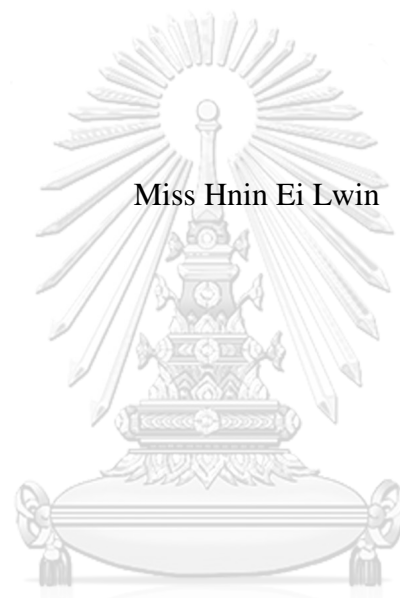


Characteristics and factors affecting contraceptive utilization in premarital sexual
relationship among unmarried youths in Rural Yangon Myanmar



Miss Hnin Ei Lwin

จุฬาลงกรณ์มหาวิทยาลัย

บทคัดย่อและแฟ้มข้อมูลฉบับเต็มของวิทยานิพนธ์ตั้งแต่ปีการศึกษา 2554 ที่ให้บริการในคลังปัญญาจุฬาฯ (CUIR)
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ลักษณะทางประชากรและปัจจัยที่มีผลต่อการใช้บริการคุมกำเนิดต่อการมีเพศสัมพันธ์ก่อนสมรสในเยาวชนที่ยังไม่ได้สมรส
ในชนบทเมืองย่างกุ้ง ประเทศเมียนมา



วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาวิทยาศาสตรมหาบัณฑิต
สาขาวิชาสาธารณสุขศาสตร์
วิทยาลัยวิทยาศาสตร์สาธารณสุข จุฬาลงกรณ์มหาวิทยาลัย
ปีการศึกษา 2560
ลิขสิทธิ์ของจุฬาลงกรณ์มหาวิทยาลัย

ช น น อ ล ว น :

ลักษณะทางประชากรและปัจจัยที่มีผลต่อการใช้บริการคุมกำเนิดต่อการมีเพศสัมพันธ์ก่อนสมรสในเยาวชนที่ยังไม่ได้สมรส ในชนบทเมืองย่างกุ้ง ประเทศเมียนมา (Characteristics and factors affecting contraceptive utilization in premarital sexual relationship among unmarried youths in Rural Yangon Myanmar) อ.ที่ปรึกษาวิทยานิพนธ์หลัก: อเลขซิโอ พันซ่า, 151 หน้า.

ความเป็นมา: โดยทั่วไป เยาวชนเป็นกลุ่มที่มีความตื่นตัวทางเพศมากกว่ากลุ่มอายุอื่นๆ การศึกษาหลายชิ้นแสดงให้เห็นว่าพวกเขาที่มีเพศสัมพันธ์ก่อนแต่งงานและการมีเพศสัมพันธ์ก่อนการแต่งงานมีอยู่ทุกภูมิภาคทั่วโลก การวิจัยครั้งนี้มีวัตถุประสงค์เพื่อศึกษาลักษณะและปัจจัยที่มีผลต่อทั้งความตั้งใจและการใช้จริงในวิธีการคุมกำเนิดในการมีเพศสัมพันธ์ก่อนสมรสในกลุ่มเยาวชนที่ยังไม่ได้สมรสในเขตชนบทของเมืองย่างกุ้ง เมียนมา

วิธีการ: ใช้การศึกษาเชิงพรรณนาเชิงปริมาณในกลุ่มเยาวชนอายุ 15-24 ปีที่ยังไม่ได้แต่งงาน จำนวน 270 คน ที่มีที่พำนักอยู่ในเขตชนบทของย่างกุ้ง การเก็บรวบรวมข้อมูลดำเนินการระหว่างเดือนกันยายนถึงตุลาคม 2560 โดยใช้แบบสอบถามที่รวบรวมโดยผู้สัมภาษณ์และแบบสอบถามที่ด้วยตนเองสำหรับตอบคำถามที่อ่อนไหวเกี่ยวกับประสบการณ์ทางเพศ

ผลการศึกษา ผลการศึกษาแสดงให้เห็นว่า 44% ของเยาวชนที่ยังไม่ได้สมรสที่มีเพศสัมพันธ์ใช้วิธีคุมกำเนิดอย่างน้อย 1 วิธีในการมีเพศสัมพันธ์ครั้งล่าสุด มีเยาวชนไม่ได้แต่งงานที่มีเพศสัมพันธ์ เพียง 17.6% เป็นผู้ที่ใช้วิธีคุมกำเนิดอย่างน้อย 1 วิธีในการมีเพศสัมพันธ์ครั้งล่าสุดเสมอ 44.8% ของเยาวชนที่ยังไม่ได้สมรสตั้งใจจะใช้คุมกำเนิดแบบสมัยใหม่เพียงอย่างเดียวในขณะที่ 8.1% ตั้งใจจะใช้ทั้งวิธีการคุมกำเนิดสมัยใหม่และแบบดั้งเดิมในอนาคต สมการถดถอยพหุคูณแสดงให้เห็นว่าไม่มีความสัมพันธ์ระหว่างตัวแปรอิสระใดๆกับการใช้การคุมกำเนิดที่เกิดขึ้นจริงในการมีเพศสัมพันธ์ครั้งล่าสุดและการใช้ยู่เสมอในชีวิตประจำวัน ความตั้งใจใช้การคุมกำเนิดในอนาคตมีความสัมพันธ์ทางบวกอย่างมีนัยสำคัญทางสถิติกับอายุของผู้ตอบแบบสอบถาม (p value < 0.001), เพศ (หญิง, p value= 0.044), การมีรายได้เป็นของตนเอง (p value= 0.013), ระดับทัศนคติ (p value= 0.034), ระดับความเชื่อ (p value=0.002), การได้ยินเกี่ยวกับการคุมกำเนิด(p value= 0.003), การเข้าถึงได้ง่ายเมื่อต้องการวิธีการคุมกำเนิด (p value< 0.001), ผู้ให้บริการสุขภาพที่เป็นเพศเดียวกัน (p value= 0.003) และประสบการณ์เพศสัมพันธ์ (p value< 0.001)

สรุป:การใช้วิธีการคุมกำเนิดและความรู้เกี่ยวกับการคุมกำเนิด โดยเฉพาะอย่างยิ่งการใช้ยาคุมกำเนิดฉุกเฉินและการใส่ห่วงคุมกำเนิด ของกลุ่มวัยรุ่นในเขตชนบทที่ยังไม่ได้แต่งงานอยู่ในระดับต่ำ ควรมีการให้ข้อมูลเพิ่มเติมเกี่ยวกับวิธีการคุมกำเนิดผ่านการศึกษาเรื่องสุขภาพทางเพศและอนามัยการเจริญพันธุ์ในโรงเรียนมัธยมศึกษาตอนต้นและมัธยมศึกษา ผ่านแอปพลิเคชัน Facebook โปรแกรมโทรศัพท์มือถือและการศึกษาต่อในช่องทางที่วิน นอกจากนี้ควรจัดให้มีการดูแลที่ไม่มีอคติและให้ความเคารพต่อทั้งเยาวชนที่แต่งงานแล้วและยังไม่ได้สมรสผู้แสวงหาบริการอนามัยการเจริญพันธุ์หรือบริการคุมกำเนิดในคลินิกของรัฐ เอกชนหรือองค์กรนอกภาครัฐ ควรมีสุนัขข้อมูลเยาวชนหรือคลินิกที่เป็นมิตรกับเยาวชนสำหรับเยาวชนที่อาศัยอยู่ในพื้นที่ชนบทของย่างกุ้ง

สาขาวิชา สาธารณสุขศาสตร์

ปีการศึกษา 2560

ลายมือชื่อนิติดี

ลายมือชื่อ อ.ที่ปรึกษาหลัก

5978836553 : MAJOR PUBLIC HEALTH

KEYWORDS: UNMARRIED YOUTHS / PREMARITAL SEXUAL RELATIONSHIP / CONTRACEPTIVE UTILIZATION / RURAL / YANGON / MYANMAR

HNIN EI LWIN: Characteristics and factors affecting contraceptive utilization in premarital sexual relationship among unmarried youths in Rural Yangon Myanmar. ADVISOR: ALESSIO PANZA, M.D, M.Com.H, D.T.M&H, 151 pp.

Background: Globally, youths are more sexually active compared to other age groups of the population. Several studies showed premarital sexual intercourse appears all regions around the world. The objective of this study was to access characteristics and factors affecting actual and intended contraceptive utilization in premarital sexual relationship among unmarried youths in rural Yangon, Myanmar.

Methods: A quantitative cross sectional descriptive study was done with 270 unmarried youths with the age of 15-24 who are residing in a rural township of Yangon region. Data was collected by using combined interviewer-administered questionnaire and self-administered questionnaire between September and October 2017. Self-administered questionnaire was prepared for sensitive questions on sexual experiences.

Result: The finding showed 44% of sexually active unmarried youths used at least one modern contraceptive method in their latest sexual intercourse. Always use at least one modern contraceptive method was found only in 17.6% of sexually active unmarried youths. 44.8% of unmarried youths intended to use only modern contraceptive method while 8.1% intended to use both modern and traditional contraceptive methods in the future. The final model of multiple logistic regression revealed that there was no association between any independent variables and actual use of contraception in the latest sexual intercourse and always use in the life-time. Intended use of contraception in the future showed significant positive associations with age group of respondents (p value<0.001), sex (female, p value=0.044), having own income (p value=0.013), level of attitude (p value=0.034), level of belief (p value=0.002), ever heard about contraception (p value= 0.003), easy availability of contraception when needed (p value< 0.001), same gender service provider (p value= 0.003) and experience on sexual intercourse (p value< 0.001)in the final model of regression.

Conclusion: Low prevalence of contraceptive utilization, and low level of knowledge about contraception especially for emergency contraceptive pill and IUD were found among unmarried rural youths. Delivering more information about contraceptive methods through comprehensive sexual and reproductive health education in middle and high schools, Facebook, mobile application and edutainment program in TV channels should be implemented. Furthermore, unbiased and respectful care should be provided to both married and unmarried youths who seek reproductive health care or contraceptive service at the public or private or NGO clinic. Youth information centers or youth-friendly clinic should also be provided for youths who live in rural areas of Yangon region.

Field of Study: Public Health

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Student's Signature

Advisor's Signature

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List of Abbreviations

AIDS	Acquired Immune Deficiency Syndrome
ANCP	Australian NGO Cooperation Program
BBT	Basal Body Temperature
BI	Burnet Institute
BIMM	Burnet Institute Myanmar
BS	Birth Spacing
BSS	Behavioral Surveillance Survey
COC	Combined Oral Contraceptives
CVR	Combined Contraceptive Vaginal Ring
ECP	Emergency Contraceptive Pill
FHI	Family Health International
FRHS	Fertility and Reproductive Health Survey
HIV	Human Immunodeficiency Virus
IUD	Intrauterine Device
LAM	Lactational Amenorrhea Method
MICS	Multiple Indicator Cluster Survey
POP	Progestogen-Only Pills
RH	Reproductive Health
SPSS	Statistical Package for the Social Sciences
TBA	Traditional Birth Attendant
UN	United Nations
WHO	World Health Organization
YAFS	Young Adult Fertility and Sexuality

CHAPTER I

INTRODUCTION

1.1 Background and Rationale

1.1.1 International Background Information

The global population of youth was 1.2 billion in 2015, and over 60 percent of them live in Asia-Pacific region (1). Youth, defined as age group of 15 to 24, is thought to be a transition stage from childhood to adulthood and a particularly challenging period of time in life for decision making especially when many revealing life events occur (2). During this transition stage, significant cognitive, emotional and behavioral changes occur along with a rapid growth of physical and sexual maturity (3).

Globally, youths are more sexually active compared to other age group of the population (4). Therefore, many youths have had sexual intercourse before marriage, and premarital sexual intercourse appears all regions around the world (5). Many countries with the trend of later marriage also lead to the rising occurrence of premarital sexual relationship (6).

In Asia, the onset of sexual activity of most young female coincides with marriage because premarital sex is not culturally acceptable (3). According to various national surveys, the prevalence of premarital sexual intercourse in Asian countries is lesser than in developed countries (7). However, studies from several countries from Asia and the Pacific regions expressed an increasing number of adolescents and youths engage in sexual relationship before marriage with the rising ages of marriage and changing sociocultural norms (3). Furthermore, smaller in-depth researches on youths in Asia found out that the increased sexual activity of youths (7).

Premarital sex itself is not a negative determinant for poor sexual and reproductive health. During the transition period of youth, interest in sex and sexual experimentation are increasing as normal parts of human development. If their development can be equipped with knowledge, skills and access to reproductive health service, they will have positive and healthy sexual relationships and health (3). Although youths have their rights to receive a healthy RH life with quality access to RH services, cultural

taboos and social norms exist as barriers to achieve adequate knowledge and accessibility of reproductive health service for unmarried people in most of the Asian countries (8).

As a consequence, 15-24 old youths have the highest rate of sexually transmitted infections compared to other age group with 42% new HIV infection in 2010 (9). Not only sexually transmitted infections and HIV/AIDS but also unwanted pregnancies are major health issues that came out as a result of unprotected sexual activity (10). In 2010, 135 million children were born, and 32% of them were born to women aged 20-24 while 12% of them were born to women aged 15-19 (11). Since sexually active unmarried youths and adolescents become very common worldwide, they also have more chance to encounter with unwanted pregnancy and abortion which significantly impact on their well-being (12).

Despite abortion is underreported, there were significant unsafe abortions (3). Besides, maternal mortality still remains as a leading cause of death among 15-24 aged girls in developing countries due to complications during pregnancy or childbirth, maternal suicide and unsafe abortion (13). In settings where premarital sex is highly stigmatized, negative physical, mental and psychosocial outcomes of unsafe sex such as unwanted pregnancy, emotional insecurity, social isolation, dropping out from the schools, forced marriage, unsafe abortion and depression are substantial (14).

According to review and analysis of national level data from January 2005 to June 2015 by Burnet Institute, one out of seven girls in Asia Pacific region gave birth at the age of 18 with high unmet need for contraception, and up to 63% of adolescent pregnancies are unwanted (3). Family planning worldwide 2013 data pointed out that contraceptive utilization and total demand was higher among unmarried female compared to married (15). Meeting contraceptive need and reproductive health service for young unmarried women is strenuous to overcome the barriers of social and cultural stigmas.

A study from Guttmacher Institute estimated unmet contraceptive need among married and unmarried women from developing countries by examining local studies. Their reported data showed that there were approximately 52% of sexually active unmarried women who were using a modern contraceptive while it was 62% for married women. The unmet need for unmarried women was 22%, and that of married

women was 12% in developing countries. For Southeast Asia only, 24% of unmarried women were with unmet contraceptive need, and married women were 13.5% (12).

Not only reducing unmet contraceptive need but also providing comprehensive reproductive health knowledge to youths is crucial to use contraception in their premarital sex to prevent unwanted pregnancies, plus sexually transmitted infections and HIV. In some countries, young people fundamental right to obtain sexual and reproductive health information and services are restricted by policies. Even though the policy barriers have been removed in most countries, social and cultural stigma, service providers' attitudes and bias make barriers for unmarried youths to seek and receive required information, knowledge and services (16).

