	14	0.541
After intervention1(6 Weeks)	70	41		70	17	
Baseline	70	43	0.087	70	14	0.96
After intervention 2(30 weeks)	61	46		61	20	
After intervention1(6 Weeks)	70	41	**0.042**	70	17	0.281
After intervention 2(30 weeks)	61	46		61	20	

Chi square test

Within the group comparison of knowledge for experiment group

As shown in table 4.22, the mean score on knowledge about sexual reproductive health, contraceptive method use, its drug side effect and benefit at 8.26 at baseline while the mean score of 3.59 after the 6 week of experiment within group in experiment arm. It is found that the difference of knowledge between before the experiment and the after experiment statistically significant (p-value < 0.001)

There is also found that the difference of knowledge between before the experiment and the after 30 weeks of experiment is statistically significant (p-value < 0.001).Furthermore, there is no difference in knowledge between after 6 weeks of experiment and 30 weeks of experiment within group in the experiment arm(p-value0.001)

Table4.22 Within group comparison of knowledge for intervention group

	n	Mean	P Value
Baseline	61	8.26	**<0.001**
Intervention 1 at weeks 6	61	13.59	
Baseline	61	8.25	**<0.001**
Intervention 2 at weeks 30	61	14.57	
Intervention1	61	13.59	**<0.001**
Intervention 2	61	14.57	

2 related sample test

As shown in table 4.23, the mean score on contraceptive self efficacy scale at 31.9 with standard deviation 11.23 at baseline while the mean score of 48.41 with standard deviation 5.866 after the 6 week of experiment with group. It is found that the difference of contraceptive self efficacy scale between before experiment and after experiment statistically significant (p-value < 0.001)

There is also found that the difference of contraceptive self efficacy scale between before the experiment and the after 30 weeks of experiment is statistically significant (p-value < 0.001).Furthermore, there is also difference between after 6 weeks of experiment and 30 weeks of experiment within group(p-value0.001)

Table4.23 Within group comparison of self efficacy scale for intervention group

	n	Mean	P Value
Baseline	61	31.9	< **0.001**
Intervention 1 at weeks 6	61	48.41	
Baseline	61	31.9	< **0.001**
Intervention 2 at weeks 30	61	52.48	
Intervention1	61	48.41	< **0.001**
Intervention 2	61	52.48	

2 related sample test

As shown in table 4.24, the mean score on expected outcome towards contraceptive method use at 2.13 while the mean score of 3.51 after the 6 week of experiment with group. It is found that the difference of outcome expectation between before experiment and after experiment statistically significant (p-value < 0.001)

There is also found that the difference of outcome expectation between before the experiment and the after 30 weeks of experiment is statistically significant (p-value < 0.001).Furthermore, there is also difference between after 6 weeks of experiment and 30 weeks of experiment within group in experiment group.(p-value 0.001)

Table4.24 Within group comparison of expected outcome for intervention group

	n	Mean	P Value
Baseline	61	2.13	**< 0.001**
Intervention 1 at weeks 6	61	3.51	
Baseline	61	2.13	**< 0.001**
Intervention 2 at weeks 30	61	3.89	
Intervention1	61	3.51	**0.001**
Intervention 2	61	3.89	

2 related sample test

Table4.25 Within group comparison of contraceptive practice and consistent use of contraception in intervention group

	n	Contraceptive practice	P-Value	n	Consistent use of contraception	P- Value
Baseline	70	44	1	70	16	**0.03**
After intervention1(6 Weeks)	70	46		70	33	
Baseline	70	44	**0.02**	70	16	**<0.001**
After intervention 2(30 weeks)	61	51		61	46	
After intervention1(6 Weeks)	70	46	**0.02**	70	33	**<0.001**
After intervention 2(30 weeks)	61	51		61	46	

Chi square test

Table 4.26 Comparison of mean knowledge score over the 30 weeks period

Group	Baseline	6 weeks	30 weeks
Controlled	7.61	10.93	10.52
Experiment	8.27	13.74	14.57

Table 4.27 Comparison of mean self efficacy score over the 30 weeks period

Group	Baseline	6 weeks	30 weeks
Controlled	29.1	33.17	35.72
Experiment	32.27	48.89	52.48

Table 4.28 Comparison of mean score of expected outcome over the 30 weeks period

Group	Baseline	6 weeks	30 weeks
Controlled	2.5	2.97	3.05
Experiment	2.19	3.57	3.89

Table 4.29 Comparison of number of contraceptive use over the 30 weeks period

Group	Baseline	6 weeks	30 weeks
Controlled	43	42	46
Experiment	44	46	51

Table 4.30 Comparison of number of consistent contraceptive use over 30 weeks

Group	Baseline	6 weeks	30 weeks
Controlled	14	16	20
Experiment	16	33	46

Table 4.31 Comparison of number of unplanned pregnancy over 30 weeks

Group	Baseline	6 weeks	30 weeks
Controlled	0	0	3
Experiment	0	0	0

Table 4.32 Comparison of number of abortion over 30 weeks

Group	Baseline	6 weeks	30 weeks
Controlled	0	0	0
Experiment	0	0	0

CHAPTER V

DISCUSSION, CONCLUSION AND RECOMMENDATION

The purpose of this study was to examine how difference of 1) knowledge of sexual reproductive health, contraceptive methods, its side effect and its benefits 2)contraceptive self efficacy in sexual engagement,3)outcome expectation towards contraceptive use,4)contraceptive practice and its consistence use, 5)unplanned pregnancy case and abortion cases between comparison group and intervention group in unmarried Myanmar migrant women age 18-26 Maesot,Tak province, Thailand through CUBE intervention(combination of self efficacy theory and group process application).

This chapter provides discussion, a summary of this study which is divided into three sections: the first section was focused on discussion of result finding .The second section is shown the conclusion of result s and the last section describe recommendation from this study, limitation , implication and recommendation in conducting for further research.

5.1: Section One: Discussion of finding

This section was discussed on 1) Interpret, explained the results 2) Answer the research questions (Explanations on whether the result findings prove or disprove research hypothesis) 3) and Justify research results 4) Evaluation of the study

Interpretation and explanation on result

The study was a quasi-experimental research two groups pretest-posttest design. This pattern is considered very effective to assess the changes of dependent variables after performing the experiment. Furthermore, it is rather well matching and responding to the objective of this study which focus on the application of Self efficacy theory and

group process to promote contraceptive use behavior. Therefore, the experimental group was compared with the comparison group. The experimental group received the CUBE program; but the comparison group received only information note of sexual reproductive health and different contraceptive method. The measurement on knowledge, self-efficacy and outcome expectation, contraceptive practice was made before and after the experimental.

Interpretation of baseline characteristic

A total number of 140 participants were in this study with 70 participants for each group. At end of6 week, there were still 70 participants .However, only sixty one participants remaining at the end of 30 weeks because of moving out from Maesot town.

In this study, baseline socio-demographic characteristics expect monthly income and knowledge, CSE, OE, contraceptive use and its consistent use of comparison group and experiment group had no significant difference. Knowledge, CSE, OE, contraceptive use and its consistent use were controlled which is not to affect research outputs.

There was no significant relationship between age and knowledge of contraceptive method, contraceptive self efficacy scale, expected outcome towards contraceptive method, and contraceptive practice and its consistent use in both groups.

Regarding education status, respondent in primary and secondary school category were found higher knowledge and higher self efficacy only in comparison group with P-value 0.02 and 0.017 respectively. Generally, the educated women are expected to be high. But, in this study it was not. The reason for different finding was that primary and middle school status category had more education information or training than other group.