1.1.2 Background Information in Myanmar

In Myanmar, the population of youth is about one fifth of the total population which is over 51 million in 2014 census (17). Although this age group is sexually active group, their sexuality is strictly restricted by social, moral and religious beliefs. According to eastern cultures, receiving reproductive health service is perceived as a shameful subject for unmarried people.

As a result, unwanted pregnancies of unmarried women are terminated secretly and illegally (18). Hence, abortion was the third most common cause of maternal death, and 2007 FRHS revealed that about 5% of all pregnancy ended in abortion. Abortion was highest 11.39% in 15-19 years age group and 9.07% in university educated youths. According to hospital statistics, the septic abortion was 53% of all maternal deaths. Again from 2004 Family and Youth Survey, about 78% of interviewed youths mentioned that the main places for abortion performed were homes of Traditional Birth Attendants since abortion is illegal in Myanmar (19).

Even though the unmet need for contraception decreased moderately from 20.6 in 1991 to 17.7 in 2007, the status of birth spacing in Myanmar described that the unmet need could be higher if unmarried women were also included in the calculation (20). Although the access of unmarried youths and young people to contraceptive service is technically legal, it is also hindered by a number of external factors. From a study in peri-urban Yangon, the interviewees mentioned that unmarried women are met with

discrimination to attempt the access care because of cultural barriers such as shame and cultural norms. Unmarried women responded that the reproductive health service and contraception are only for married women in Myanmar. Therefore, most of unmarried sexually active women usually use short-term methods like emergency contraceptive pills which are available at drug stores or through male partner or married peers (21).

Less contraceptive knowledge and utilization lead to not only unwanted pregnancy and abortion but also sexually transmitted infections and HIV/AIDS. In 2014, there were over two hundred thousand people living with HIV in Myanmar, and 34% that population was female. The second highest proportion of new HIV infections could be seen in low risk women (27%) in 2014 (22). Although Myanmar people have knowledge on condoms in preventing sexually transmitted infections including HIV/AIDS, condom use is very low compared to other methods. 2006 BSS data reported that condom use in high risk sex was 43.8%. While overall contraceptive prevalence rate in 2012 was 46%, condom use was only 0.7%. Condom can be seen for men to use when they have sex with sex workers but rare to use as a birth spacing method (23). A study on youths in Myanmar found out that 11.9% of youths had premarital sexual relationship but consistent condom use among male was only 36.6% and 23.0% never used condoms (24).

The study in peri-urban of Myanmar also proved that unmarried women had less contraceptive knowledge compared to married participants. This is due to a lack of contraceptive information and reproductive health related educational resource for unmarried and young female. Furthermore, it is also mentioned that the hostile manners of service providers towards unmarried women who came to receive service or ask questions which are related to reproductive health knowledge (21).

Since Myanmar has strong cultural and social norms concerning pre-marital sex, providing contraceptive knowledge and services are challenging to both service providers and unmarried youths. Although the public and private sectors such as local and international non-government organizations are providing RH services, unmarried youths are still in need to increase correct contraceptive knowledge and utilization.

1.2 Rationale

The population in Yangon region, the largest city of Myanmar, is 7.36 million that make 14.3% of the country's total population. Out of 7.36 million, about 2.04 million above 15 years and over are unmarried (17).

Although Yangon region has country's best medical facilities with qualified doctors, inequalities are found in health care between urban and rural areas. Majority of rural areas in which 30% of 7.36 million people live are with weak health system and lack of facilities (25). Additionally, 2007 FRHS pointed out that women who live in urban area have slightly better knowledge about contraception than those from rural areas (19).

However, most reproductive health researches in Yangon region were conducted only in peri-urban or urban areas. Next, many researches on contraceptive utilization focused only on married people. In the same way, some RH researches for both married and unmarried women were done on reproductive age group of 18 to 44 years. Despite there was one study on youths about premarital sex in Myanmar as a part of risk behaviors study, that was done only on premarital sex experience and condom use.

To summarize, there is no research which emphasizes specifically on unmarried youths' circumstances of knowledge, attitude, beliefs and uses of modern and traditional contraception in rural Yangon. Hence, a community based research study to access characteristics and factors affecting contraceptive utilization among unmarried youths needs to be undertaken in rural townships of Yangon region. In this study, factors associated with actual and intended contraceptive utilization among unmarried youths were determined by using Andersen' Initial Behavioral model (1960s) that consisted of predisposing, enabling and need factors for health service utilization (26).

1.3 Research Questions

1. What are the predisposing factors such as socio-demographic characteristics, the level of contraceptive knowledge, attitudes and beliefs towards premarital sex and contraception among unmarried youths in rural Yangon, Myanmar?
2. What are the enabling factors such as availability of contraceptive information as well as availability and accessibility to contraception among unmarried youths in rural Yangon, Myanmar?
3. What are the need factors such as sexual activity status and sexual history of unmarried youths in rural Yangon, Myanmar?
4. What is the prevalence of actual and intended contraceptive utilization in premarital sexual relationship among unmarried youths in rural Yangon, Myanmar?
5. Are there any association between predisposing, enabling, need factors and actual and intended contraceptive utilization in premarital sexual relationship among unmarried youths in rural Yangon, Myanmar?

1.4 Research Objectives

General Objective

1. To describe the characteristics of unmarried youths, and to evaluate the association between their characteristics and actual and intended contraceptive utilization in premarital sexual relationship among unmarried youths in rural Yangon, Myanmar

Specific Objectives

1. To determine the predisposing factors such as socio-demographic characteristics, the level of contraceptive knowledge, attitudes and beliefs towards premarital sex and contraception among unmarried youths in rural Yangon, Myanmar
2. To assess the enabling factors such as availability of contraceptive information as well as availability and accessibility to contraception among unmarried youths in rural Yangon, Myanmar
3. To assess the need factors such as sexual activity status and sexual history of unmarried youths in rural Yangon, Myanmar
4. To determine the prevalence of actual and intended contraceptive utilization in premarital sexual relationship among unmarried youths in rural Yangon, Myanmar
5. To evaluate the association between predisposing, enabling, need factors and actual and intended contraceptive utilization in premarital sexual relationship among unmarried youths in rural Yangon, Myanmar

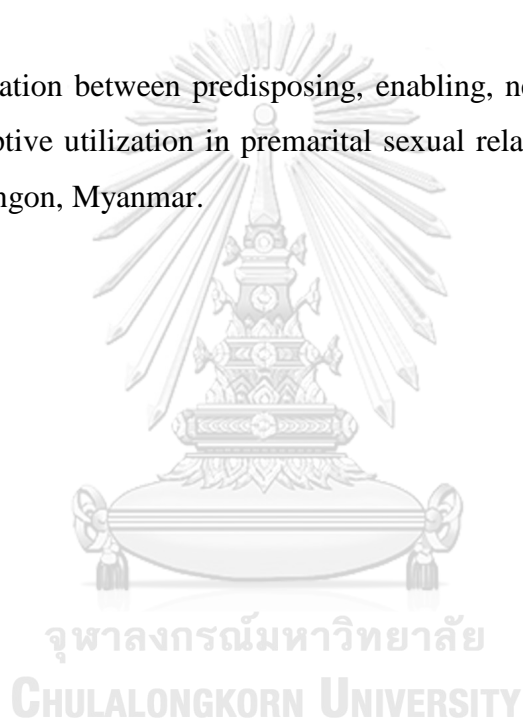
1.5 Research Hypothesis

Null Hypothesis

There is no association between predisposing, enabling, need factors and actual and intended contraceptive utilization in premarital sexual relationship among unmarried youths in rural Yangon, Myanmar.

Alternative Hypothesis

There is an association between predisposing, enabling, need factors and actual and intended contraceptive utilization in premarital sexual relationship among unmarried youths in rural Yangon, Myanmar.



1.6 Conceptual Framework

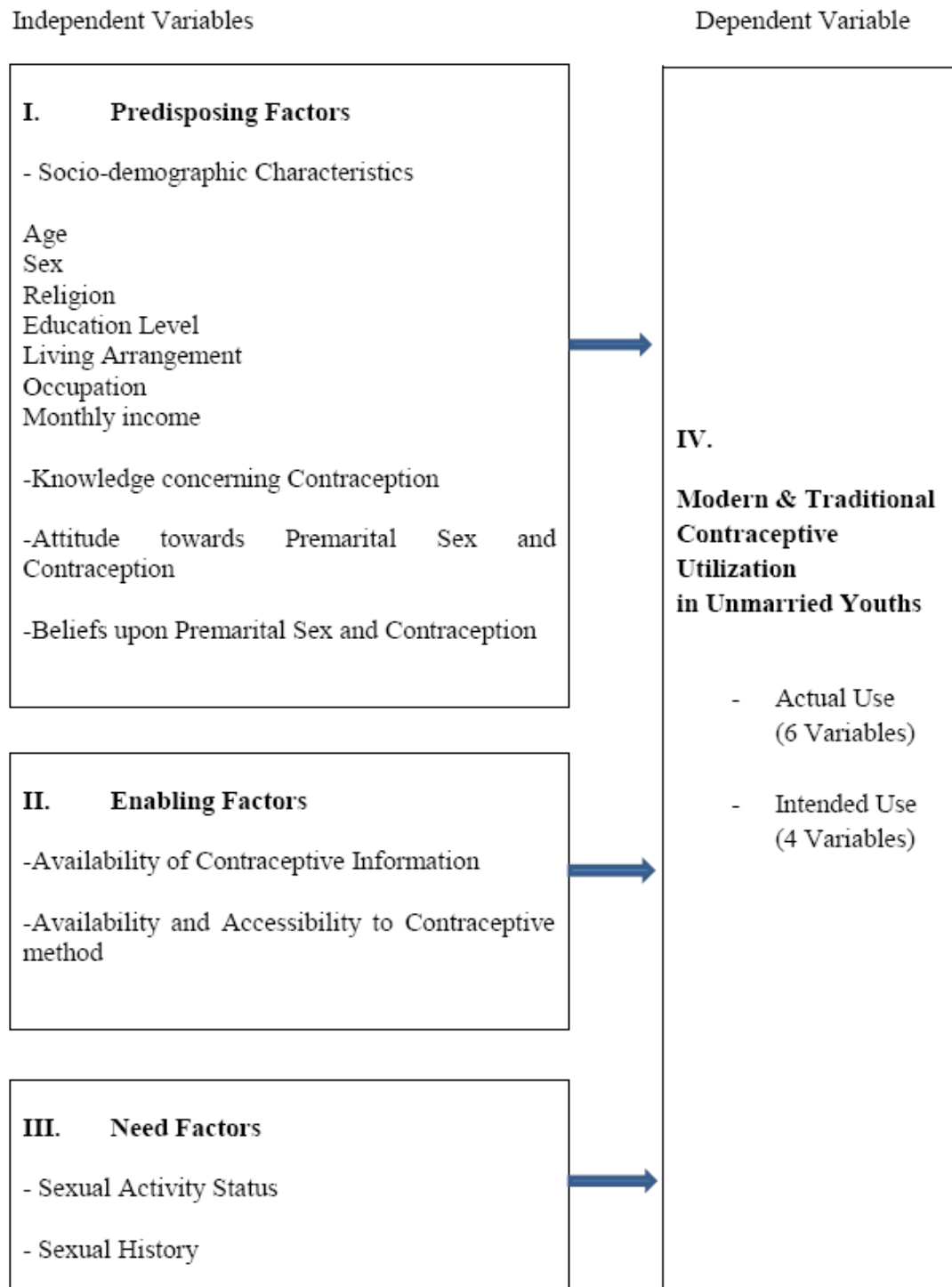


Figure 1. Conceptual Framework

1.7 Operational Definition

General

Youth: refers the age group between 15-24 years according to the United Nations definition.

Unmarried Youths: refers to 15-24 years old youths who are not reported as “married” but documented as “single” at the village tract administration office during the period of this research. This is because people who are living in the rural areas of Yangon Region have to report to the village tract or village administration offices when they are married since 2014. Although most of the people in rural areas do not have marriage certificate, they have to inform and report to their specific village tract or village administration offices through 10 households head or 100 households head when they got married (that means traditionally married but not legally).

Premarital Sex: means sexual intercourse engaged in by persons who are not legally married.

Sexual Intercourse: There are many definitions of sexual intercourses such as vaginal intercourse, anal intercourse, and oral sex. In this research, however, sexual intercourse refers to vaginal intercourse: the act in which the male reproductive organ enters the female reproductive tract.

Independent Variables

Age: refers to how old the respondent is at the time of last birthday by self-report method. The age will be divided into three groups: (15,16), (17,18,19), and (20-24).

Sex: refers to male or female, the respondent’s sex characteristics as observation by interviewer.

Religion: refers to the respondent’s religion in term of Buddhist, Christian, Muslim, Hindu and others by self-report method.

Education Level: refers to the highest education that the respondent attained, and it is classified into Never gone to school, Never gone to school but can read and write simple Myanmar language, Primary School (equivalent to Grade 1 to Grade 4), Middle School

(equivalent to Grade 5-8), High School Level (equivalent to Grade 9-10), and Higher Education Level (University) by self-report method.

Living Arrangement: refers to any family member or relative or friend or other who is (or are) staying together and sharing most of the meals together with the respondent for past 3 months, by self-report method.

Occupation: refers to the respondent work at the time of interview, and is divided into student, private employee, government employee, unemployed and others by self-report method.

Monthly Income: refers to the respondent's own income in kyat per month.

Knowledge concerning Contraception: refers to respondents' knowing and understanding about contraceptive methods with familiarity gained through experience or education. Three levels of knowledge as poor level of knowledge, fair level of knowledge and good level of knowledge are determined by using 16 contraceptive knowledge questions.

Attitude towards Premarital Sex and Contraception: refers to respondent's subjective judgment on premarital sex and contraceptive utilization. The level of attitude on premarital sex and contraception will be measured by asking eight premarital sex and contraceptive related questions with Likert's scale which includes the range from strongly agree to strongly disagree. Three levels of attitude are defined as negative attitude, neutral attitude and positive attitude.

Belief towards Premarital Sex and Contraception: refers to respondents' scientifically correct beliefs upon unprotected sexual intercourse as well as transmission and prevention of sexually transmitted infections including HIV/AIDS. Six belief-related questions are included in the research questionnaire. The level of belief is classified as low level of correct belief, fair level of correct belief and high level of correct belief.

Availability of Contraceptive Information: refers to availability of the contraceptive related information. Availability of formal or informal health education session, group or individual discussion with health professionals, health education materials, and their sources will be included.

Availability and Accessibility to Contraceptive Method: refers to availability of contraceptives, geographical accessibility such as distance and mode of transportation including affordability on contraceptive and acceptability.

Sexual Activity Status: refers to experience on premarital sex. If a respondent has experience on premarital sexual intercourse, that respondent will be defined as sexually active. If the respondent has never had sexual intercourse, that respondent will be defined as non-sexually- active.

Sexual History: refers to the history of sexual experience such as age of first sexual intercourse, type of partner, peer pressure to practice sexual intercourse, sex with commercial partner, contraceptive uses on those occasions and number of sexual partners.

Dependent Variables

Modern and Traditional Contraceptive Utilization in Unmarried Youths: refers to the actual use of contraception for who had sexual experience, and intended use of contraception in the future for all respondents. Actual use of contraception will be measured by two ways: use of contraception at the latest sexual intercourse (27), and always use of contraception in the life time (up to this study period).

Modern Contraceptive Methods: refers to oral contraceptive pills, injection, IUD, implant, emergency contraceptive pill, female condom, and male condom. Male sterilization and female sterilization will not be included because they are not available for unmarried people in Myanmar (23).

Traditional Contraceptive Methods: refers to withdrawal and safe period (20, 28).

Actual Use: 6 dependent variables for Actual Use (34 sexually active respondents)

1. Use of at least one modern contraceptive method at the latest sexual intercourse
2. Use of only traditional contraceptive method at the latest sexual intercourse
3. Not use any contraceptive method (use neither) at the latest sexual intercourse

4. Always use at least one modern contraceptive method in the life-time
5. Always use only traditional contraceptive method in the life-time
6. Not always use any contraceptive method (always use neither) in the life-time

Intended Use: 4 dependent variables for Intended Use (All 270 respondents)

1. Intend to use only modern contraceptive method in the future
2. Intend to use both contraceptive methods in the future
3. Intend to use only traditional contraceptive method in the future
4. Not intend to use any contraceptive method in the future



CHAPTER II

LITERATURE REVIEW

2.1 Brief about Myanmar and Yangon Region

Myanmar, officially as the Republic of the Union of Myanmar, is located in South-East Asia and bordering with India, Bangladesh, China, Thailand and Laos. By the World Bank's estimate of GNI per capita of 1160 US\$ in 2015, Myanmar became lower-middle income country which is defined when the annual income is between \$1,046 and \$4125 from former low-income country (29). Myanmar administratively consists of sever regions and seven states.

Yangon region which is a former capital city of Myanmar is the largest city. Yangon region is also a home to bustling markets and has highest population size in Myanmar. Yangon region is comprised by four districts such as Yangon East district, Yangon West district, Yangon North district and Yangon South district. Again, there are 8 townships, 14 townships and 13 townships in Yangon North district, Yangon East district and Yangon West district respectively. In Yangon South district, there are 10 townships and one sub-township. However, that sub-township is classified as a separate township and it makes 11 townships in Yangon South District. In this way, Yangon region includes 46 townships in Myanmar Population and Housing Census 2014.

Out of 46 townships, eight townships in Yangon South district and four townships in Yangon North district are classified as rural areas in Yangon Region in the 2014 population census as they are outside of the Yangon City Development Committee (YCDC) which coordinates urban planning.

In each township in Yangon, there is a township hospital with 16 or 25 or sometimes 50 bedded depending on the size of population. Under each township level hospital, there are at least one or two station hospitals, and 4 to 7 rural health centers (RHCs) in order to provide health service to rural population while urban health center, school health team, and maternal and child health center are responsible for the urban

population. Under every RHC, there are four sub-centers to give primary health care to the community (30).

2.2 Socio-demographic Characteristics

Socio-demographic characteristics are important in determining contraceptive utilization. This is because cultural influences, health seeking behavior, community beliefs and norms can influence on individual's perception and usage of health service. Access to reproductive health service utilization is mostly influenced by social beliefs and cultural norms.

Reproductive health care includes a constellation of health services, methods and techniques that contribute to reproductive health improvement and well-being by preventing and solving sexual and reproductive health problems (31). Therefore, reproductive health care should be accordant by understanding audiences' perspectives related to socio-demographic factors such as age, sex, religion, culture and some underlying determinants in order to provide relevant reproductive health service for the people. This is because their health service use, especially for RH, varies according to various socio-demographic characteristics.

2.2.1 Age

Age is a considerably important determinant of sexual exposure. Among the various age groups, youths are in transition from the childhood's dependence to independence of adulthood, and they are more fluid than other age groups (2). Therefore, youths usually encounter with risks and challenges during this transition. Their physical and mental changes need to be well handled not to address negative impacts on length and quality of their lives (32). As this age group is sexually active with physical development, they have risks of early sexual activity and childbearing which can negatively effect on their future.

From a study on youths in Myanmar, the mean age of first sex among youths was 17.6 years (24). Existing evidences indicated that the average risk of sexually transmitted infections (STIs) and HIV, unintended pregnancy, sexual abuse and other preventable sexual health problems were higher in youths. Therefore, policy makers

and program planners are facing challenges to promote sexual and reproductive health, and well-being of these youths (33).

In 2008, about 11 million abortions in Asia were unsafe and up to 65% of them are from South-East Asia. Among them, women under age 25 years were 34% along with 11% of 15-19 age group and 23% of 20-24 age group (3). In Myanmar, abortion was highest in age group of 15-19 years (19).

2.2.2 Sex

Sex is also considerably importance to engage in sexual intercourse and contraceptive use. This is because social expectation on sexual behavior, attitudes, and feelings are linked to gender norms. Sexual double standard supports male as an encouraging factor to involve in pre-marital sexual intercourse which is socially disapproved for girl (34).

The results of cross sectional study on youths about premarital sex in Myanmar provide confirmatory evidence that the experience of premarital sex in female youths was statistically significant lower than that of male youths. In that research, the total percentage of youths who had premarital sex was 11.9% for community youth. However the proportion of female youths was only 5.9% of total female sample population while that of male youths was 15.9% of total male.

Eastern culture usually recognizes virginity as highly prize and controls females' sexuality. In many Asian societies, women are expected to remain silent with the sex and sexuality issues. It makes difficulties for female to learn about risk reduction and safe sex in their premarital sexual relationships. The strong social stigma and cultural norm of encouraging women to remain virgins until they are married; unmarried women are difficult to access reproductive health services such as contraception and treatment for sexually transmitted diseases at the health care centers (34).

In the same way, men from male-dominant countries are more sexually active and earlier to involve in sexual relationship with social norms which encourage virility compared to women (35). As an example, a study in Turkey reported that 73.2% of male university students and 27.4% of female students were sexually active. From those

students, 30.6% and 44.5% of female university students did not use any contraceptive methods in their first sexual intercourse. Moreover, 47.0% male and 21.2% female students always used contraception in their sexual intercourse. That study showed the statistically significant difference of sexual activity status and contraceptive utilization based on gender (36).

2.2.3 Religion

Data analysis from 2008 Ghana Demographic and Health Survey noted that contraceptive utilization among adolescents was the highest in Christians (20.1%) but lowest in traditionalist or spiritualists (7.8%) (37). A study on youths in Nepal, likewise, pointed out that non-Hindu religious group had 3.25 times greater odds of modern contraceptive utilization compared to Hindu youths (38). Again, an analysis of current contraceptive use from 2013 Nigerian Demographic and Health Survey (NDHS) described that current contraceptive use among reproductive age women was highest for women of other Christian except Catholics (26.4%) although it was significantly lowest among Muslim women (5.6%) (39).

Contradictorily, a study on Myanmar migrant youths in Thailand showed that there was no significant relationship between religion and contraceptive use: 59.5% of Buddhist used contraception while 64% of Christian, Hindu and Islam also used contraception (18). A similar finding can be seen a research on contraceptive use among Spanish single youth. The contraceptive use does not vary significantly with religion for those youths (40).

2.2.4 Education

Education, one of the important socio-demographic characteristics, also takes parts as a prominent determinant on contraceptive utilization in developing countries. Results from 26 demographic and health surveys stated that women with more schooling tend to make a later, healthier transition into adulthood by experiencing first sexual intercourse later, marry later, and are more likely to use contraceptive methods compared to less educated peers (41). 2012 Afghanistan health survey similarly reported that 12.7% of women with no education, 15.2% with primary education, and

17.8% of women with secondary or higher education used contraception. Therefore, it pointed out that education is an important factor in using contraception (42).

A study on currently married women related to contraceptive use in Indonesia, likewise, reported that women with secondary or higher education level had a high probability of using modern contraceptive methods (43). Besides, a study from Uganda also approved that women with a secondary or higher education had a greater knowledge about contraception and more likely to intend to use. Therefore, having secondary or higher education was a significant related factor to ever use of contraception. On the other hand, women with no or only primary education were more likely to use traditional method (44).

In addition, 2013 Young adult fertility and sexuality study in the Philippines also confirmed the association between education and sexual initiation age, then also with premarital sex. The median age of sexual initiation was 18.4, and it showed one year later of sexual initiation for youths with college education than youths with elementary schooling or high school undergraduates. The prevalence of premarital sex among youths was 32.4% in 2013 although it was only 17.8 in 1994, and it was higher among high school graduates (44%) than high school undergraduate students (21%) (45).

However, a study from West Africa indicated a contradictory result. A survey from Burkina Faso reported that unmarried females with higher level of education were almost twice (45%) as ever have had sex as young unmarried females who never attended school (24%) (46).

2.2.5 Living Arrangement

Parents or guardians living together are important for youths' sexual behavior such as premarital sexual experience and contraceptive use. Most of the youths staying with their family such as parents and relatives are found to be less likely to had premarital sex. This is because of the culture transmitted from their parents, and afraid of their guardians' attitude of strictly prohibiting of premarital sexual relationship. A study on adolescents in Malaysia reported that only 5.1% of respondents who lived with

parents or relatives had premarital sexual relationship although 12.2% respondents who did not live with their family had sexual experience (47).

Previous studies in Myanmar observed that adolescents and young people who live with parents and talking about sex with their parents tend to be less sexually active, and a strong likelihood to use contraception. A study on communication between parents and adolescents about reproductive health in Yangon indicated that majority of adolescents (89%) have positive attitude towards to talk with parents about reproductive health while 76.9% intended to ask parents if they have a reproductive health related questions in the future. 63.7% of adolescents in the study reported that they have discussed about reproductive health with their parents. Nevertheless, adolescents did not feel comfortable and free to ask or they were afraid of the judgmental behavior of the parents. Only 17.5% of the study population felt comfortable in talking with parents. That study also highlighted the transmission of cultural value from parents to their generation. Majority of adolescents (81.3%) reported conservative attitude on premarital sex and adolescents who discussed with their parents have more conservative attitudes compared to who have not discussed (48).

2.2.6 Occupation

Women with occupation had a positive association for promoting spousal discussion on family planning (49). Besides, adolescent who was working for pay has statistically significant association with ever utilization of contraception. In Ethiopia, 69.1% of adolescents who were working for pay ever used contraceptives while only 57% of adolescents who did not work used contraception (50).

On the contrary, a research in Myanmar reported that there was no significant difference of contraceptive utilization between dependent women and working women (51). That study also mentioned that income group is contraceptive use also did not have a significant association.

2.2.7 Monthly Income

A study on family planning in Ethiopia also reported that higher family income and women's occupation had a significant association with family planning (49). In the

Republic of Ireland, a telephone call survey on adults about contraceptive usage reported that oral contraceptive pills (OCP) users had higher income compared to contraceptive non-users (52). Many other intervention studies pointed out the association between income and contraceptive utilization (53, 54). However, one study on Myanmar migrant women in Thailand indicated no significant difference of contraceptive usage upon different income groups (55).

2.2.8 Knowledge Concerning Contraception

As youths are more sexually active than other age groups, they have more chances to expose the risk of unwanted pregnancies and sexually transmitted infection including HIV/ AIDS if they do not have proper knowledge on contraception.

A study on undergraduate females in Edo state, Nigeria mentioned a statistically significant association between knowledge and current contraceptive use (within in preceding 6 months) with p value 0.021. Although most of the respondents are unmarried females, they have a very high awareness on contraceptive as 94.4%. The commonest method was condom as 76.1%. The percentage of respondents who had a good knowledge of contraceptive methods and benefits was only 31.2%. The commonly used contraceptive was condoms (57.4%). The second commonly used was OCP (28.7%) while the percentage of respondents who used emergency contraceptives, subcutaneous implants and safe period method were 10.7%, 2.5% and 2.5% respectively. The sources of information on contraception were 34% from mass media, 30% from health personnel, 28.7% from friends and 6.7% from the school (56).

Another cross-sectional study on adolescents at public schools in Brazil contradicted the above observation. At the public schools in Brazil, the knowledge on contraception did not show statistically significant association with the utilization of contraceptives for both male and female. In the study, almost all adolescents (97.4%) were familiar with some kinds of contraceptive methods. Approximately 95% mentioned male condom. The percentage of being knowledgeable about a wide variety of contraceptive methods, except male condom, was considerably higher among female than male respondents (57).

A study on unmarried undergraduate students, an age range from 16-25 years, in Nigeria also approved the result from Brazil. Most of the students had knowledge on contraceptives, condom (98%), Pill (98%), injectable (82.3%), implant (49%), IUD (60.3%), abstinence (83.3%). The sources of knowledge were media, internet, peers (31% each), parents (3%) and health workers (4%). That study reported the low level of contraceptive utilization among sexually active students (10.7%) despite a good level of knowledge and awareness on contraceptives. Among sexually active students, only 15.7% used contraception regularly while 25% occasionally used and nearly 60% had never used any form of contraceptive methods (58).

According to 2007 Fertility and Reproductive Health Survey in Myanmar, over 95% of population have knowledge on at least three methods of contraceptives, with the knowledge on private source of 52% and government source 42% for supplies. However, contraceptive utilization still low in Myanmar as CPR was only 41% (20).

2.2.9 Attitude towards Premarital Sex and Contraception

According to Youth Sexuality Survey by Hong Kong Family Planning Association in 2011, the majority of unmarried young adults (63.8%) aged between 18-27 years reported acceptance of premarital sex. Male youths had more liberal attitudes towards premarital sexual relationship (69.5%) than female (57.3%). Although over 60% of unmarried youths had liberal attitude on premarital sex and the prevalence of premarital sex was 41.5%, half of the sexually active youths did not use contraceptives because their sexual intercourse happened unexpectedly. Sexually active male and female youths used contraceptives nearly every time (30.3%), used around half of the time (15%) and used seldom (5.3%) in the past six months (59).

A cross-sectional survey on female university students in Uganda correspondingly supported that finding, and indicated that attitude on contraceptive acceptance in the student community was high (93%). The students answered positive attitudes on contraceptive utilization in overall, but negative attitudes on accessibility to contraception such as discussion with partner for sexual cases as well as contraceptive use, and contraception for the poor were existed in some students (44).

In Myanmar, most students expressed a negative opinion regarding premarital sex (6). Stigmatization of premarital sex among unmarried youths deters them from seeking RH information and service. Moreover, negative attitude on premarital sex makes youths far away from access to reproductive health service and contraceptive utilization (60).

2.2.10 Beliefs upon Premarital Sex and Contraception

In the same way, wrong beliefs on contraception make failure to use contraception as well as contraceptive failure. Most people in Myanmar believe that they do not need to receive reproductive health knowledge and service unless they are married. Since they do not get correct knowledge from health care workers, unmarried youths usually use emergency contraceptive pill as their regular contraception, and they are very prone to get unwanted pregnancy and unsafe abortion (60).