Regarding religion status, although most of respondents were Buddhist, all respondents in other religion had higher knowledge and self efficacy compare to Buddhist religion in comparison group.

In comparison group, duration of staying in Thailand was also found statistically significant with P-value 0.015 in response to knowledge questions. The knowledge was found declining with the increasing duration of stay. Those who recently came would more likely to have health education and training from Myanmar site.

Regarding Thai language skill, in comparison group, those who can speak Thai langue a few or well had more knowledge than other. The reason for different finding was that those who were likely to have education information and training from Thai health organization.

Availability and accessibility of health services is one of the important factors in migrant health. Majority of the migrants suffer from geographical, time, economic and cultural inaccessibility. Likewise, Health information availability was found statistically significant for current contraception usage and knowledge .Those who received health supports and information would likely to use contraception with P values 0.025 in comparison group.

Apart from above mention socio-demographic factors had no effect upon 1) knowledge of sexual reproductive health, contraceptive methods, its side effect and its benefits 2)contraceptive self efficacy in sexual engagement,3)outcome expectation towards contraceptive use,4)contraceptive practice and 5)its consistence use.

Interpretation and explanation on knowledge result

With regards to individual items of contraceptive knowledge answer, the respondents in both groups didn’t know well about contraceptive pills at baseline with correct answer percentage 10-54%.Although, the respondents in experiment group gained

improvement from mean score 8.27 to 14.57 on the knowledge of contraceptive pills throughout intervention period.

Regarding comparison of within group before and after intervention, there had significant difference of knowledge in both groups with P values <0.001.

Interpretation and explanation on contraceptive self efficacy scale result

This study also demonstrates that the difference between of contraceptive self efficacy scale between comparison group and intervention group. With regards to individual items of contraceptive self efficacy response, the mean score of contraceptive self efficacy score tended to be neutral with 29.1 in comparison and 32.27 in experiment group at baseline. In addition, the respondents do not have a firm confidence to deny sexual partner when they don't have any protection for sex relation with low confidence and no confidence score were 50-80%. This suggested that the respondents in this study may not have a firm confident about self control over sexual and contraceptive situation at baseline. Although, the respondents in experiment group gained improvement on the CSE(self efficacy scale) with extreme confidence and strongly confidence score were 80-97% throughout intervention period while the comparison group still remain low with extreme confidence and strongly confidence score 17-65%.

Regarding comparison of within group before and after intervention, there had significant difference of knowledge in both groups with P values <0.001.

Interpretation and explanation on outcome expectation towards contraceptive method use result and justify the results

Response rate of Outcome expectation toward contraceptive method use was more than 50% in both groups at baseline. After intervention, comparison group had no significant change in outcome expectation toward contraceptive method use. However,

there was significant changes in outcome expectation in experiment group with increase mean score 2.19 to 3.89(P Value<0.001)

Regarding comparison of within group before and after intervention, there had significant difference of knowledge in both groups with P values <0.031 in the comparison group and P values <0.001 in the intervention group.

Interpretation and explanation on contraceptive practice result

With regards to contraceptive practice, contraceptive prevalence rate among migrant unmarried women is 61.4%in comparison and 62.9% in experiment group at baseline. This finding is comparable with a study done among Myanmar migrant youth in Bang Bon district, Bangkok, Thailand in which the rate was found to be 60% (Han, 2009). Moreover, it was consistent with the studies done among Myanmar migrants in Thailand, 73.3% in Phang Nga Province (Soe, 2008b).Another study of contraceptive use among unmarried female migrants in one factory in Shanghai shows 78% which is comparable this research baseline results.(Qian et al., 2007).

Over 30 weeks of duration, there was no significant change of contraceptive practice in comparison group with 61.4 %-75.4% .There was still constant contraceptive use in experiment group over the period with P value 0.087. However, there was significant change in contraceptive use between 6 week and 32 week of intervention period. (65.7%-83.6% with P Value 0.02)

Regarding comparison of within group before and after intervention, there had no significant difference of contraceptive practice in both groups with P values 0.087 in the comparison group .There had significant difference of contraceptive practice with P values 0.002 in the intervention group.

Interpretation and explanation on type of contraceptive method use result

The most commonly used contraception were oral pills (53.48%), condoms (18.6%), contraceptive injection (13.95%) in comparison group while oral pill was 70.45%, condom (4.5%) and injection(22.72%) in experiment group at baseline. This result was inconsistent with study done among female adolescents in Kaoshiung county Taiwan. This study showed that condom was most popular contraceptive method(51.2%)(Wang, et al., 2004). However, it was consistent with the studies done among Myanmar migrants in Bang Bon district, Bangkok, Thailand, which show the most commonly used contraception were oral pills (42.4%).(Han, 2009)Supportive findings were found in Myanmar migrants from Phang Nga (Soe, 2008b)and Tak Provinces (Thwin, 2008). A study in Chiang Rai Vocational school stated that Thai youths used oral pills mostly (69.5%) in their sexual relationship (Manopaiboon, et al, 2003).

A possible interpretation of this finding is that OC pills were widely and anonymously available due to free distribution from health center via their peers in factory than condom distribution. Another possible factor is that condom use is male dominant practice and women were weak to ask use of condom to her partner.

Interpretation and explanation on consistent contraceptive method use result

The consistent use of contraceptive percentage was 32.55% and 36.36% in comparison and experiment group respectively at baseline. In this study, there was no significant change in consistent use percentage of contraceptive in comparison group after intervention (at weeks 6 and 30 weeks).However, highly significant difference in consistence use of contraceptive was found that at 6 week and 32 week of intervention in experiment group with 47.1%(n=33) -75.4(n=46)P-Value <0.001. This finding is comparable with a study done among urban women in New Jersey with significantly consistent use of contraceptive method (condom).(Lindberg, 2000)Another supportive finding was found in the study of unmarried colleague women of china. This study found that increase in proportion of contraceptive use. (medical research paper ,2011)

Regarding comparison of within group before and after intervention, there had no significant difference of contraceptive consistent use in comparison group with P values 0.96.There had highly significant difference of contraceptive consist use in the intervention group with P value <0.001.

A possible interpretation of this finding is that strong knowledge and self efficacy in sexual negotiation might enhance on consistent contraceptive use.

Interpretation and explanation unplanned pregnancy and abortion result

There had no unplanned pregnancy and abortion cases last 9 months at base-line data and 6 week of post intervention in both groups. Only three unplanned pregnancy cases were found in the comparison group at the 32 week of post intervention with P value 0.079 compare to intervention group,

Explanations on whether the result findings prove or disprove research hypothesis

Hypothesis 1

There is no significant difference of mean score knowledge about sexual and reproductive health, contraceptive method and its benefit and side effect of experiment group and comparison group after CUBE intervention

The mean rank on knowledge about sexual reproductive health, contraceptive method use, its drug side effect and benefit in the experimental group is 88.98 while 34.02 in the comparison group. It is found that the difference of knowledge between the experimental group and the comparison group is statistically significant (p-value<0.001). Therefore, Hypothesis1 is rejected.

Consistent with previous research done among adolescents in Zimbabwe and in support of first hypothesis, finding indicated that knowledge of sexual reproductive health, pregnancy risk, STDs and HIV/AIDS showed an significantly upward trend, from 20% to 96% after nine month period.(Rusakaniko et al., 1997).Another Supportive findings were found in urban women from new Jersey.(Lindberg, 2000) and in female adolescents from Udupitaluk, Karnataka, India (Rao, Lena, Nair, Kamath, & Kamath, 2008).The comparison group still remain low knowledge in contraceptive pills with 30-55% correct answer response. The low level of knowledge on contraceptive pills indicated that this area needs to be address in the development of sexual reproductive health program.

According to behavior change model, person health related behavior will depend on the person's knowledge also. The knowledge as with attitude, although knowledge is necessary, simply providing the facts will not lead o great changes in behavior (Hines et al., 1987) Two types of knowledge have been identified declarative (knowledge of issue) and procedural knowledge (knowledge of action strategies)

Logically, for people to act on their concerns, declarative knowledge is often not sufficient people also need to understand how to proceed or obtain the necessary skills to do so. Therefore providing both types of knowledge is necessary for changes in behavior to occur.

Hypothesis 2

There is no significant difference mean score of contraceptive self efficacy scale of experiment group and comparison group after CUBE intervention

The mean rank of contraceptive self efficacy in the experimental group is 89.62 while 33.38 in the comparison group. It is found that the difference of contraceptive self efficacy scale between the experimental group and the comparison group is t statistically significant (p-value<0.001).Therefore, hypothesis 2 is rejected.

Consistent with the previous studies done among urban women in New Jersey revels the finding with significant increase contraceptive self efficacy scale.(Lindberg, 2000) and support second hypothesis. Another study show that significant increase contraceptive use of self efficacy at 12 month compared to baseline.(Melnick, et al., 2008).

This present study demonstrates that intervention group has significantly increased in self efficacy scale which is consistent with previous study(Pearson, 2006) and in support of finding that self efficacy in sexual negotiation are significantly increased.

According to self efficacy theory, it plays a big role in our successfully managing a behavior change over time and across situations. Self-efficacy makes us feel better about themselves, more powerful, and in control. People who believe in their ability to control their situation look at tasks as challenges to be mastered rather than as threats to be avoided.

Dominant belief about men's sexuality may lead to adolescent women feeling powerless in sexual encounter and compel them to give in to unwanted sexual advance. For this reason, Self efficacy in sexual negotiation is central in determining which women will take an active role in protecting themselves from unwanted pregnancy. Therefore, Self-efficacy has been identified as an important determinant of health behavior of contraceptive use.

Hypothesis 3

There is no significant difference mean score of outcome expectation on contraceptive use of experiment group and comparison group after CUBE intervention

The mean rank of outcome expectation towards contraceptive method use in the experimental group is 76.36 while 46.64 in the comparison group. It is found that the difference of outcome expectation between the experimental group and the comparison group is statistically significant (p-value<0.001). Therefore, hypothesis 3 is rejected.

Hypothesis 4

There is no significant difference contraceptive used behavior practice between experiment group and comparison group after CUBE intervention

The percentage of contraceptive method practice in comparison group is 75.4 %(46) while 83.6 %(51) in the experimental group .It is found that the contraceptive practice between the experimental group and the comparison group after 30 weeks of intervention is not statistically significant (p-value.0.262).Therefore, hypothesis 4 is acceptable.

Consistent with the fourth hypothesis, finding reveals from a study from Bihar, India showed that contraceptive use was not increase after Community-Based Reproductive Health Communication Interventions(Daniel, Masilamani, & Rahman, 2008).Another study in china didn't support this study finding and reveals that long-term

effects of a community-based program on contraceptive use among sexually active unmarried youth in Shanghai, China study was associated with a significant increase in the frequency of contraceptive use among participants initiating sexual relations over the period of the intervention (odds ratio [OR] = 6.91)(X. Tu, C. Lou, E. Gao, & I. H. Shah, 2008).The study from San Francisco which is inconsistent with our finding, USA showed that improvement contraceptive use through follow-up phone calls to female adolescent clinic patients.(Kirby et al., 2010)

A possible interpretation of this finding that there is lack of free basic contraceptive services in the factories or at the nearest factories although respondents want to practice contraceptive use in their area

Hypothesis 5

There is no significant difference percentage of unwanted pregnancy of experiment group and comparison group after CUBE intervention

As shown in table, there was 4.91% (3) of unplanned pregnancy in comparison group while no cases of unplanned pregnancy present in experiment group. It was found that no significant difference in unplanned pregnancy with P Value0.079.Therefore, hypothesis 5 is acceptable.

A possible interpretation of this finding was that respondents in both groups might hide accurate information of unplanned pregnancy during interview. The reason is that they are afraid of leaking information of unplanned pregnancy to others in factory.

Hypothesis 6

There is no significant difference percentage of induced abortion of experiment group and comparison group after CUBE intervention.

There was no abortion case in both groups after 30 weeks of intervention. Therefore, hypothesis 6 is acceptable.

A possible interpretation of this finding was that respondents in both groups might hide accurate information of abortion during interview. The reason is that they are afraid of leaking information of unplanned pregnancy to others in factory.

5.2 Conclusion

This dissertation has investigated 1) of sexual reproductive health, contraceptive methods, its side effect and benefits 2) Contraceptive self efficacy scale 3) Outcome expectation towards contraceptive method use 4) Contraceptive use and its consistent use 5) Unplanned pregnancy and abortion rate among study participants

This study has shown that overall increase in Knowledge of sexual reproductive health, contraceptive methods, its side effect and benefits, contraceptive self efficacy scale, outcome expectation in the experiment group compare with comparison group.

One of the more significant findings to emerge from this study is that increase in consistent use of contraceptive method in experiment group although there was no significant difference in contraceptive use over 6weeks and 30 weeks of period among both groups

The second major finding was that contraceptive pill was the most common use for contraception in both groups which is inconsistent with some articles.

5.3.1 Recommendation

Although contraceptive knowledge, contraceptive self efficacy were obtained more than 90% after 30 weeks of study, the contraceptive practice was 83.6%.Although it is satisfactory, it should be more than 90% to consistent with contraceptive knowledge and contraceptive self efficacy. The possible reason is that it would be limited distribution or lack of reproductive free services in this study area. Therefore, there should be setting up more reproductive free delivery services by Thai health authority or community based organization in this study area.

The evidence from this study suggests that there might be some gaps in the existing sexual health education program in the study area because of the low level of knowledge on contraceptive pills. The results of this study indicate that this area needs to be address in the development of more sexual reproductive health program.

It is recommended that further research be undertaken in the following things for condom use contraceptive method, sexual communication skills and sexual decision making ability because condom use for unplanned pregnancy is not totally female controlled and it is male dominance to use. Developing sexual communication skill on women can negotiate to use condom practice use and can prevent unplanned pregnancy. More information on sexual communication skills would help us to establish a greater degree of accuracy on condom practice matter.

A mixed model of self efficacy and group process on condom use behavior encouragement intervention study can apply on HIV high risk area or community to reduce the HIV transmission among community.

Longer than 30 weeks duration of research should carry out to monitor unplanned pregnancy and induce abortion and contraceptive self efficacy, contraceptive use and consistent use among unmarried women for observing the sustainability.

Contraceptive used behavior encouragement intervention among young unmarried migrant couple should be conducted to prevent unwanted pregnancy for reducing the burden of social and economic problems among migrant community.

5.3.2 Limitation of research

A number of important limitations need to be considered. Firstly, there was lack of random assignment because of study design .Secondly, migrant's people has nature of mobility. Therefore, some participants were loss of attending training after 6 weeks of intervention.

The current investigation was limited by time. If there were be more time to follow up, the results would be more accurate than recent results of contraceptive practice and consistent use of contraception, unplanned pregnancy and abortion rate.

5.3.3 Implication of research

The findings of this study have a number of important implications for development of contraceptive practice encouragement program among unmarried Myanmar migrant women where is high rate of unplanned pregnancy and abortion.