A cross-sectional study on Myanmar migrants in Thailand for both married and unmarried people in reproductive age indicated that belief was statistically significant by bivariate analysis in association with current contraceptive utilization in accordant with p value 0.018. Despite contraceptive beliefs had no association with current contraceptive usage by multivariate analysis, the highest proportion of non-user had the low level of correct beliefs on contraceptive utilization in that study (18).

A qualitative research in Rural Malawi revealed the wrong beliefs on contraceptive utilization of people with age of 15 to 65 years. In the research, some male and female respondents who do not use contraceptive methods answered that condoms can cause men to be impotent and weaken the sexual strength. What is more, some female respondent also mentioned the fear of side effects (61).

2.3 Availability of Contraceptive Information

Contraceptive services where contraceptive information provides for youths should be ensured that services are accessible, acceptable, appropriate, equitable and effective for adolescents and youths. Besides, health providers have to be trained to offer youth-friendly services for youths in providing contraceptive and reproductive health information with full confidentiality and privacy (62).

A study in Romania reported that female youths who came to RH medical clinic generally felt fear at their first time. For most of the unmarried but sexually active female addressed that those services made them public statement in front of the people who were in the same waiting room with them. Moreover, some medical staffs made judgmental attitude that made youths discomfort. The next barrier was disrespectfully treat from doctors even if they did not have judgmental attitude, such as be in a hurry, not empathetic and not give them time to open up and talk. The main barriers that female youths identified were psychological such as fear, and other barriers were quality of the services available and doctor-patient relationship. Due to these barriers, youths had limited access to information, communication and service. Hence, that study recommended that service providers' attitudes and mentalities should change to overcome these barriers in providing and promoting appropriate information and service to youths (63).

In Myanmar, abortion remains illegal, and so, married women who experience contraceptive failure and unmarried women got unwanted pregnancies usually engage unsafe abortion. When those people came to hospitals for post-abortion complications, service providers felt that they should scold the clients. By this way, service providers keep those clients away from seeking services for those complications. It causes negative impacts especially for the village women; they delayed seeking help for even severe complications (64).

Result from another survey in Mandalay reported that health centers were the best places to receive information for more than half of current contraceptive users and non-users. However, more than half of current users obtained contraception from private clinics and drug store (51). This is because most of the current services are not youth-friendly and have confidentiality and privacy concerns to meet the health needs of youths in Myanmar (65).

2.4 Availability and Accessibility to Contraceptive Method

Availability of contraceptive is a necessary factor to use contraception. Modern contraceptive methods can be available at public health care centers and private clinics. In Myanmar, availability of contraceptives in public and NGO health centers started

increasing at the end of 2013 with the support of UNFPA. Compared to public sector, contraceptive availability is higher in private sector. IUD, injection, oral contraceptive pill (OCP), and emergency contraceptive pill (ECP) are readily available in public sector and drug store (23). Including Myanmar, other 45 countries with greatest needs are also supported to increase contraceptive prevalence and availability (66).

Contraceptive accessibility includes physical availability, affordability and acceptability to receive any contraceptive method. Some of the contraceptive methods are now produced and distributed with affordable price with the purpose of promoting contraceptive utilization around the world. However, contraceptive accessibility is still with barriers in availability and acceptability.

For examples, embarrassment to buy, fear of side effects, social disapproval and being rejected or humiliated by providers still remained as barriers to contraceptive accessibility and hindered contraceptive use of adolescents in the city of Addis Ababa (50).

Unfavorable physical and social environment affected on adolescents' perception on contraceptive accessibility, especially for unmarried adolescents. This study in Kenya reported that knowledge of where to go to get contraceptive was the main barrier to use contraceptive for the adolescents. Both quantitative and qualitative results indicated that the adolescents were afraid of seeking services because of service providers' discrimination on their age. In Kenya, lack of quality standard youth-friendly service and information was a problem associated with low use of contraception among youths since there was only 7% of public youth-friendly service. During the process of seeking services, service provider's attitude affected adolescents' perception on contraceptive accessibility. Even though an adolescent had a positive attitude or perception on contraceptive use, barriers such as service provider's attitude was encountered in the process of receiving service influenced on their utilization. Therefore, a significant association could be seen between contraceptive accessibility and use of contraception (67).

A study on Myanmar youth migrants in Thailand supported the above results. Majority of current user youths felt more comfortable and convenient to receive contraception from their peers and drug stores where they could obtain more privacy. The study also found out that the time taken to reach to contraceptive source was

significant association with contraceptive utilization. The youths who need more than one hour to reach to the source were the least contraceptive utilization (18).

In Myanmar, service provider's negative attitude stands as a very important barrier in receiving contraception for unmarried youths. Service providers sometimes even refuse to provide contraception for unmarried women because of strong cultural attitude and sensitivity (23).

In suburban areas of Mandalay, approximately 32% of sexually active females, regardless of their marital status, encountered with alarmingly high unmet need of family planning and did not use contraception despite they did not intend to conceive (60). The result from multiple studies in Myanmar showed that health professionals should need to be trained to provide service with effective communication and positive attitude in order to improve accessibility to contraception in Myanmar.

1.5 Sexual Activity Status

Nowadays, most of the unmarried youths are sexually active and pre-marital sex can be observed in almost all countries data on youths' reproductive health. 19% of nationally representative sample of unmarried women with the age range from 15 to 24, for example, reported as sexually active along with very low levels of sexuality and reproductive health knowledge in China with the is substantially larger proportion of unmarried young men than women (3).

Similarly in Hong Kong, a 2013 study indicated that nearly 41.5% of unmarried youths engaged in premarital sexual relationship (59). Uganda demographic health survey, likewise, showed that premarital sex was common, and one out of five young females aged 15-24 , at least , were being sexually active (44).

In Myanmar, many people acknowledged that unmarried young people were engaging premarital sexual relationship despite premarital sex was culturally and traditionally restricted (24, 68). A cross sectional study on medical students and community youths in Myanmar reported that 11.9% of community youths and 10.1% medical students and in Myanmar engaged in premarital sex. There was no significant difference on involvement in premarital sexual relationship among these two groups of youth (24).

1.6 Sexual History

In a study on vocational students aged 15-21 years in Chiang Rai, Thailand, almost 48% of male and about 43% of female were sexually active, and 60% of male and 46% of female had two or more partners. 51% of students who had had sexual intercourse answered that they currently use one or more contraceptive methods. The use of oral pill could be seen in common (69.5%). However, many respondents reported the use of other unreliable contraceptives such as periodic abstinence, withdrawal before ejaculation, emergency contraceptive pill. They used these methods usually together with other unreliable methods or condoms. 27% of the female and 17% of the male who ever had sexual intercourse mentioned that they or their partners had ever been pregnant. From the last reported pregnancies, 95% of them were aborted (69).

According to 2013 Young adult fertility and sexuality study in the Philippines, early sexual initiation that defined as beginning sexual activity before 18, was found as 13% in 1994 to 23% in 2013 for both male and female. For male, it was increased from 13.8 to 25.1% while for female was 12 to 22 from 1994 to 2013. For contraceptive utilization, nearly 12.9% of youths who experienced premarital sex used condoms during their sexual initiation. 9.2% used other contraceptive methods notably withdrawal but the rest (about 78%) did not use any contraceptive method (45).

Many researches stated that females had later onset of sexual experiences than males, and their first sexual intercourses in premarital sex were with their boyfriends. However, a significant proportion males had reported their first experience of sexual intercourse were with a commercial sex partner or a casual friend. In the Republic of Korea, premarital sex was occurred in 24% of male and 11% of female secondary school students. A majority of female secondary school students who had had premarital sexual intercourse reported that their first experiences were with their boyfriends whereas over half percentage of men were with commercial sex workers or casual friends. Not only in Korea but also in Nepal, Thailand and Vietnam, many reports indicated that over 50% of adolescent males had sexual experiences with commercial sex workers. Additionally, about 70% and 30% of male students in the Republic of Korea and Thailand respectively had more than two sexual partners (68).

1.7 Modern and Traditional Contraceptive Utilization in Unmarried Youths

According to WHO 2016 December updated fact sheet, there are several kinds of modern contraceptive methods such as combined oral contraceptives (COCs) or “the pill”, progestogen-only pills (POPs) or "the minipill", implants, monthly injectable or combined injectable contraceptives (CIC), combined contraceptive patch, combined contraceptive vaginal ring (CVR), intrauterine device (IUD) with copper containing, intrauterine device (IUD) contained levonorgestrel, male condoms, female condoms, male sterilization (vasectomy), female sterilization (tubal ligation), lactational amenorrhea method (LAM), emergency contraception pills (ulipristal acetate 30 mg or levonorgestrel 1.5 mg), standard days method or SDM, basal body temperature (BBT) method, two-day method and sympto-thermal method. As traditional methods, WHO described calendar method or rhythm method and withdrawal (coitus interruptus) (28).

Modern contraceptive methods were globally used by 57% of married or in-union women of reproductive age, including 90% of contraceptive users in 2015. Therefore, they were used at least three out of four contraceptive users in 148 countries which could represent all regions of the world. Nevertheless, in 11 countries mainly in Southern Europe and Middle Africa, less than half of all contraceptive users used modern methods. In Southern Europe and selected countries in Western Asia, withdrawal was widely practiced (70).

A study on unmarried women in India showed that 84% of respondents had used ECP, condom was about 63% as well as OCP and natural methods were around 47% and 26% respectively. That data described that the use of ECP is superseded that other contraceptive methods among unmarried women. Moreover, the respondents mentioned that they did not prefer to use condoms even though they had knowledge of condoms which can prevent sexually transmitted diseases and HIV/AIDS. Although ECP is not recommended as a routine family planning method, it is a very useful method to reduce the chance of unwanted pregnancy for unmarried youths' unplanned and unprotected sexual intercourse. That study, moreover, found that around two-third of unmarried sexually active youths who used ECP were regular users of ECP whereas only 38% had used ECP as in emergency case (71).

A survey in California on uninsured adolescents had similar results on ECP. They had good awareness on ECP but poor level of knowledge on ECP's purpose, access and proper uses. 14% of the respondents believed that ECPs were abortion pills and 26% did not certain the answer. 40% of respondents both male and female did not sure the answers on ECPs could be used as a regular method while 19% wrongly answered on that ECPs could prevent sexually transmitted diseases (72). Even though ECP is easily available for most of the population especially in western countries to reduce the risks for unwanted pregnancy, knowledge on use and perception on access is still limited (73). A report of fhi explained that limited providers' knowledge and negative attitudes, and poor users' awareness on ECP hindered adolescents and youths to learn about and use ECPs (74).

Condom use is also predominantly important in sexual intercourse of married and unmarried young people. This is because more than three-quarter of 552, 000 teenage pregnancies in US were occurred as unwanted pregnancies in 2011, as well as chlamydia, gonorrhea or syphilis diagnosis among nearly half a million of adolescents can be observed in 2014 (10). Hence, many countries emphasized on promoting condom use during those years, and condom use was increased. 2015 worldwide data from United Nations mentioned that condom use among married or in-union women of reproductive age has increased from 8% in 1994 to 12% in 2015 of all methods use (70). A study among unmarried female university students in China similarly indicated that male condom is the most popular contraceptive methods. Out of 28.3% of sexually active students who always adopted contraceptive methods, 82.9% of them use male condoms (75). Since HIV is continuously spreading throughout Asia, promoting condom use to prevent HIV/AIDS is vital for Asian countries (20).

In Myanmar, the pill, the minipill, injectable contraceptives, female sterilization, male sterilization, condoms and emergency contraceptive pills can be available as modern contraceptive methods. The main traditional methods are safe period (calendar method), withdrawal and traditional folk methods which cannot be proved certain efficacy (20).

In 2012, contraceptive prevalence rate in Myanmar was 46% (76). FRHS 2007 reported about 40.9% of currently married women were using contraception including

2.6% of traditional methods. In 2007, 19.3% of women used 3-month injection and it was the most common method (23).

A cross sectional study on risk behaviors such as tobacco smoking, alcohol consumption and premarital sex among medical students and community youths in Myanmar showed that 10.1% medical students and 11.9% of community youths in Myanmar engaged in premarital sex. There was no significant difference on premarital sexual experience in these two groups. However, consistent use of condom was obviously lower in (36.6%) in community youths than that of medical students (61.5%) (24).

A research on vulnerable youths in Pyin-Oo-Lwin indicated that most of the interviewees could answer various kinds of contraceptive methods including condoms. Majority of them also knew how to proper use a condom as well as merits of condom in preventing sexually transmitted infections and HIV/AIDS when having sex. However, that study also found out that people did not use condoms in reality when asking their participatory sex census (77).

Another study on male Myanmar migrant workers about condom use in Pakokku, Myanmar also found out that regularly condoms users with spouse, sex workers or girlfriends were only 11.1% of total respondents (78). As a common problem, contraceptive failure was appeared in Myanmar. 37% of women were seeking treatment for post abortion complications although they used contraceptive at the time of pregnancy occurred (23).

Moreover, unmet need of contraception was 17.7 in 2007 but the calculation did not include for unmarried women (20). An overview of WHO for birth spacing in Myanmar described that some service providers denied to provide contraceptives to unmarried women due to cultural sensitivity (20).

MICS 2009-2010 also mentioned that asking unmarried women about contraceptive use, pregnancy and childbirth is too sensitive. Hence, their data could not capture the information concerning contraceptive use of unmarried women (79). For these reasons, there is no reported data in Myanmar to determine or suggest the current circumstances of unmarried youths' contraceptive utilization in premarital sexual relationship. Therefore, this study on unmarried youths will highlight the current contraceptive utilization of them and some related factors.

2.8 Andersen Model of Health Service Utilization

Health service utilization is important to provide opportunity for prevention and treatment of diseases. In Andersen's health behavior model, health service utilization was defined by predisposing factors, enabling and need factors (80). Demographic variables, social structure and health beliefs are included in predisposing factors. As demographic variables, age and gender are imperative to determine the need of health service biologically. For social structure, a wide variety of factors which can determine social status are constituted. They are education, occupation, income, ethnicity which used as traditional measures in most researches to observe whether respondent's physical environment is leading to be healthy or unhealthy. However, the social structure of this model did not pay attention to social network and culture as much. Then, as health beliefs, knowledge, attitudes, beliefs and values of people on health care services are involved as important determinants for service utilization (26).

The next characteristic in behavioral model is enabling factor (26). It contains personal or family and community enabling characteristics. Health staffs and facilities have to be available for the people conveniently. For example, clinic should be near where people live or work so that people can access the health care service without having much transportation difficulties. Moreover, health service price should not be a burden for every individual or family. In addition, Andersen explained that providing information about various kinds of providers and types of health service can be additional enabling factors of the model. Likewise, the quality of social relationship can also influence to facilitate or impede the utilization of health service. Therefore, service providers' attitudes and the way to treat to the people who receive service are included as one of the enabling factors of the people.

Need, another necessary factor in Andersen's health seeking behavior model, contains perceived and evaluated needs. Indeed, perceived need is largely corresponding to social structure and health beliefs but demographic variables such as age and gender are related to evaluated need (26). Evaluated need can be represented by professional judgment on the need of medical care. However, it is sometimes related to both biological and social factors in some types of health services (26).