5.3.4 Research contribution

The CUBE (contraceptive use behavior encouragement) user guide book may be applied to other part of Myanmar migrant area in Thailand to increase the knowledge of contraceptive methods, contraceptive self efficacy, outcome expectation and contraceptive consistent use to prevent unplanned pregnancy among Myanmar migrant unmarried women.

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APPENDICES

APPENDIX A

Form of
Informed Consent Form

Address
……
Date
……..

Code number of participant ……

I who have signed here below agree to participate in this research project

Title "Effectiveness of contraceptive used behavior encouragement (CUBE) intervention to prevent unwanted pregnancy among young unmarried migrant women in Maesot,Tak province, Thailand"
Principle researcher's name: ***Thaw Htwe Min***

Contact address: 521/3-4, Soi Sriayuthaya 2 Rd, Phayathai Rajthevee Bangkok10400, Thailand
Telephone +66(0)873070971

I have **(read or been informed)** about rationale and objective(s) of the project, what I will be engaged with in details, risk/ham and benefit of this project. The researcher has explained to me and I **clearly understand with satisfaction.**

I willingly **agree** to participate in this project consent the researcher to attend to 9 training sessions and will response to research questionnaires.

In addition, I have **the right** to withdraw from this research project at any time as I wish with no need to **give any reason**. This withdrawal **will not have any negative impact upon me (eg: still receive the usual services).**

Researcher has guaranteed that procedures acted upon me would be exactly the same as indicated in the information. Any of my personal information will be **kept confidential.** Results of the study will be reported as total picture. Any of personal information which could be able to identify me will not appear in the report.

If I am not treated as indicated in the information sheet, I can report to the Ethical Review Committee for Research Involving Human Research Subjects, Health Sciences Group, Chulalongkorn University (ECCU). Institute Building 2, 4 Floor, Soi Chulalongkorn 62, Phyat hai Rd., Bangkok 10330, Thailand, Tel: 0-2218-8147 Fax: 0-2218-8147 E-mail: eccu@chula.ac.th,

I also have received a copy of information sheet and informed consent form. I fully understand the statements in the participant information sheet and this consent form, and consent to participate in this research.

Sign ……..……
(***Thaw Htwe Min***)
Researcher

Sign ……..……
(……..……)
Participant

Sign ……..……
(……..……)
Witness

APPENDIX B

Form of
Patient/ Participant Information Sheet

Title of research project: Effectiveness of contraceptive used behavior encouragement (CUBE) intervention to prevent unwanted pregnancy among young unmarried migrant women in Maesot,Tak province, Thailand

Principle researcher's name :Thaw Htwe Min **Position**: medical doctor

Office address: 68/30 Bantung Road, PO Box 46,Maesot 63110, Tak, Thailand
Home address: 521/3-4, Soi Sriayuthaya 2 Rd, Phayathai Rajthevee Bangkok10400, Thailand
Telephone (office): + 66 55 545021 **Telephone (home)**:……Nil……
Cell phone +66(0)873070971 **E-mail:** thawhtwemin@yahoo.com

1. You are being invited to take part in a research project. Before you decide to participate it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and do not hesitate to ask if anything is unclear or if you would like more information.

2. This research project involves "Contraceptive use behavior encouragement intervention by application of self efficacy and group process to prevent unwanted pregnancy and induced abortion among young unmarried migrant women who has boy friend , living together in Maesot ,Tak province ,Thailand"

3. Objective of the project.

General objective

To study the effectiveness of self efficacy theory and group process for promote the contraceptive use behavior among youth migrant unmarried women

Study information

We would like to invite you to join this research study. We plan to give 9 training sessions(6 session per week plus 3 session per month) which will takes 2 hours in

7 and half month duration .We need at least 68 participants ,age between 18-25 years, unmarried who has boy friend and living together.
This is important because we want to prevent/reduce unplanned pregnancy by giving training among unmarried women who are living together with their boy friend

4. Thing you have to do if you decided to join this research
We will give you training and you have to attend the 9 training sessions for 9 months duration which will take about 2 hours for each session

Before and after training, we will give you some questionnaires and you have to answer.
For some questionnaires, we also ask you and you have to response these questionnaires.

We will provided sexual reproductive health brochures in Myanmar language and easily readable. If you can not read, please ask the researcher and researcher assistant to explain to you until you completely understand.

5. Risk and benefit
Attending the training sessions is a loss of work and loss of time. However, you can obtain sexual reproductive health, pros and cons of using contraceptive methods, and how to use contraceptive methods which is useful for you.

6. Compensation and payment
We will give you 100 baht to compensate your loss of work and loss of time for attending every training session.

7. Stop to join the study
Participation to the study is **voluntary** and participant has the **right to deny** and/or **withdraw** from the study at any time, no need to give any reason, and there will be no bad impact upon that participant."

8. If you have any question or would like to obtain more information, the researcher can be reached at all time. If the researcher has new information regarding benefit on risk/harm, participants will be informed as soon as possible."
This practice will provide an opportunity for participants to decide whether to stay/not stay with the project. You can contact:

Name	Address	Telephone
Dr Thaw Htwe Min	68/30 Bantung Road, PO Box 46,Maesot 63110, Tak, Thailand	+66 873070971
Mr July	68/30 Bantung Road, PO Box 46,Maesot 63110, Tak, Thailand	+66 869345324

9. Your information

It will be kept **confidential.** Results of the study will be reported as total picture. Any information which could be able to identify you will not appear in the report.

10. If you have not been received/treated as indicated in the information, the participants can report the incident to the Ethical Review Committee for Research Involving Human Research Subjects, Health Sciences Group, Chulalongkorn University (ECCU). Institute Building 2, 4th Floor, Soi Chulalongkorn 62, Phyathai Rd., Bangkok 10330, Thailand, Tel: 0-2218-8147 Fax: 0-2218-8147 E-mail: eccu@chula.ac.th.

APPENDIX C

PART I

QUESTIONNARIES

Identity No: _ _ _ Interviewer: ----------

Instruction: Please fill color with pencil in …… and fill in as appropriate.

Part 1: Socio-demographic characteristics

1. How old are you now? ---------- Years.
2. Religion

    A. Buddhist │____│

    B. Christian │____│

    C. Islam │____│

    D. Other (please specify)……..

3. Education

    1. Never go to school

    2. Primary education (1-4 years of school) │____│

    3. Secondary education (5-8 years of school) │____│

    4. High school level (9-10 years of school) │____│

    5. Higher education (university) │____│

4. Family income per month (Total family income per month) ---------- Baht/per month

5. How long have you been living in Thailand? ---------- Months/Years
6. What is your Thai language skill?
    1. Cannot communicate at all │____│
    2. Can communicate basically │____│
    3. Can speak Thai language fluently but cannot read and write │____│
    4. Fluently in Thai language │____│
7. Have you ever been had pregnant before?
    1. Yes │____│
    2. No │____│
8. Have you ever had an abortion before?
    1. Yes │____│
    2. No │____│
9. Do you know where contraceptives are available?
    1. Yes │____│
    2. No │____│
10. Have you ever received contraceptive information?
    1. If Yes (Please specify)…….
    2. No │____│

PART II: KNOWLEDGE ABOUT SEXUAL AND REPRODUCTIVE HEALTH, CONTRACEPTIVE METHOD AND ITS INFORMATION QUESTIONNARIES

No	Statement	Correct	Incorrect	Not sure
1.	Using male condom properly can prevent the women being pregnant			
2.	Using condom can prevent sexual transmitted diseases and AIDS			
3.	Condom can break when having sex			
4.	Women who take oral contraceptive pill should take a pill daily to avoid being pregnant			
5.	If woman miss the pill, she can continue taking the pill and should have sex with condom for 1 week			
6.	Using contraceptive pill can prevent unplanned/unwanted pregnancy			
7.	If woman want to start to use contraceptive pill, it should be take 1st day of menstrual cycle			
8.	Contraceptive pill increase the risk of cervical cancer			
9.	A woman can not get the pregnancy when they have sex 7 days before and 7 days after their menstrual period(for 28 days menstrual cycle)			
10.	Ovulation can occur on the 14th day counting from 1st day of menstrual period(for 28 days menstrual cycle)			
11.	Woman can get pregnant when ovulation occurs.			
12.	Woman can not get pregnant when she have sex 14 days after menstruation and 14 day before menstruation			
13.	Contraceptive pill can cause sometimes nausea and headache			
14.	Contraceptive pill can prevent STI diseases			
15.	Contraceptive pill can cause vaginal bleeding			

PART III: SELF EFFICACY QUSTIONNARIES

No	Statement	Level of opinion				
		EC	SC	MC	LC	NC
1.	I can ask my partner to use male condom consistently whenever I have sex with my boyfriend					
2.	I can not have sex with my partner when I am in ovulation period					
3	I could tell my partner that I am on OC pills for birth control.					
4.	I could easily stop the thing if I couldn't bring up the subject of protection.					
5.	I can deny to have sex if my partner does not use condom					
6.	I can excuse myself of taking OC pills for birth control because I have risk of being pregnancy					
7.	I can not take contraceptive pill because I am boring to take.					
8.	I can not ask my partner to use male condom because my partner does not want to use.					
9.	Having sex with or without male condom, I prefer to have sex with male condom.					
10.	Having sex with or without OC pills, I prefer to have sex with using OC pills					
11.	I can ask my partner to have sex with condom when I miss to take OC pills.					

EC-Excellent confident, SC -strong confident, MC- moderate confident. LC- little confident, NC-no confident

PART IV: OUTCOME EXPECTATION ON CONTRACEPTIVE USE QUESTIONNARIES

No	Statement	Agree	Not agree	Not sure
1.	Taking contraceptive pill make freeing of being pregnant			
2.	Using condom make me freeing of STI and AIDS			
3.	Using condom make me freeing of being pregnant			
4	Using calendar method make freeing of being pregnant			

PART V: PRACTICE OF CONTRACEPTIVE USED BEHAVIOR

QUESTIONNARIES

These questions will be asked before intervention, after intervention and follow up period in experiment group and comparison group.

Q 1.Did you use contraceptive method when you had last sex?

Yes |____| No |____|

Q 2.If ***yes*** please goes to question 2

Which of following contraceptive method did you use the last time you had sex

1) Pill |____|
2) Injection |____|
3) Condom |____|
4) Calendar method |____|
5) Withdrawal |____|
6) Combine …please specify
    a. (pill + condom) |____|
    b. (Injection + condom) |____|
    c. (Calendar + condom) |____|
    d. (Calendar + withdraw) |____|
    e. Other |____|

Q 3.If they use contraceptive, how often do you use

1) All of the time |____|
2) Most of the time |____|
3) Some of the time |____|
4) Rarely |____|

PART VI: UNPLANNED PREGNANCY

QUESTIONARIES: These questionnaires will be asked to experiment group and comparison group after intervention

1. Have you had unplanned pregnancy last 9 months?
    1. Yes |____|
    2. No |____|

PART VII: ABORTION

These questionnaires will be asked to experiment group and comparison group after intervention

1. Have had an abortion last 9 months?
    1. Yes |____|
    2. No |____|

APPENDIX D

CUBE TRAINING GUIDE BOOK

Introduction to CUBE (Contraceptive use behavior encouragement) training guide book

The Training Guide was developed as a tool for Myanmar migrant unmarried women to reduce unnecessary pregnancy: A Toolkit for health education trainer which is designed to assist community base organizations to reduce unnecessary pregnancy among Myanmar migrant community with a specific focus on young people's sexual and reproductive health (SRH) and contraceptive methods.

The Training Guide was developed with the view that contraceptive used behavior encouragement is a intervention, and that needs to be done to equip unmarried Myanmar migrant women with the SRH, contraceptive materials available services areas information and contraceptive method information.

The nine-day training leads participants with understanding of SRH, contraceptive methods, its side effect and benefits and, deliver link where contraceptive available service areas.

Training goals and objectives

Goal

1. To reduce the number of unplanned pregnancy and induced abortion
2. To increase contraceptive use

Objectives

1. Development of contraceptive used behavior

Training schedule

Day	week	session	time
Day1	Week 1	Module 1:Introduction and contraceptive method one: calendar method use encouragement	2hours 15 minutes
Day2	Week2	Module 2:Group process one	2 hours
Day3	Week 3	Module 3:contraceptive used behavior encouragement method two: condom used behavior encouragement method	2 hours
Day4	Week4	Module 4:group process two	2 hours
Day 5	Week 5	Module 5:Contraceptive used behavior encouragement method three: Contraceptive pills used encouragement method	2 hours
Day6	Week 6	Module 6:group process three	2 hours
Day 7	Week 14	Module 7:Review and recap activities one	2 hours
Day8	Week 22	Module 8:Review and recap activities two	2 hours
Day 9	Week 30	Module 9:Review and recap activities three	2 hours

How to Use this Training Guide

The Training Guide is designed for nine-day training. The five modules include:

1. Module one
2. Module two

3. Module three
4. Module four
5. Module five
6. Module six
7. 3 Recap trainings

Each module of the training guide is organized as follows:

1. Session Overview, includes total time allocated for the module, the session topics and type of activity and suggested time for each topic, learning objectives, handouts to be used, materials needed, guest speaker presentation(live model)and essential advance preparations.
2. Activity instructions are the actual steps to take with the participants. Trainers are encouraged to adapt the Activities as needed to accommodate training participants' needs and to reflect the trainers' own experience and expertise. Estimated times are provided for each activity, but changes to the times may be necessary depending on the background and skills of the training participants.
3. Notes to the Trainer and Essential Points for Discussion, provides further information on the Activity content.
4. Sample Responses, provides possible responses if participants have difficulty with or are unaware of definitions.
5. Definitions, Tasks, Questions, Examples, and Tables, include information that should be written on newsprint prior to the session.
6. Handouts and Worksheets

Each training day is scheduled, on average, to be an two-hour per day. It is recommended that a 10-minute wrap-up be scheduled at the end of each module. This will allow trainers to monitor and assess participants' satisfaction with the content and

approach of the training, and will allow participants to suggest changes that would make the training more effective for them. It is also suggested that 10 minutes be reserved at the beginning of each module for “greetings and announcements,” which may include feedback on the previous module’s recommendations from participants, re-caps of the previous sessions, and updates on logistics or any changes to the schedule.

It is recommended that a team of at least two trainers assistant conduct the training. In addition to prior experience in facilitating trainings, the team of trainer assistant should have experience and expertise in both young people’s sexual and reproductive health

Both trainers assistant should be present throughout the training, with helping to monitor and support small-group work and assisting with logistical support, distributing handouts and newsprint, etc. The training team should meet at the end of each module to review and adjust plans for the next module as needed.

General Tips for the Trainers

The trainer's skills are important to the success of any training. Trainers should feel comfortable discussing sensitive issues related to sexuality and should be careful not to project values or place judgment on the thoughts, opinions, and experiences of the participants. Most importantly, however, the trainers need skills in good listening. Effective listening skills show participants that the trainer is interested, attentive, and respectful. There are several elements of good listening skills, including:

• Body language: Posture, facial expressions, nodding of the head, and making sounds that encourage a participant to continue speaking;

• Reflecting: The trainer can, in his or her own words, repeat back to the group the key point that a participant has made;

• Questioning: If asked appropriately, questions can be used to encourage a participant to elaborate or expand upon what he or she has just said;

• Summarizing: The trainer can summarize key points made by participants and use this summary as a natural transition to another topic.