Under this behavioral model, the study on contraceptive utilization of unmarried youths will be carried out. Age and sex of youths will be included in demographic variables, as well as religion, education level, occupation, monthly income and persons staying together are as variables of social structure. Combining with them, knowledge, attitude and beliefs will be involved in predisposing factors. This is because a person's knowledge, attitude and belief can predispose to use or non-use contraception and it can explain how social structure can influence enabling factors and perceived need withal. As availability of contraceptive information and accessibility of contraceptive can enhance or impede contraceptive utilization of unmarried youths who engage in sexual intercourse, these variables are involved as enabling factors. If a respondent is still not sexually active, he or she will not use contraceptive. If a respondent involves in a sexual relationship, he or she may or may not perceive to use contraceptive. Moreover, sexual history can also point out whether a respondent had to use contraceptives or not. That is why sexual status and sexual history are defined as need factors in this study.

This study will find out whether there is association between specified predisposing, enabling, need factors and contraceptive utilization of unmarried youths in rural Yangon, Myanmar by using Andersen model of health service utilization (1960s) which found out the correlations between these variables. By exploring the association, the potential factors or variables that might significantly improve the contraceptive utilization of unmarried youths in rural areas of Yangon region, can be identified.

The Initial Behavioral Model (1960s)

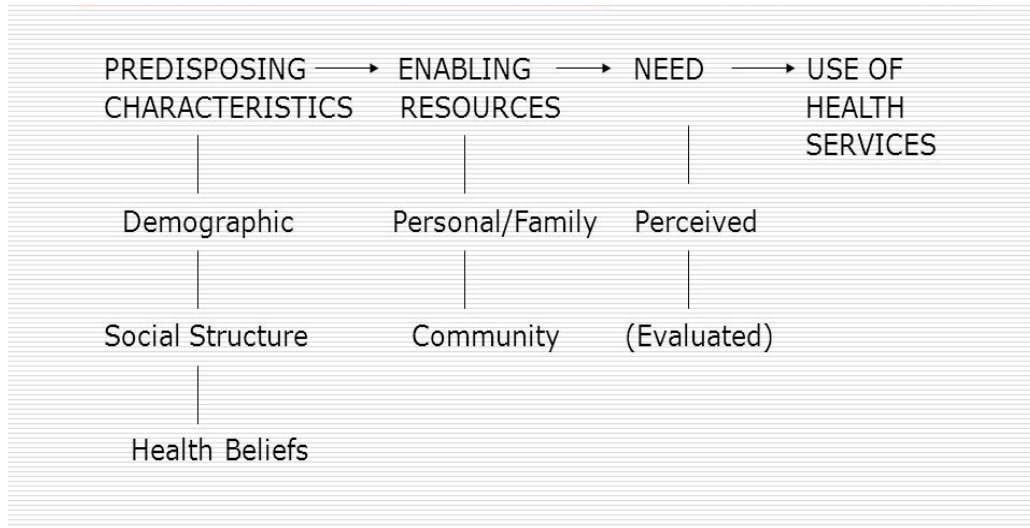
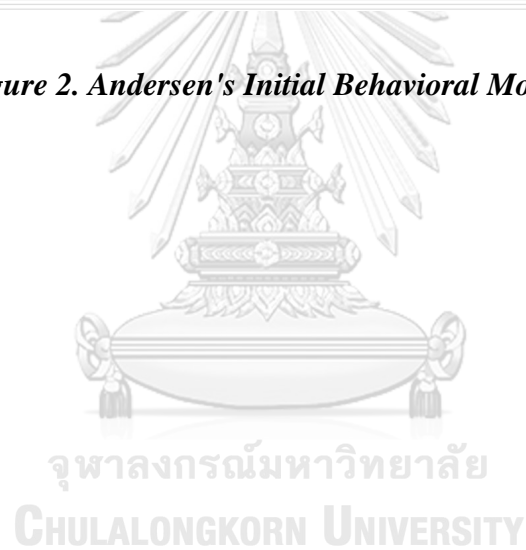


Figure 2. Andersen's Initial Behavioral Model (1960s)



CHAPTER III

RESEARCH METHODOLOGY

3.1 Research Design

This study was designed as a quantitative cross sectional descriptive study.

3.2 Study Population

The population in this study was unmarried youths with the age group of 15-24 who are residing in the rural areas of Yangon.

3.3 Study Area

This study was done in rural townships of Yangon region. Yangon region is the largest city of Myanmar, as well as an economic center and chief port of Myanmar.

There are four districts in Yangon as Yangon East district, Yangon West district, Yangon North district and Yangon South district.

Again, there are 8 townships, 14 townships and 13 townships in Yangon North district, Yangon East district and Yangon West district respectively. In Yangon South district, there are 10 townships and one sub-township. However, that sub-township is counted as a separate township in 2014 population census, and it makes 11 townships in Yangon South District. In this way, Yangon region includes 46 townships.

Among them, eight townships in Yangon South district and four townships in Yangon North district are classified as rural areas in Yangon Region in the 2014 population census and they are outside of the Yangon City Development Committee (YCDC) which coordinates urban planning. All townships (14) in East district and all townships in West district (13) are not included in rural areas of Yangon Region. Therefore, they are excluded from sampling of rural areas in Yangon Region. There are 11 townships in South district and 8 townships in North district. However, 8 out of 11 township from South and 4 out of 8 townships from North are classified as rural areas of Yangon Region in 2014 population census. Rural areas in Yangon region is only

defined by township level and not concerned with district level according to the 2014 census. Therefore, one township from 12 rural townships in Yangon region was chosen for study area.

3.4 Sample Size

The sample size was calculated by Cochran's formula.

The proportion of premarital sex among youths in Myanmar, 11.9%, was used from the results of previous survey in Myanmar.

The survey on risk behavior and associated factors of medical student and community youths in Myanmar, aged 15-24 years, was conducted to 400 medical students and 410 community youths with the support of Ministry of Health, Myanmar and MEXT (Ministry of Education, Culture, Sports, Science and Technology), Japan. That research revealed that 10.1% of medical student and 11.9% of community youths engaged in premarital sex. There is no significant difference on premarital sex among these two groups (24).

Based on this study, the proportion of premarital sex in youths was calculated as 11.9%.

According to Cochran's Formula,

$$n = \frac{Z^2 p(1 - p)}{d^2}$$

$$= \frac{(1.96)^2 (0.12)(0.88)}{(0.04)^2}$$

$$= 253.5 = 254$$

n= sample size

Z= standard value for 95% confidence interval=1.96

d= error allowance= 0.04 (the estimated proportion from previous study=P is low, 11.9%= 0.119=0.12, and so, error allowance 0.04 was used with 95% confidence interval.)

p= the proportion of community youths who engaged in premarital sex in Myanmar = 11.9%= 0.119= 0.12 (24)

$1-p= 0.88$

20% for withdraw from interview and refusal to participate = 51

Therefore, the sample size= $254+51= 305$

The 20% was added to sample size in order to avoid missing vital data, respondent's refusal to questionnaire, and incomplete answering the questionnaire.

3.5 Sampling Technique

Multistage sampling technique was used for data collection.

Step 1: There are four districts in Yangon region as Yangon East district, Yangon West district, Yangon North district and Yangon South district. All townships (14) in East district and all townships in West district (13) are not included in rural areas of Yangon Region (2014 census). Therefore, they are excluded from sampling of rural areas in Yangon Region. As rural areas of Yangon, eight townships in Yangon South district and four townships in Yangon North district are involved (2014 census). In Yangon, rural areas are classified as townships but they cannot be defined by district level. Hence, 12 townships out of 46 townships are included in rural areas of Yangon region. From those total 12 rural townships, 1 township was selected by simple random sampling method (17).

Step 2: The chosen township (Kawhmu township) includes 55 village tracts. Hence, one village tract was selected randomly.

Step 3: The chosen village tract has about 1290 unmarried youths with the age of 15- 24 according to the data from Kawhmu township immigration office and village tract administration office. Since 2014 to till now, people from the village tracts in Yangon Region have informed or reported to village tract administration offices through 10 households head or 100 households head when they are married. Hence, the list of unmarried youths was available from War Ba Lauk Thauk village tract's administration office. Therefore, the sample size 305 were selected by simple random sampling method, by using the list of 15-24 unmarried youths. The list was finally prepared and checked with the help of village leader and community health workers.

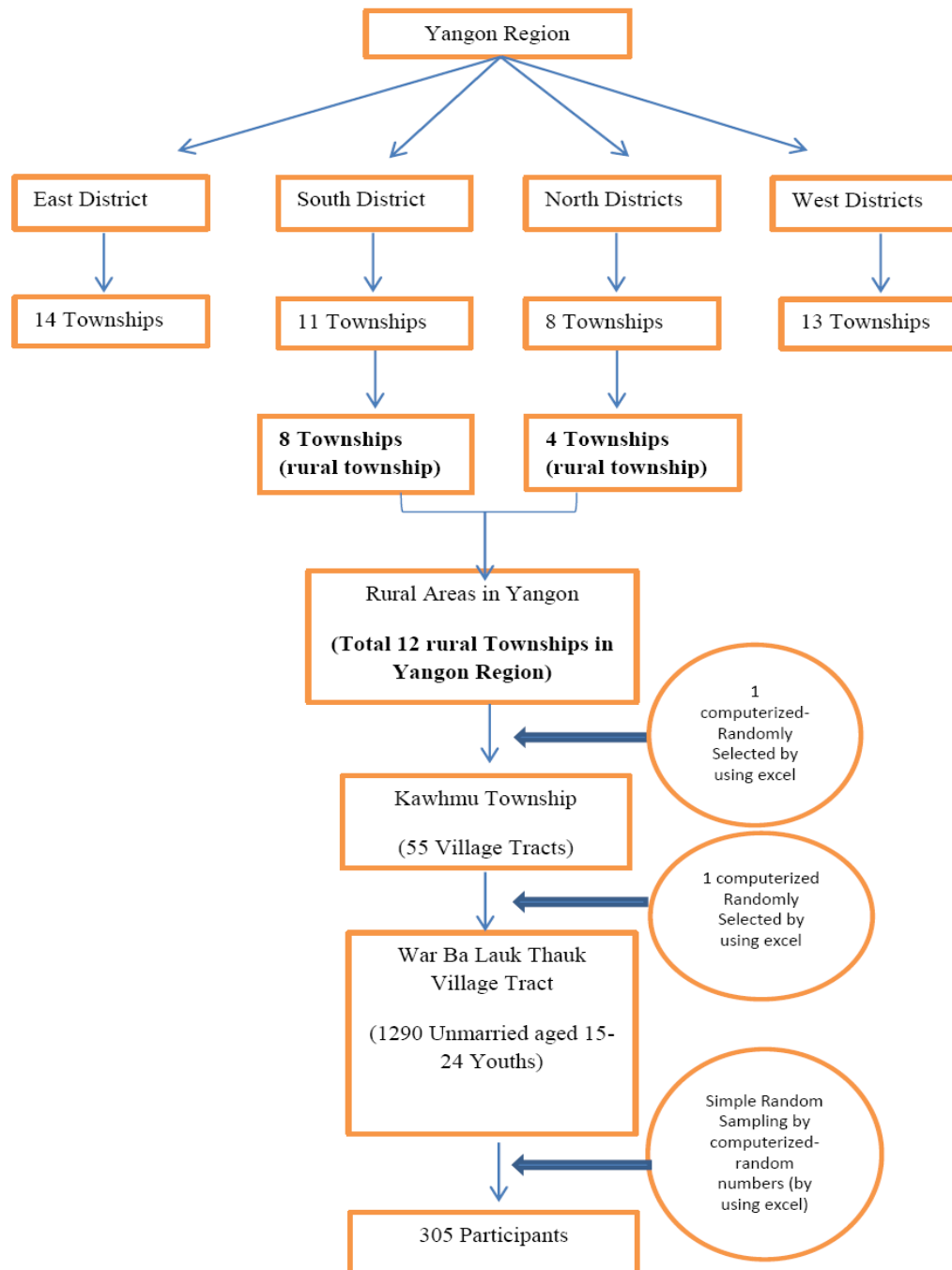


Figure 3. Sampling Flow Chart

3.5.1 Inclusion Criteria

- Youths, both male and female, who are not documented as (traditionally) “married” at the village tract administration office
- Unmarried youths, both male and female, who are in age of 15-24 years.
- Unmarried youths, both male and female, who are willing to participate and give written consent.
- Unmarried youths (both male and female) under 18 years old who are willing to participate and get written consent of parents or guardians.

3.5.2 Exclusion Criteria

- Unmarried youths, both male and female, who are mentally unsound.
- Youths (both male and female) who are divorced, separated and ever (either traditionally or legally) married.
- Unmarried youths (both male and female) under 18 years old whose parents or guardians are not willing to give written consent.

3.6 Measurement Tool

The data was collected by using both interviewer-administered and self-administered questionnaires. The questionnaire was prepared in English language. After that, the questionnaire was translated to Myanmar language, and then, back translated to English language by two independent translators who are working as researchers in Reproductive Health field. In order to ensure correspondence between Myanmar and English language, the translation from English to Myanmar was done by a reproductive health researcher with satisfied proficient English from government sector. Then, that translated Myanmar questionnaire was back translated to English by a reproductive health researcher who has not seen the original English questionnaire, has satisfied proficient English and Myanmar language, and worked at Burnet Institute Myanmar which is an international non-government organization. For some small

disagreements occurred between these two translators about some questions, the principal researcher discussed the issue with them, then decided and chose the right translation. The questionnaire was divided into four parts such as predisposing factors, enabling factors, need factors and contraceptive utilization. Part I and Part II were included in interviewer-administered questionnaire, and Part III and Part IV were in self-administered questionnaire.

Part I. Predisposing Factors

- Socio-demographic characteristics include age, sex, religion, education level, persons staying together, occupation and monthly income.
- Knowledge concerning Contraception

Ever heard on contraceptive methods was asked for 11 types of contraceptive methods that can be available in Myanmar. If the respondent could not answer some contraceptive methods by themselves, researcher prompted those methods.

The level of contraceptive knowledge was determined by asking 16 questions about knowledge on advantages and uses of different contraceptive methods including transmission and prevention of STI and HIV/AIDS.

The respondent obtained 1 mark for each correct answer and 0 for incorrect and uncertain answer. The score range was from 0 to 16, and was classified into three levels as follow by Benjamin Bloom's criteria.

Poor level of knowledge (<60%)	<10 Scores
Fair level of knowledge (60% - 80%)	10-13 Scores
Good level of knowledge (>80%)	>13 Scores

- Attitude towards Premarital sex and Contraception

The attitude of the respondent regarding premarital sex and contraception was measured by eight questions whether they agree or disagree with the statement used in Likert's scale which was ranging from strongly agree to strongly disagree.

Positive Statement (4)		Negative Statement (4)	
Choice	Score	Choice	Score
Strongly agree	5	Strongly agree	1
Agree	4	Agree	2
Uncertain	3	Uncertain	3
Disagree	2	Disagree	4
Strongly disagree	1	Strongly disagree	5

The standard point for the attitude was mean \pm standard deviation. All individual's answers summed up and calculated mean and standard deviation. The level of attitude was classified as follows.

Negative Attitude score \leq mean – standard deviation

Neutral Attitude mean- standard deviation <score< mean+ standard deviation

Positive Attitude score \geq mean + standard deviation

- Beliefs upon Premarital Sex and Contraception

The questions asked about the respondent's believes or presumptions on unprotected sexual intercourse, transmission and prevention of sexually transmitted infections as well as HIV/AIDS to explore the respondent's incorrect beliefs on premarital sex and contraception.

Six beliefs related questions were involved. The respondent obtained 1 mark for each correct answer and 0 for incorrect belief and unsure answer. In this questionnaire, all belief-related questions are negative statements. Therefore, correct answers were “No” for each question. The level of beliefs was classified as high, moderate and low level of correct beliefs after calculating mean and standard deviation from the total score of all answers.

Low level of correct belief	score \leq mean – standard deviation
Fair level of correct belief	mean- standard deviation <score< mean+ standard deviation
High level of correct belief	score \geq mean + standard deviation

Part II. Enabling Factors

- Availability of Contraceptive Information

The question asked about the availability of formal or informal health education session, group or individual discussion with health professionals, and availability of health education materials and their sources.

- Availability and Accessibility to Contraceptive Method

This asked about availability of contraceptives, geographical accessibility such as distance, time taken and mode of transportation to the source of contraception, affordability on contraceptive and acceptability such as service provider’s attitude.

Part III. Need Factors

- Sexual Activity Status

The question asked about experience on premarital sex whether the respondent has ever had sexual intercourse. If the respondent had sexual

experience, that respondent was defined as sexually active and asked about sexual history. If the respondent has never had sexual intercourse, that respondent was defined as sexually inactive and skipped the sexual history questions.

- Sexual History

The questions asked the sexually active respondent about the history of sexual experience such as age of first sexual intercourse, type of partner, peer pressure to practice sexual intercourse, sex with commercial partner, contraceptive uses on those occasions and number of sexual partners.

Part IV. Modern and Traditional Contraceptive Utilization in Unmarried Youths

- The sexually active participants were asked whether they used any contraception at the latest sexual intercourse.
- If the participants did not use any contraception at the latest sexual intercourse, the participants were asked why they did not use.
- Then, the sexually active participants were asked the frequency of utilization on each modern and traditional contraceptive method as “Always”, “Almost Always”, “Sometimes” and “Never”.
- After that, intended use for both sexually inactive respondents and sexually active respondents were asked.
- The participants who intend to use were again asked which traditional or modern contraceptive method are intended to use in the future.

3.7 Data Validity and Reliability

The questionnaire was initially adopted from existing questionnaire which had been validated by experts in previous study (18). However, that questionnaire was later modified according to study area and population. This is because the previous study was done on Myanmar youth migrants in Bang Bon district, Thailand.

For knowledge question that was question number 11 in this study questionnaire, question number 11.4 for emergency contraceptive pill, 11.7 for IUD, 11.8 for male condom, 11.10 for female condom and 11.13 for withdrawal method questions were added to the previous questionnaire to include all methods which were available in Myanmar and focused in this study. For attitude question, question number 12.8 was added to the questionnaire in accordance with the social norm among Myanmar unmarried youths.

Therefore, the questionnaire was again validated by three experts for content validity and construct validity to confirm whether this questionnaire measures what it claimed in conceptual framework and operational definitions. The questionnaire was validated by three experts; Dr. Alessio Panza, MD (RH consultant), Dr. Ratana Somrongthong (Ph.D, Speciality with Adolescent and Reproductive Health) and Dr. Montakarn Chuemchit (Ph.D, Speciality with Gender and Sexuality).

. For face validity, unmarried youths who lived in Yangon but not in the study township checked the questionnaire to be sure the comprehension of each question.

a. Pre-test

For internal consistency of the questionnaire, the pre-test (pilot test) was conducted by principal researcher with 10% of sample size. Therefore, 30 unmarried youths with the age of 15-24 were involved for pre-test to detect the problems of questionnaire design such as misinterpretation of questions, inability to answer some questions and ambiguity of words, and also to test the process of performing the research. The pre-test was done in Hmawby, another township which is also involved in rural areas of Yangon.

After the pre-test, an explanation for causal encounter (at question no. 30) was added into both English and Myanmar versions of questionnaire.

b. Reliability

A Cronbach's Alpha for scale reliability was used to test the reliability. Cronbach's alpha result with cutoff point of 0.70 was used to estimate the internal consistency of knowledge, attitude and beliefs questions. This is because 0.70 can be assumed that 70 percent of the measured variance is reliable and the left 30 percent is owing for random error (81). The results from Cronbach's alpha for pre- test showed 0.79 for 16 knowledge questions, 0.86 for 8 attitude related questions, and 0.72 for belief questions.

The reliability test was also performed after collecting the data from the sample population. The result of Cronbach's alpha for knowledge, attitude and belief questions for study population were 0.744, 0.716 and 0.710 respectively.

3.8 Data Collection

Data collection was carried out by principle researcher and three research assistants. Two male and one female research assistants who worked, and were working as research assistants for reproductive health related research projects at international non-government organizations were recruited for this study. In order to obtain the sincere information from unmarried youths, research assistants who already have experience with reproductive health research were recruited. The interviews were performed by same gender researchers and participants.

Principal researcher trained research assistants for one day prior to data collection in order to reduce interviewer bias. Training was included research objectives, methodology, details about questionnaires and ethics concerns. The principal researcher explained about all of them. The documents such as research objectives, questions, methodology, papers for ethic approval, and questionnaires were given to the research assistants to know clearly about the research. After teaching, explaining and reading those papers, they asked the questions to the principal researcher what they were not clear or wanted to know more. To assess the research assistants' understanding and performance, they had to role-play as interviewer and interviewee. When one research assistant made interviewer, another same gender research assistant had to act as an interviewee. To be familiar with the questionnaire and to minimize the

interviewer's bias, every researcher had to role-play as an interviewer at least two times in the training. Finally, the field testing was done with three unmarried youths by using the questionnaire in order to assess the research assistants' performance.

Data collection was processed between September and October 2017. Questionnaires were in Burmese language, and all participants were asked the same questionnaires. Participants (15-24 unmarried youths) were selected by simple random sampling method (by excel) by using the list which was prepared with the help of village leader and community health workers. Then, the principle researcher and research assistants went to the houses of selected participants by bike or car.

The researcher explained the selected participant about participant information sheet and consent form including the right to refuse to participate in the research. Then, the researcher asked the selected participant whether they want to participate in the research or not. When the participant chose to participate, he or she had to sign the consent form to participate in the research. When the selected participants refused to participate in this research, they were excluded.

For the selected participants who were not available at their houses or village tract at the time of interview, the researchers contacted until three times to those participants with the help of community health workers. When the participants could not be available until three times, those participants were excluded.

When the selected participants were in age under 18, the researchers asked to get the consent from their parents. When their parents were not be available at the interview period, the researchers asked guardians to get consents for participating in the research. When the participants' parents or guardians were illiterate, the consents were read by researcher. The illiterate parents or guardians could make thumbprint on the parental consent form to allow their child to participate in the research. When the respondent or parent or guardian of the respondent refused of give a fingerprint in a consented form, he or she could write down one word (initial name) of their names, as a traditional way of signing for illiterates in those rural areas. Moreover, a literate witness who was selected by participant's parent or guardian but no connection to the researcher signed the consent. When (under 18) participant's parent or guardian refused to give consent, that participant was excluded.

Data collection was done in combination of face to face interview by using interviewer administered questionnaire, and self-report by self-administered questionnaire for sensitive questions. Interviewer-administered questionnaire were used for Part I: predisposing factors and Part II: enabling factors. Part III: need factors and Part IV: contraceptive utilization were prepared as a self-administered questionnaire, and participants responded by themselves in the self-administered questionnaire.

The interview and answering self-administered questionnaire were conducted at the participant's convenient time and place. When the participant's house or backyard or nearby place had privacy, the interview was done on that place. When those places did not have privacy, the interview was done at the community meeting halls or compound outside of sub-center. The researcher and respondent were either on wooden or plastic chairs or sitting on the floor or under shaded trees, and were in the same level. The interview places were quite, shaded, and with privacy.

Before the interview, the researchers explained the participants about consent, anonymity, freedom to participation, right to withdraw, confidentiality, access to final report and no use the data for other purposes. Participant were also explained that the self-administered questionnaire will be seen only by the principal researcher. After the researcher had explained the process in step by step, the participants who agreed to participate signed on the written consent form. The participant was informed that the written consent form which includes participant's sign will be kept confidentially and separately from the questionnaires, and it cannot be traced back the answer. After the interview, self-administered questionnaire had answered by themselves. After the self-administered questionnaire had been answered, the participant had to give the questionnaire back to researcher by folding it in half and stapling in the middle of wide opening edge of the fold. The staplers and opaque files were already prepared and brought by researchers. Then, the researcher will keep both interviewer-administered and self-administered questionnaires in an opaque file confidentially. The questionnaires were kept by principle researcher in a locked drawer. All questionnaires and data were destroyed after the thesis had finished.

Out of 305 randomly selected participants, 24 participants did not give participant consents and parents or guardians of 7 participants who are in age under 18

did not give parental/guardian consents. Therefore, refusal rate was 10% in this study. Moreover, there were 3 unavailable participants even though researchers tried to contact until three time during the interview period, and 1 incomplete answer.

3.9 Data Entry and Data Analysis

In this way, 270 respondents were included in data entry for analysis. Principle researcher checked and input the data every day after the data collection. Before entering the data to the computer, the questionnaire were coded. Data entry was done by double entry process. Data analysis was processed by SPSS software version 16 for windows.

Descriptive Statistics was done as the following table.

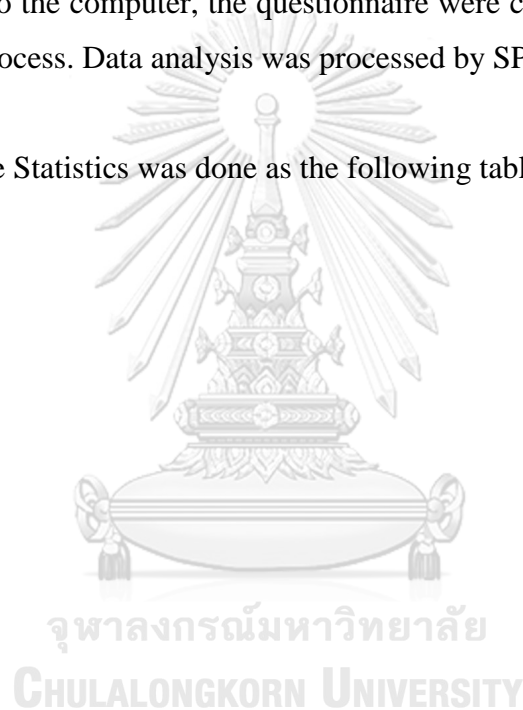


Table 3.1 Variables, Measurement Scale and Descriptive Statistics

Variables	Measurement Scale	Descriptive Statistics
I. Predisposing Factors		
A. Socio-demographic Characteristics		
Age (15,16), (17,18,19), and (20-24)	Ratio Scale	Number, Percentage, Mean, S.D
Sex	Nominal Scale	Number, Percentage
Religion	Nominal Scale	Number, Percentage
Education Level	Ordinal Scale	Number, Percentage
Living Arrangement	Nominal Scale	Number, Percentage
Occupation	Nominal Scale	Number, Percentage
Monthly Income	Ordinal Scale	Number, Percentage
B. Knowledge on Contraception	Ordinal Scale	Frequency, Percentage
C. Attitude towards Premarital Sex & Contraception	Ordinal Scale	Frequency, Percentage
D. Beliefs upon Premarital Sex & Contraception	Ordinal Scale	Frequency, Percentage
II. Enabling Factors		
E. Availability of Contraceptive Information	Nominal Scale	Frequency, Percentage
F. Availability and Accessibility to Contraceptive Method	Nominal Scale	Frequency, Percentage
III. Need Factors		
G. Sexual Activity Status	Nominal Scale	Number, Percentage
H. Sexual History	Nominal Scale	Frequency, Percentage
I. Modern and Traditional Contraceptive Utilization among Unmarried Youths		
Use of contraception at the latest sex	Nominal Scale	Number, Percentage
Always use of contraception in the life-time	Nominal Scale	Number, Percentage
Intended use of contraception in the future	Nominal Scale	Number, Percentage

Inferential Statistics

Bivariate Analysis: Associations between independent variables and dependent variables were analyzed by using Pearson's Chi-square test with statistical significant level of less than 0.05. When the frequencies of cells were less than 5, Chi-square approximation may not be reliable, and so, Fisher's exact test with statistical significant level of less than 0.05 was used (82).

Multivariate Analysis: In order to find out the clear associations between multiple independent variables and a dependent variable at the same time, multivariable regression were be used. Since the dependent variables such as use of contraception at the latest sexual intercourse, always use of contraception in the life-time and intended use of contraception in the future were arranged as dichotomous outcomes, multiple logistic regression with "forward conditional" stepwise method was used (83).

For multivariate analysis, the variables which were significant at the level of p value less than 0.2 at bivariate analysis, plus those variables that were theoretically important or had been cofounders in prior research (even with significance >0.2) went first step of regressions (83). Then, variables with p value of greater than 0.05 were excluded from the analysis to get the final model.

Table 3.2 Variables, Measurement Scale and Inferential Statistics for 34 Sexually Active Respondents

Independent Variables (Categorical Scale)	Dependent Variable	Bivariate Analysis	Multivariate Analysis
<p>I. Predisposing Factors A. Socio-demographic Characteristics</p> <p>Age (15,16), (17,18,19),(20-24) Sex Religion Education Level Living Arrangement Occupation Monthly Income</p> <p>B. Knowledge on Contraception</p> <p>C. Attitude towards Premarital Sex & Contraception</p> <p>D. Beliefs upon Premarital Sex & Contraception</p> <p>II. Enabling Factors</p> <p>E. Availability of Contraceptive Information F. Availability and Accessibility to Contraceptive Method</p> <p>III. Need Factors</p> <p>G. Sexual Activity Status H. Sexual History</p>	<p>Actual Use (Dichotomous outcomes)</p> <p><i>I. Use of contraception at the latest sexual intercourse</i></p> <p>A. Use of at least one modern contraceptive method</p> <p>B. Use only traditional contraceptive method</p> <p>C. Not use any contraceptive method</p> <p><i>II. Always use of contraception in the life-time</i></p> <p>A. Use of at least one modern contraceptive method</p> <p>B. Use only traditional contraceptive method</p> <p>C. Not use any contraceptive method</p>	<p>Chi Square test</p> <p>Fisher's exact test (when the frequency of cells were less than 5)</p>	<p>Multiple logistic regression</p>

Table 3.3 Variables, Measurement Scale and Inferential Statistics for all 270 Respondents

Independent Variables (Categorical Scale)	Dependent Variable	Bivariate Analysis	Multivariate Analysis
<p>I. Predisposing Factors</p> <p>A. Socio-demographic Characteristics</p> <p>Age (15-19, 20-24) Sex Religion Education Level Living Arrangement Occupation Monthly Income</p> <p>B. Knowledge on Contraception</p> <p>C. Attitude towards Premarital Sex & Contraception</p> <p>D. Beliefs upon Premarital Sex & Contraception</p> <p>II. Enabling Factors</p> <p>E. Availability of Contraceptive Information</p> <p>F. Availability and Accessibility to Contraceptive Method</p> <p>III. Need Factors</p> <p>G. Sexual Activity Status</p> <p>H. Sexual History</p>	<p>Intended Use (Dichotomous outcomes)</p> <p>III. Intended Use of Contraception in the future</p> <p>A. Only modern contraceptive method</p> <p>B. Both modern and traditional contraceptive methods</p> <p>C. Only traditional contraceptive method</p> <p>D. Not intend to use any contraceptive method</p>	<p>Chi Square test</p> <p>Fisher's exact test (if the cells are less than 20%)</p>	<p>Multiple logistic regression</p>

3.10 Ethical Consideration

Ethical approval was obtained from the Ethical Committee of Chulalongkorn University (COA No. 181/2017). The purpose or objective and procedure of research were well explained to the participants before interview. Then, written consent was taken from who committed to participate. Although illiterate participants could make thumbprint or sign their initial name, there was no illiterate participant in this study. The interviewers asked consents from the guardians before they started interview with the unmarried youths of under 18 years. When the parent or guardian was illiterate, they could make thumbprint and a literate witness also signed on the parental consent form. When the parent or guardian of the respondent refused to give a fingerprint in the consent form, he or she could write down one word (initial name) of their names, as a traditional way of signing for illiterates in those rural areas. The privacy and confidentiality were precisely kept up. Self-determination and autonomy were respected. The participant could feel free to withdraw any time during interview. Time and place for interview and self-administered questionnaire were chosen according to the convenience to the participants. Research was carried out by gender preference as female participant with female young adult researcher, and male for male young adult researcher. That is why participants could feel comfortable while interviewing. In addition, the research did not have any discrimination on never married youths aged between 15 and 24 who were residing in this selected village tract. The names of the respondents were not noted, and their answers were closed in opaque files and kept confidentially. The written consents that include participant's signs were kept in a separate opaque file to maintain confidentiality. The questionnaires were kept by principle researcher in a locked drawer. Any questionnaires could not be traced back to any participants. Names or other identifying information were not included in the report or summaries of this study. All questionnaires and data were destroyed after the thesis had finished.