Each of these elements requires that the trainer always pay close attention to what participants are saying and think about how it relates to the points that the trainer is trying to convey.

Other key principals that can serve as a guide for both experienced or beginner trainers include:

• A warm, friendly and confidential environment enhances discussion;

• The role of the trainer is to establish a climate of openness, trust, and acceptance within the group;

• Conflicts within the group should be dealt with diplomatically and with a sense of humour.

General tips for group process

This process is intended to group members who are outcome oriented and focus on the goal the group is attempting to reach

Guidelines for groups:

- **Have respect for each other**
- Respect each other's ideas
- Respect the other group members
- Don't interrupt each other
- Everyone's opinion should count
- Be honest with each other

All group members should do an equal amount of work

- Everyone should share the responsibility of the tasks
- Don't take over and don't let others take over

Your group should have a common understanding of goals that need to be achieved.

- Help each other to understand all concepts

Be open to compromise

- Be willing to cooperate with others on their ideas
- Keep an open mind
- Vote on disagreements

Effective communication

- Make sure everyone is able to be vocal about their ideas and problems
- Give ideas no matter how "off" you may think they are

- Listen effectively
- Don’t be critical

Time management

- Attend and arrive on time for group process work
- Be flexible about times
- Keep on task (limit talk about non-related events)

Inclusion criteria for selecting live model

For calendar method use

7. Unmarried
8. If possible, it should be same age of participants
9. Use calendar method consistently or combination with other method
10. Never had unplanned pregnancy or induced abortion before
11. Voluntarily and willingly to sharing her experiences
12. Should be informative to participants

For OC pills use

7. Unmarried
8. If possible, it should be same age of participants
9. Use OC pills consistently for more than 1 year
10. Never had unplanned pregnancy or induced abortion before
11. Voluntarily and willingly to sharing her experiences
12. Should be informative to participants

For condom use

7. Unmarried
8. If possible, it should be same age of participants
9. Use condom consistently for more than 1 year
10. Never had unplanned pregnancy or induced abortion before
11. Voluntarily and willingly to sharing her experiences
12. Should be informative to participants

Unplanned pregnancy live model

6. Unmarried
7. If possible, it should be same age of participants

8. History of unplanned pregnancy before
9. Voluntarily and willingly to sharing her experiences
10. Should be informative to participants

Live model with history induced abortion

6. Unmarried
7. If possible, it should be same age of participants
8. History of induced abortion before
9. Voluntarily and willingly to sharing her experiences
10. Should be informative to participants

Module 1

Learning objective: Development of contraceptive used behavior

Distribute Handout of Objectives of the Training. Ask participants if they have any questions or comments regarding the objective of the training.

NOTE TO TRAINER:

The training should start with an invitation for participants to share their expectations, followed by a presentation on the training objectives. While this order of activities can be fruitful in confirming that participants' expectations will be met, it can also be problematic if participants received unclear or inaccurate information and sometime the purpose and content of the training will not be matched their expectation. It is recommended that the training objectives be presented before training start.

Expectations for module one: Brainstorm/Discussion (20 minutes)

1. Ask each participant to write his or her name on an index card and then write one or two expectations they have for the training module one. (5 minutes)
2. Ask each participant to share his or her expectation(s) with the full group. (10minutes)
4. Tape each participant's expectations on the wall under the sign that says EXPECTATIONS for reference throughout training module one.

Setting Ground Rules: Brainstorm/Discussion (15 minute) this was applied to all of training session

1. Explain to the group that a supportive, friendly, and participatory environment will enhance the training discussions, and ensure that the training provides an opportunity for everyone to build their knowledge and skills, and identify new strategies that they can undertake in their work. Ask the group to brainstorm ground rules that should be

respected throughout the training (e.g. rules such as punctuality, respect of other's ideas and points of view, politeness, equal participation, etc.).

2. As ground rules are suggested, confirm that everyone agrees with them and record on newsprint. Post this newsprint in a place where it can be seen and referred to throughout the duration of the training, as a constant reminder.

3. Ask everyone to ensure that they respect these ground rules throughout the training, and ask for two volunteer "whistleblowers" to alert the group if ground rules are not being respected.

Training Schedule: Discussion (20 minutes)

1. Distribute Handout of Training Schedule. Review, in general terms, the plan for each day of the training, helping participants understand the order of the topics that will be given training and discussed
2. Ask participants if they have any questions concerning the schedule.

Session overview

Topic

1. Introduction to female reproductive system
2. What is menstruation and menstrual cycle?
3. What is ovulation and how does ovulation determine your fertility days
4. How do you calculate fertile period using ovulation calendar

Guest speaker section (Please see in the activity instruction section)

Picture show section (Please see in the activity instruction section)

Fertility calculation using table (Please see in the activity instruction section)

Materials

Handout

1. Picture of female reproductive system
2. Lecture notes
3. ovulation day indicate table
4. Objectives of training
5. Training schedule

Advance preparation

1. Make copies of the handouts for participants
2. Copy the training objectives onto newsprint, hang on the wall, and keep covered until use.
3. Contact to guest speaker and make appointment
4. Buy coffee, cookies, and pen

Activity instruction: These are the actual steps to take with the participants. Trainers are encouraged to adapt the Activities as needed to accommodate training participants 'needs and to reflect the trainers' own experience and expertise. Estimated times are provided for each activity, but changes to the times may be necessary depending on the background and skills of the training participants.

Start with an ice-breaker that provides an opportunity for participants to introduce themselves to each other, and sets a friendly, relaxed tone for the training. Use an ice-breaker you like, or give the following instructions to participants:

• Ask participants to pair up for the introduction. There are many ways to divide participants into pairs, but one simple way is to count the number of participants and divide the total number by two. Then ask the group to count off from one to that number (i.e. if there are a total of 70 participants, ask participants to count from one to15 and then from one to 15 again). Then ask people to pair up with who has the same number as they

have (the two 1s will be partners, as will the two 2s, the two 3s, etc.) If there is an odd number of participants, the facilitator can be someone's partner.

• Next, ask each pair to sit together and record the following four things about her partner: name and factory, one thing he or she likes most, one thing he or she hates most. (5 minutes)

• After about five minutes ask everyone to rejoin the main group and have each of the participants introduce her partner to the group, and share what he or she learned about his or her partner. (10 minutes)

After everyone has been introduced, present the objectives for the training using flipchart on the wall. Explain that over the course of the training, participants will:

Learn

1) female reproductive system,
2) What is menstruation and menstrual cycle?
3) What is ovulation and how does ovulation determine your fertility days
4) How do you calculate fertile period using ovulation calendar
5) How to use calendar method ,its effectiveness of calendar method

NOTE TO TRAINER:

Although trainer give sexual reproductive health related topic, this training is primarily focus on encouragement of calendar method used behavior. After finish the lecture presentation, trainer should ensure that all participants have common understanding of key issue such as relation of ovulation and fertility period and how to use calendar method.

The modeling

Symbolic model

A picture of female reproductive system, menstrual cycle and fertility period, .It will be used to lesson presentation and let the group know how importance and usefulness of fertility period to prevent being pregnant.

Live model guest speaker

NOTE TO THE TRAINER:
If possible, have the guest speaker share a personal story illustrating how `calendar method used can effectively prevent unplanned pregnancy and introduce speaker The unmarried woman, who uses calendar method consistently, has boyfriend and risk of being pregnant will be invited to session class. She prevented being pregnant by using calendar method consistently.