3.11 Expected Benefit & Application

Since this study was the first study which emphasized on unmarried youths' contraceptive utilization in Myanmar, it provides base line information of unmarried youths' contraceptive usage and some related factors to health authorities for further promoting contraceptive knowledge and utilization.

Based on this finding of the study, health service for reproductive health of unmarried youths might be aware and improved in rural areas of Yangon Region.



CHAPTER IV

RESULTS

4.1 Background Information of the Study Area

This study aimed to describe the socio-demographic characteristics, predisposing factors, enabling factors, need factors and contraceptive utilization, and to analyze the relationship between them among unmarried youths in rural Yangon, Myanmar. The study population consisted of 270 unmarried youths from a village tract of one rural township in Yangon. Out of 270 unmarried youths, 34 were sexually active, and 236 were sexually inactive.

First section of the result part focuses on describing the all predisposing factors such as socio-demographic characteristics, knowledge, attitude and belief, enabling factors, need factors and contraceptive utilization.

Then, the second section concentrates on the bivariate and multivariate analysis between independent variables and dependent variables. Dependent variables are use of contraception at the latest sexual intercourse and always use of contraception in the life-time for sexually active respondents, and intended use of contraception in the future for all respondents. The data of use of contraception at the latest sexual intercourse and always use in the life-time is again divided and prepared as use of at least one modern contraceptive method, use of traditional contraceptive methods only and use neither method. Intended use of contraception is also divided as intend to use only modern contraceptive method, intend to use both methods, intend to use only traditional method and intend to use neither. In this way, there are total 10 dependent variables in this study, and relationships between all independent variables and dependent variables are analyzed.

Part I: Descriptive Findings

a) Predisposing Factors

4.2 Socio-demographic Characteristics

4.2.1 Age group, Sex, Religion, Education and Living Arrangement

Table 4.1 shows about some of the socio-demographic characteristics of the respondent in rural Yangon, Myanmar. The mean age of the respondent was 20 years. By categorizing into three age groups, about 56% respondents were included in 20-24 years age group. Nearly 46 percent of the respondents were male, and about 54 percent were female. As religion, almost all of them are Buddhist since only one respondent answered as an atheist.

For level of Education, all respondents could read and write simple Myanmar language. Only 1.1 % had never gone to school but still could read and write Myanmar language. Over half of the respondents (68.1 %) had high school level education.

High percentage of respondents (76.7%) lived and shared most of the meals together with their parents in past three months.

Table 4. 1 Age group, Sex, Religion, Education and Living Arrangement of the respondents (n=270)

Socio-demographic Characteristics	Frequency (n)	Percentage (%)	Cumulative Percent (%)
Age group of respondents			
15 - 16 years old	47	17.4	17.4
17 - 19 years old	72	26.7	44.1
20-24 years old	151	55.9	100.0
Mean = 19.85 , SD = 2.868 Range = 15- 24			
Sex			
Male	124	45.9	45.9
Female	146	54.1	100.0
Religion			
Buddhist	269	99.6	99.6
Other (Atheist)	1	0.4	100.0
Level of Education			
Never gone to school but can read and write simple Myanmar Language	3	1.1	1.1
Primary School	6	2.2	3.3
Secondary Education	34	12.6	15.9
High School Level	184	68.1	84.1
Higher Education	43	15.9	100.0
Living Arrangement			
With Parents	207	76.7	76.7
With Father only	5	1.9	78.5
With Mother only	13	4.8	83.3
With Relatives	25	9.3	92.6
With Friends	20	7.4	100.0

4.2.2 Occupation and Income

For occupation as shown in Table 4.2, almost half of the respondent (45.6 %) were students, 13.3% were employed while others were working as private or government employees or together with their family member such as agriculture, tailor and so on.

Regarding having own income, 60.7% of the respondents answered that they do not have own income. 39.3% of respondents had own income, and about half of them (53.3 %) had 100,000-200,000 kyats per month and 40.2 percent had less than 100,000 kyats per month.

Table 4. 2 Occupation and Income of the respondents (n=270)

Socio-demographic Characteristics	Frequency (n)	Percentage (%)	Cumulative Percent (%)
Occupation			
Student	123	45.6	45.6
Private Employee	19	7.0	52.6
Government Employee	6	2.2	54.8
General/ Random Laborer	28	10.4	65.2
Hawker	24	8.9	74.1
Agriculture	14	5.2	79.3
Tailor	20	7.4	86.7
Unemployed	36	13.3	100.0
Having Own Income			
Yes	106	39.3	39.3
No	164	60.7	100.0
Monthly Income			
<100,000 kyats per month	43	40.2	40.2
100,000-200,000 kyats per month	57	53.3	93.5
200000-300000 kyats per month	7	6.5	100.0

4.3 Heard of any Contraceptive Method

Out of 270 respondents, table 4.3 showed that majority of them (82.2%) had ever heard contraceptive methods. 17.8 percent of the respondents answered that they never heard about contraceptive method, and their knowledge scores were calculated as 0 since they had to skip all of the knowledge related questions in the questionnaire.

Table 4. 3 Ever Heard of any Contraceptive Method (n=270)

Ever heard of any Contraceptive Method	Frequency (n)	Percentage (%)	Cumulative Percentage (%)
Yes	222	82.2	82.2
No	48	17.8	100

Ever Heard of Specific Contraceptive Method with and without prompt Answers

Table 4.4 shows describes the respondents' answer on heard of contraceptive methods without prompts. The highest percentages in without prompts can be seen in oral contraceptive pill (22.3%) and injection (21.2%) whereas male sterilization got the

least respond (2.8%) as male sterilization cannot be legally available for unmarried male. For traditional methods, 7.2 % and 5.1% of respondents answered for withdrawal and safe period without prompt.

Table 4. 4 Ever Heard of Specific Contraceptive Method without Prompt Answers (n=222)

*Heard of Contraception	Without Prompt
	N (%)
Oral Contraceptive Pill	161 (22.3%)
Injection	153 (21.2%)
Male Condom	95 (13.1%)
Female Sterilization	84 (11.6%)
Withdrawal before Ejaculation	52 (7.2%)
IUD	38 (5.3%)
Safe Period	37 (5.1%)
Female Condom	34 (4.7%)
Emergency Contraceptive Pill	26 (3.6%)
Implant	23 (3.2%)
Male Sterilization	20 (2.8%)
Total	723 (100.0%)

*Multiple Responses

Table 4.5 also shows the respondents' answers with prompt. With prompt answers, safe period was the most frequent answers (13.9%), followed by female sterilization (12.5%) and emergency contraceptive pill (10.5%). 10.4% answered about male condom. Even with prompt, only 5.3% and 5.8% of respondents had heard female condoms and male sterilization respectively.

Table 4. 5 Ever Heard of Specific Contraceptive Method with Prompt Answers (n=222)

*Heard of Contraception	With Prompt
	N (%)
Safe Period	133 (13.9%)
Female Sterilization	120 (12.5%)
Emergency Contraceptive Pill	101 (10.5%)
Male Condom	100 (10.4%)
IUD	91 (9.5%)
Withdrawal before Ejaculation	91 (9.5%)
Implant	90 (9.4%)
Injection	66 (6.9%)
Oral Contraceptive Pill	59 (6.2%)
Male Sterilization	56 (5.8%)
Female Condom	51 (5.3%)
Total	958 (100.0%)

*Multiple Responses

4.4 Knowledge Concerning Contraceptive Method

Table 4.6 shows the answer of respondents for knowledge concerning question. 64% of respondents knew that injection can be taken once in 3 months. For oral contraceptive pill, however, only 33.8% knew it cannot prevent sexually transmitted diseases even though 63.5% of respondent knew oral contraceptive pill is needed to take every day to prevent pregnancy.

Regarding emergency contraceptive pill, majority of respondents did not have knowledge on it. 85.1% of respondents thought that it can be substituted for regular contraception, and moreover, only 18.5% of respondents knew that the second dose of emergency contraceptive pill should be taken 12 hours after the 1st dose.

31.5% of respondent answered that implant can be used to prevent pregnancy for 3-5 years depending on type of implant. For IUD, only 18.5% responded that it does not interfere sexual intercourse.

64.9% of respondents answered that male and female condoms can prevent both pregnancy and sexually transmitted diseases, and HIV/AIDS.

Although 76.1% of respondents could answer correctly for female sterilization, only 14.9% responded correctly for male sterilization. Majority (85.1%) thought that male sterilization can reduce sexual desire and can cause weakness to men.

For traditional contraceptive methods, only 28.4% of respondents answered that withdrawal cannot work well to prevent pregnancy. In addition, only 15.3% refused that safe period can be used as an effective contraceptive method. That shows most of the respondents assumed that traditional methods are effective like modern methods.

Majority of respondent (82.0%) answered that all contraceptive methods can prevent both sexually transmitted infections and pregnancy if used properly.

According to the result of correct answers on each method, knowledge on emergency contraceptive pills and IUD was very low compared to other modern contraceptive method. Moreover, the study population had low knowledge about safe period despite most of them mentioned it as a contraceptive method that they ever heard.

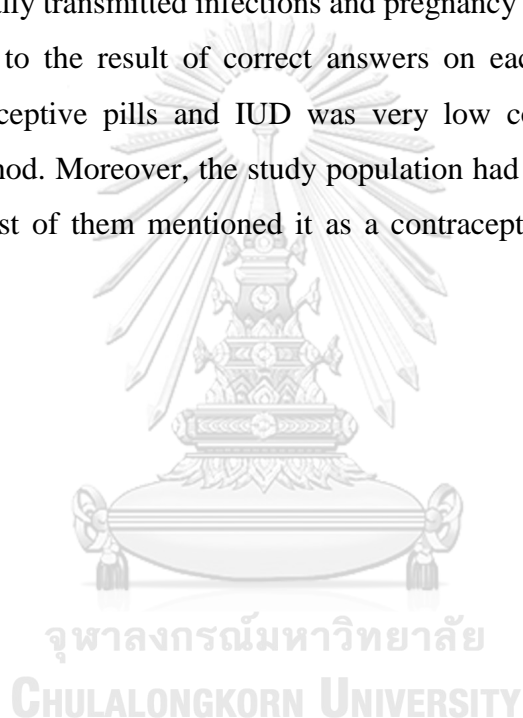


Table 4. 6 Respondents by Knowledge Concerning Contraceptive Method (n= 222)

Statement	Number (Percentage)	
	Correct	Incorrect
1. Depo injection should be taken once in 3 months to prevent pregnancy.	142 (64.0%)	80 (36.0%)
2. Women who take oral contraceptive pills should take a pill every day at the same time to avoid becoming pregnant.	141 (63.5%)	81 (36.5%)
3. Oral contraceptive pill can prevent sexually transmitted diseases.*	75 (33.8%)	147 (66.2%)
4. Emergency contraceptive pill can substitute for regular contraception.*	33 (14.9%)	189 (85.1%)
5. 2nd dose of emergency contraceptive pill should be taken 12 hours after the 1st dose.	41 (18.5%)	181 (81.5%)
6. Implants can be used to prevent pregnancy for 3-5 years depending on type of implant.	70 (31.5%)	152 (68.5%)
7. IUD interferes sexual intercourse.*	41 (18.5%)	181 (81.5%)
8. Male condoms may slip off during sexual intercourse if not used correctly.	108 (48.6%)	114 (51.4%)
9. Male and female condoms can prevent both pregnancy and sexually transmitted diseases including HIV/AIDS.	144 (64.9%)	78 (35.1%)
10. Female condom is placed inside the vagina.	90 (40.5%)	132 (59.5%)
11. If the women do not want the children anymore, sterilization can be used.	169 (76.1%)	53 (23.9%)
12. Male sterilization can reduce sexual desire and it can cause weakness to men.*	33 (14.9%)	189 (85.1%)
13. Withdrawal before ejaculation does not work well at preventing pregnancy.	63 (28.4%)	159 (71.6%)
14. Safe period can be used as an effective contraceptive method.*	34 (15.3%)	188 (84.7%)
15. Incorrect and inconsistent use of contraception can cause unwanted pregnancy.	120 (54.1%)	102 (45.9%)
16. All contraceptive methods can prevent both sexually transmitted infections and pregnancy if used properly.*	40 (18.0%)	182 (82.0%)

*Negative Statement

Level of Knowledge

Among 270 respondents, majority (89.3%) had poor level of knowledge which was defined when the score was less than 10 out of total 16 scores. Table 4.7 showed three levels of knowledge among respondents.

Table 4. 7 Level of Knowledge Concerning Contraceptive Method (n= 270)

Level of Knowledge	Frequency (n)	Percentage (%)	Cumulative Percentage (%)
Poor level of Knowledge (<10 score)	241	89.3	89.3
Fair Level of Knowledge (10-13 score)	27	10	99.3
Good Level of Knowledge (>13 score)	2	0.7	100

4.5 Attitude towards Premarital Sex and Contraception

Table 4.8 shows that about 30% of the respondents revealed that premarital sex is acceptable for unmarried youths for those who promise to marry but cannot marry yet.

Almost 45% of the respondents disagreed that providing information to youths about contraception can increase the rate of sexual activity. Furthermore, over half of the respondents agreed that contraceptive utilization should be taught in the school, and discussion on using contraception is not a shameful manner among couples.