After the presentation, facilitate a short question-and-answer session.

The mastery experience

In this process, after symbolic model finish the demonstration of menstrual cycle and fertility period calculation. The researcher let the group to calculate the fertility period using fertility calculated table. Make sure that they can calculate fertility period .After that there will be clear understanding of fertility period. This activity will be the mastery experience.

The verbal persuasion

The researcher use description to give knowledge to the experiment group. Therefore, group will know and understand about how to avoid fertility period from being pregnant. They will be persuading to know usefulness of calculation of fertility period

The emotional arousal

The form's activity that is used with the experiment group doesn't make them feel fear. It will be easy a way as group can calculate fertility period themselves and can avoid unwanted pregnancy by using fertility avoiding method.

Definitions

1. Ovulation
2. Fertility
3. Menstruation
4. Reproductive system

Task

Understanding fertility table

Build their knowledge of sexual reproductive health, self efficacy scale on contraceptive use (for first session calendar method)

* Sample Responses, provides possible responses if participants have difficulty with or are unaware of definitions during training session

During the wrap-up discussion, keep the following points in mind:

1. Stress again on there is relation between fertility period and ovulation
2. Calendar method is one of the ways to prevent unwanted pregnancy up to 86%

Evaluation (Pre-test/post-test section)

1. Most of regular menstruation is 28 days cycle
2. Menstrual period usually takes 3-5 days
3. Ovulation usually occur 14^{th} day after 1^{st} menstrual period
4. Ovulation period indicate the fertility period

5. There is relation between ovulation and pregnancy
6. Having sex during ovulation period cannot get pregnancy

Answers

1. Yes
2. Yes
3. Yes
4. Yes
5. Yes
6. No

Before finish module one training

Ask participants to review their expectations and move their card under the sign that says EXPECTATIONS MET if and when their expectation has been met or Say expectation is not met

Module 2(Group process)

Objective: **Development of contraceptive used behavior**

Materials

Work sheet for group work

Advance preparation

5. Make copies of the handouts for participants
6. Contact to guest speaker and make appointment
7. Buy coffee, cookies, and pen, work sheet

Session topic

Session topic will be group discussion to focus on unplanned pregnancy problems

Activity instruction

Brain storm and group discussion: The trainer have to raise problem of “if you have unwanted pregnancy”and “What will impact on your social, mental, economic, health, work career. (2 minutes)

Discussion/sharing experience (60 minutes)

Problem discussion of unplanned pregnancy

Discussion of unplanned pregnancy economic social, mental and working career impacts.Generation of solution or find solution of how to prevent unplanned pregnancy

One representative of each group present problem of unplanned pregnancy and propose solution

Chose solution

This is only one solution which will be protected sex (Using contraceptive methods) for unmarried migrant factory women.

Essential point for discussion: Health, social, economic, mental and working career impact on unplanned pregnancy

Provide further information for this activity

NOTE TO THE TRAINER:

If possible, have the guest speaker share a personal story illustrating how unplanned pregnancy **impact on her** social, economic, mental and working career **and introduce guest speaker**

During the wrap-up discussion, keep the following points in mind:

Stress on unplanned pregnancy can seriously impact on social, mental, economic and working career

Evaluation (Pre-test/post-test questions)

1. Unwanted pregnancy can cause many social and economic problems
2. Unwanted pregnancy can prevent

Answer

1. Yes
2. Yes

Module 3

Learning objective: Development of contraceptive used behavior

Distribute Handout of Objectives of the Training. Ask participants if they have any questions or comments regarding the objective of the training.

Expectations for module three: Brainstorm/Discussion (20 minutes)

1. Ask each participant to write his or her name on an index card and then write one or two expectations they have for the training module three. (5 minutes)
2. Ask each participant to share his or her expectation(s) with the full group. (10minutes)
4. Tape each participant's expectations on the wall under the sign that says EXPECTATIONS for reference throughout training module three.

Session overview

Topic

1) Introduction to Oral contraceptive pill
2) OC pills effectiveness, its benefits and risk
3) How to take OC pills to prevent getting pregnant
4) Available source to get OC pills

Guest speaker section (Please see in the activity instruction section)

Materials

Handout

1) Objectives of training
2) Hand notes of OC pill effectiveness, its benefit, risk and how-to take OC pills
3) Map of available source of OC pills(Light library)
4) Name of free OC pills distributed persons from factory

OC pill cards

Advance preparation

8. Make copies of the handouts for participants.
9. Copy the training objectives onto newsprint, hang on the wall, and keep covered until use.
10. Get sample OC pills to show
11. Buy coffee and cookies
12. Contact to guest speaker and make appointment

Activity instruction

The modeling

Live model (guest speaker)

NOTE TO THE TRAINER:
If possible, have the guest speaker share a personal story illustrating how `OC pill method use can effectively prevent unplanned pregnancy

Introduce guest speaker by trainer

An unmarried woman who use OC pill consistently, has boyfriend and risk of being pregnant will be invited to session class. She prevented being pregnant by using OC pills consistently.

After the presentation, facilitate a short question-and-answer session.

The mastery experience

She (guest speaker) will also explain the experimental group where OC pills are available. She shows them how easy to take OC pills. She will also demonstrate how to

take OC pills and let group to find out and take the OC pills from available place. Then, let them look the OC pills and ask questions to invited unmarried women. After that, let them feel it will be very easy to take OC pills and to use contraceptive pills. During this period, the researcher adds some important and correct content of OC pills.

The emotional arousal

This method happens from the group activity. The researcher arouses them to know that getting and taking OC pill is very easy and usefulness of OC pill from being pregnant. After that the group will not be feared anymore and nervous from being pregnant.

The verbal persuasion

The researcher will persuade the experiment group about oral contraceptive pill by describing the advantages and disadvantages of oral contraceptive pills and them to weight the pro and cons of OC pills. Let them know how usefulness and necessary to have them to prevent unwanted pregnancy.

NOTE TO TRAINER:
There are two different types of available OC pills in this area. If more than one type of available OC pill, trainer may need to additional explanations to clearly illustrate the difference between different types of OC pills. However, trainer should ensure that different type of OC pill can prevent unwanted pregnancy.

Build their knowledge, self efficacy scale on OC pill contraceptive use

* Sample Responses, provides possible responses if participants have difficulty with or are unaware of definitions during training session

During the wrap-up discussion, keep the following points in mind:

1. Stress again on there is a lot of proven research of OC pill can take safely

2. OC pills contraceptive method is one of the ways to prevent unwanted pregnancy up to 96%

Definition

OC pills: oral contraceptive pill

Evaluation (pre-test/post test question)

1. Effectiveness of oral contraceptive pills against pregnancy is 98%
2. Oral contraceptive pills can get vaginal bleeding
3. Having oral contraceptive pills consistently can prevent pregnancy
4. Oral contraceptive pills can get nausea and headache
5. Oral contraceptive pill should not take for breast cancer patient

Answers

1. Yes
2. Yes
3. Yes
4. Yes
5. Yes

Before finish training:

Ask participants to review their expectations and move their card under the sign that says EXPECTATIONS MET if and when their expectation has been met or Say expectation is not met

Module 4(Group process II)

Objective:

Advance preparation

Session Topic

Session topic will be group discussion to focus on induced abortion problems

Activity instruction

Brain storm/discussion: The trainer has to raise the problem of “If you make induce abortion” and “What will impact on your social, mental, economic, health, work career. (2 minutes)

Discussion/sharing experience (60 minutes)

Problem discussion of induced abortion

Discussion of induced abortion economic social, mental and working career impacts.Generation of solution or find solution of how to avoid induce abortion

One representative of each group present problems of induced abortion and proposes solution

Chose solution

This is only one solution which will be protected sex (Using contraceptive methods) for unmarried migrant factory women.

Essential point for discussion: Health, social, economic, mental and working career impact on induced abortion

Provide further information for this activity

NOTE TO THE TRAINER:
If possible, have the guest speaker share a personal story illustrating how induced abortion had **impact on her** social, economic, mental and working career **and introduce guest speaker**

During the wrap-up discussion, keep the following points in mind:

Stress on induced abortion can seriously impact on social, mental, economic and working career

Evaluation

1. Induce abortion can cause death

Answer

1. Yes

Module 5

Learning objective: Development of contraceptive used behavior

Distribute Handout of Objectives of the Training. Ask participants if they have any questions or comments regarding the objective of the training.

Expectations for module five (condom used method): Brainstorm/Discussion (20 minutes)

1. Ask each participant to write his or her name on an index card and then write one or two expectations they have for the training module five. (5 minutes)
2. Ask each participant to share his or her expectation(s) with the full group. (10minutes)
4. Tape each participant's expectations on the wall under the sign that says EXPECTATIONS for reference throughout training module five.

Session overview

Topic

5) Introduction to condom
6) Condom effectiveness, its benefits and risk
7) Available source to get condom

Guest speaker section (Please see in the activity instruction section)

Materials

Handout

5) Objectives of training
6) Hand notes of condom effectiveness, its benefit, risk and how-to fit on male genital organ picture
7) Map of available source of condom(Light library)

8) Name of free condom distributed persons from responsible factory

Advance preparation

13. Make copies of the handouts for participants, pretest/post test question
14. Copy the training objectives onto newsprint, hang on the wall, and keep covered until use.
15. Get sample condoms to show
16. Buy coffee and cookies, pens
17. Contact to guest speaker and make appointment

The modeling

Live model (guest speaker)

NOTE TO THE TRAINER:
If possible, have the guest speaker share a personal story illustrating how condom method use can effectively prevent unplanned pregnancy **and introduce guest speaker**

An unmarried woman, having boy friend and living together, who use condom consistently, will be invited to session class. She presented to participant about using condom and can effectively prevent unplanned pregnancy and STI diseases.

The mastery experiences

She will explain the experimental group where male condom is available. She shows them how easy to take male condom. She will also demonstrate how to fit condom in male genital organ model and let group to find out and take the condom from available place. Then, let them practice to fit in male genital organ model and ask questions to invited unmarried women. After that, let them feel it will be very easy to get condom and

to use condom. During this period, the researcher adds some important and correct steps of fitting condom.

The emotional arousal

This method happens from the group activity. The researcher arouses them to know that getting and taking condom very easy and usefulness of condom from being pregnant. After that the group will not be feared anymore and nervous from being pregnant. It is very easy and everyone can do it.

The verbal persuasion

The researcher will persuade the experiment group about condom by describing its effectiveness, the advantages and disadvantages of condom and them to weight the pro and cons of condom. Let them know how usefulness and necessary to have them to prevent unwanted pregnancy.

* Sample Responses, provides possible responses if participants have difficulty with or are unaware of definitions.

NOTE TO TRAINER:

It is important throughout the training to stress the small differences of effectiveness among calendar method, OC pills and condom method. However, it should be ensured that all method can prevent unintended pregnancy.

During the wrap-up discussion, keep the following points in mind:

1. Stress again on there is a lot of proven research of condom and it can use safely
2. Condom contraceptive method is one of the ways to prevent unwanted pregnancy up to 96% and also prevent STI diseases

Before finish training

Ask participants to review their expectations and move their card under the sign that says EXPECTATIONS MET if and when their expectation has been met or Say expectation is not met

Evaluation (Pre-test/Post-test questions)

1. Condom can prevent getting pregnancy is 98%
2. Condom can prevent sexual transmitted diseases
3. If you forget to take OC pill, you have use condom when having sex for 1 week

Answers 1) Yes,2)Yes 3)Yes

Module 6(Group process III)

General objective: **Development of contraceptive used behavior**

Materials

Work sheet for group work

Advance preparation

18. Make copies of the handouts for participants
19. Buy coffee, cookies, and pen, work sheet

Session topic

Session topic will be group discussion to focus on previous module 1, 3, and 5

Activity instruction

1. Group work completion for review lecture topic of ovulation “how do you feel during ovulation period” “how importance” “Does it have relation to pregnancy”
2. Group work completion for review lecture topic of “calendar, condom, OC pill method effectiveness %” “OC pills benefit and risk of these method” “why these topic is reviewing and for what”
3. Do you know available places to get condom and OC pills?
4. Do you know the person names who distribute free condoms and OC pills in your factory?

NOTE TO TRAINER

Module is only group completion session, Facilitate to ensure on right track

During the wrap-up discussion, keep the following points in mind:

1. Stress on unplanned pregnancy and induce abortion can seriously impact on social, mental, economic ,health and working career
2. Encourage to use contraceptive method when having sex relation
3. Encourage to develop freeing of unplanned pregnancy environment

Evaluation (Pre-test/post-test questions)

1. Protective sex can avoid unwanted pregnancy

Answer

1. Yes

Recap activity 1, 2, 3

Objective: To increase **the existing contraceptive used behavior**

Activity instruction

Following question will be present to discussion, brain storming and answer the questions by group work

5 questions for each recap trainingX3

1. What is ovulation?
2. Why it is important?
3. How do you apply this ovulation period to prevent unplanned pregnancy?
4. If you are in sexual engagement during ovulation period, what will you do? Will you say Yes or No? If yes, what will happen to you in next few months? If No, what will happen to you in next few months?
5. Do you have confidence to refuse to make sex with your partner? If not, what can happen to you? What are the complications of weak confidence to refuse sex during ovulation?
6. What are oral contraceptive pills?
7. Do you where can get OC pills free of charge (from which people in your factory or nearest reproductive health services place)
8. How do you take this OC pills? Daily /alternative day/weekly? What will happen if you take alternative day or weekly?
9. What will happen if you don't use OC pill consistently?
10. Do you feel shy or afraid of other people know that you have been taken OC pills? If yes, what can happen to you when you had sex without contraceptive protection? If no, what can happen to you when you had sex without contraceptive protection?

11. What is condom?
12. Do you where can get condom free of charge (from which people in your factory or nearest reproductive health services place)
13. Do you have confidence demand to your partner when you are in sexual engagement? If not, what can happen to you? What are the complications of weak confidence to demand to use condom(Make sex without contraceptive protection)
14. Do you have confidence to avoid making sex without contraceptive protection? If not, If yes, what will happen to you in next few months? If No, what will happen to you in next few months?
15. Do you believe that you will be freeing of unplanned pregnancy when you use contraceptive method consistently? Yes/No if Yes...why, No …Why

APPENDIX E

VITAE

Name	:Mr Thaw Htwe Min
Date of birth	: 28th November 1969
Place of birth	: Yangon, Myanmar
Education	: M.B, B.S(Yangon)1996
	: Dip Tropical Medicine & Hygiene (Mahidol University)
	: Master in Clinical Tropical Medicine (Mahidol University)
Work experience	
1998-2001	: Medical doctor in government hospital
2001-2002	: Medical doctor in Private hospital
2004-2005	: STI/HIV doctor in Aide Medical Internationale(Myanmar)
2006-2008	: Medical doctor in Aide Medical Internationale(Thailand)
2008-upto now	: Medical doctor in Shoklo Malaria Research Unit Thailand