Almost 30% of the respondents only disagreed that buying or accessing contraception is a shameful manner for unmarried youths. Nearly 48% of the respondents agreed that negotiation skill is needed to convince the partner to use condom.

Only about 26% of the respondents disagreed that they will be looked down or stigmatized if their friends find them with condom.

Table 4. 8 Respondents by Attitude towards Premarital Sex and Contraception (n= 270)

Statement	Frequency (Percentage)				
	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
1. Premarital sexual relation is acceptable for those who promise to marry but can't marry yet.	45 (16.7%)	36 (13.3%)	42 (15.6%)	69 (25.6%)	78 (28.9%)
2. It is acceptable to have premarital sex for men but not for women.*	28 (10.4%)	51 (18.9%)	72 (26.7%)	62 (23.0%)	57 (21.1%)
3. Providing information to youths about contraception can increase the rate of sexual activity. *	27 (10%)	43 (15.9%)	88 (32.6%)	57 (21.1%)	55 (20.4%)
4. Contraceptive utilization should be taught in the school.	71 (26.3%)	80 (29.6%)	53 (19.6%)	34 (12.6%)	32 (11.9%)
5. Discussion on using contraception is not a shameful manner among couples.	80 (29.6%)	72 (26.7%)	60 (22.2%)	33 (12.2%)	25 (9.3%)
6. Buying or accessing contraception is a shameful manner for unmarried youths.*	68 (25.2%)	65 (24.1%)	60 (22.2%)	43 (15.9%)	34 (12.6%)
7. You need negotiation skill to convince your partner to use condom.	64 (23.7%)	66 (24.4%)	100 (37.0%)	25 (9.3%)	15 (5.6%)
8. If you go for a shop for contraception and if your friends find you with condom, you will be looked down or stigmatized.*	63 (23.3%)	55 (20.4%)	82 (30.4%)	35 (13.0%)	35 (13.0%)

*Negative Statement

Level of Attitude

Regarding attitude, the mean score of attitude was 25 and standard deviation was 6. The score of attitude was defined as negative when the score was less than or equal to $25-6$ (19), and as positive when it was greater than or equal to $25+6$ (31). Table 4.9 shows over half of the respondents (67.4%) had neutral attitude.

Table 4.9 Level of Attitude towards Premarital Sex and Contraception (n= 270)

Level of Attitude	Frequency (n)	Percentage (%)	Cumulative Percentage (%)
Negative Attitude (≤ 19 score)	40	14.8	14.8
Neutral Attitude (20-30 score)	182	67.4	82.2
Positive Attitude (≥ 31 score)	48	17.8	100.0

4.6 Belief upon Premarital Sex and Contraception

Table 4.10 reveals that 37.8% of respondents believed that a woman cannot become pregnant when she has unprotected sex with a man for the first time.

Nearly half of the respondents (45.9%) believed that they have no risk of sexually transmitted diseases if they have unprotected sex with their lover or regular partner, and they cannot get sexually transmitted diseases if they wash properly with soap after having sexual intercourse.

Above half of the respondents (52.6%) believed that the boy does not need to use condom to prevent STI if his partner is using another contraceptive methods except female condom.

Furthermore, still 31.5% respondents believed that all sexually transmitted diseases including HIV/AIDS can be treated and cured. Moreover, 58.5% also believed that condoms can interfere with sexual activity.

Table 4. 10 Respondents by beliefs upon Premarital Sex and Contraception (n= 270)

Statement	Number (Percentage)	
	Correct	Incorrect
1. Do you believe that a woman cannot become pregnant when she has unprotected sex with a man for the first time?	168 (62.2%)	102 (37.8%)
2. Do you believe that you have no risk of sexually transmitted diseases if you have unprotected sex with your lover or regular partner?	146 (54.1%)	124 (45.9%)
3. Do you believe that you cannot get sexually transmitted diseases if you wash properly with soap after having sexual intercourse?	146 (54.1%)	124 (45.9%)
4. Do you believe that the boy does not need to use condom to prevent STI if his partner is using contraception (except female condom)?	128 (47.4%)	142 (52.6%)
5. Do you believe that all sexually transmitted diseases including HIV/AIDS can be treated and cured?	185 (68.5%)	85 (31.5%)
6. Do you believe that using condom can interfere with sexual activity?	112 (41.5%)	158 (58.5%)

Level of Correct Beliefs

For level of correct beliefs, three levels were categorized by using mean score and standard deviation as in attitude levels. As all the statements in belief questions were negative, the correct answers for all 6 statements were “false”. The mean score of correct belief was 3, and standard deviation was 2. The level of correct belief was defined as low when it was less than or equal to 1, and as high when it was higher or equal to 5.

About half of the respondents (50.4%) had fair level of correct beliefs. The percentages of respondents who had low level and high level of correct beliefs were not much different: 20.7% with low level of correct beliefs and 28.9% with high level of correct belief as shown in table 4.11.

Table 4. 11 Level of Correct Belief upon Premarital Sex and Contraception (n= 270)

Level of Correct Belief	Frequency (n)	Percentage (%)	Cumulative Percentage (%)
Low level of Correct Belief (≤ 1 score)	56	20.7	20.7
Fair Level of Correct Belief (2-4 score)	136	50.4	71.7
High Level of Correct Belief (≥ 5 score)	78	28.9	100.0

b) Enabling Factors

4.7 Health Education Session and Health Education Materials about Contraception

Table 4.12 describes that 44.8% of the respondent had received health education session about contraceptive methods, and 39.6% of respondents had received health education materials while 60.4% did not received any health education material about contraceptive methods.

Table 4. 12 Receiving Health Education Session and Health Education Materials about Contraception (n=270)

Health Education	Frequency (n)	Percentage (%)	Cumulative Percent (%)
Ever Received Health Education Session about Contraceptive Methods			
Yes	121	44.8	44.8
No	149	55.2	100.0
Ever Received Health Education Materials about Contraceptive Methods			
Yes	107	39.6	39.6
No	163	60.4	100.0

4.7.1 Types and Source of Health Education Session

Figure 4.1 describes types of health education session that the respondents received; about 42% of health education session were health talk, and others such as health education session by videos, group trainings and individual discussion with health professional could also be found.

Health personnel (NGO, Private, Public) got the highest percentage among source of health education session. Other sources are friends, family members, working place, school and university as shown in figure 4.2.

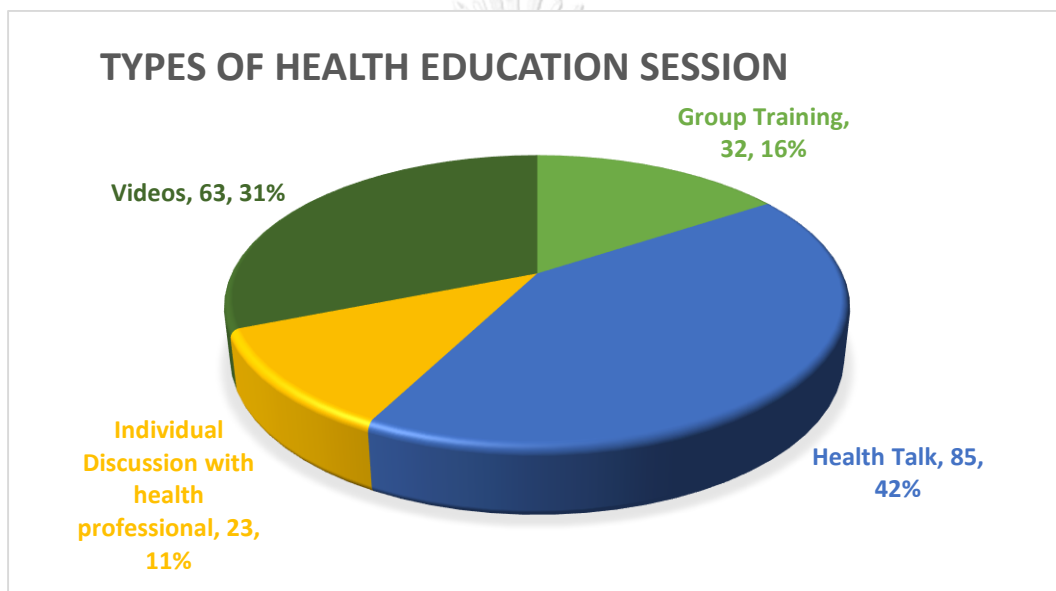


Figure 4. 1 Types of Health Education Session (n=121)

*Multiple Responses

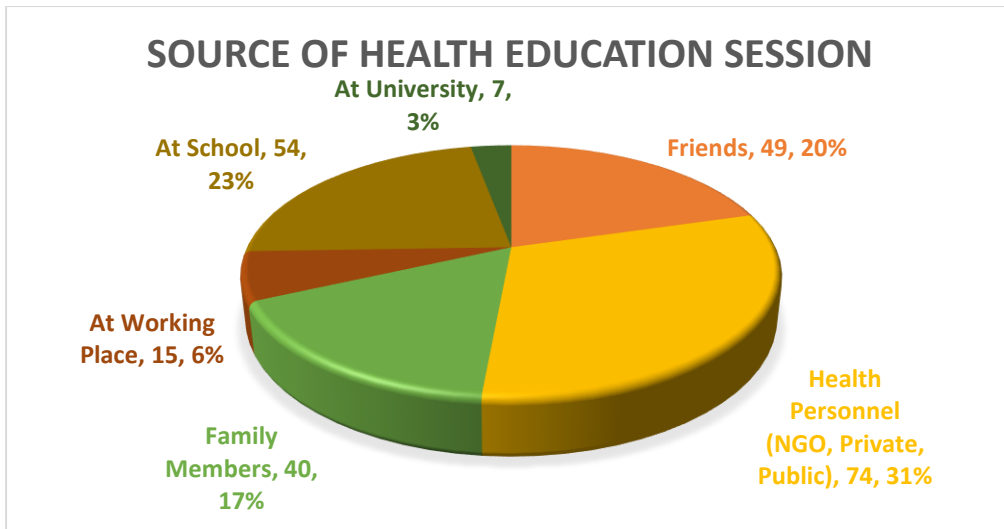


Figure 4. 2 Source of Health Education Session (n=121)

*Multiple Responses

4.7.2 Health Education Materials

Figure 4.3 also reveals that the highest and second highest percent for the source of health education materials were from NGO or private or public health personnel (36.6%) and from their friends (20.9%) respectively.

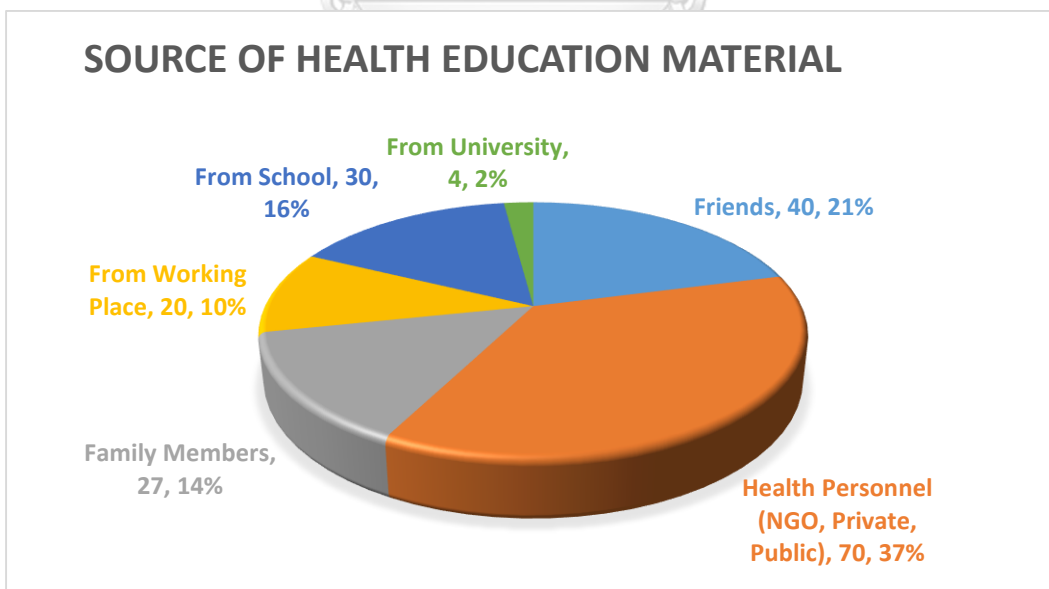


Figure 4. 3 Source of Health Education Material (n=107)

*Multiple Responses

4.8 Easy availability and Source of contraception when needed

Table 4.13 also shows about easily availability of contraception in need and sources which are also included in enabling factors. 40.4% of respondents answered that they can get contraception easily if they are in need. Drug store (70.6%) was the main source of contraception in need according to the respondents' responds. On the other hand, only very few respondents answered government clinic (5.5%).

Table 4. 13 Easy availability and Source of contraception when needed

Enabling Factors	Frequency (n)	Percentage (%)	Cumulative Percent (%)
Easy Availability of Contraception when needed (n=270)			
Yes	109	40.4	40.4
No	161	59.6	100.0
Source of Contraception when needed (n=109)			
Drug Store	77	70.6	70.6
Government Clinic	6	5.5	76.1
Private Clinic	9	8.3	84.4
Friends	7	6.4	90.8
Health Personnel from NGO	10	9.2	100.0
Total	109	100	

4.9 Transportation and Time-Taken to the nearest source of contraception and Affordability to the price of contraception

Again for transportation to the nearest source of contraception in table 4.14, 20.7% of respondents answered walking although 6.3% responded that they will ask someone to buy. 47.8% of respondents mentioned that they do not know.

For time-taken to the nearest source of contraception, 22.6% answered that less than 30 minutes while 53.3% mentioned don't know.

Regarding affordability, only 3% answered that they cannot afford for any contraceptive method and 74% answered do not know.

Table 4. 14 Transportation and Time-Taken to the nearest source of contraception, and Affordability to the price of contraception (n=270)

Enabling Factors	Frequency (n)	Percentage (%)	Cumulative Percent (%)
Transportation to the nearest source of Contraception			
Walking	56	20.7	20.7
Public Vehicle	26	9.6	30.4
Private Vehicle	42	15.6	45.9
Ask someone to buy	17	6.3	52.2
Don't Know	129	47.8	100.0
Time Taken to the Nearest source of Contraception			
<30 mins	61	22.6	22.6
30mins-1 hr	36	13.3	35.9
1-2 hours	24	8.9	44.8
Over 2 hours	5	1.9	46.7
Don't Know	144	53.3	100.0
Affordable to the price of Contraception			
Yes	61	22.6	22.6
No	8	3	25.6
Don't Know	201	74.4	100.0

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4.10 Friendly Welcome, Judgmental Attitude, Same Gender Service Provider and Confidentiality in Service Provider

Table 4.15 describes that 20% of respondent responded that they believed that the service provider will friendly welcome them to provide contraceptive service if they go to NGO or public or private clinic to receive contraception but 14.4% did not believe.

Besides, 31.5% of respondents believed that the service provider will judge them on their age or not being married if they go to NGO or public or private clinic to receive contraception but 10% of them believed that the service providers will not judge them.

28.5% of the respondents believed that they can discuss with same gender service providers and they can confidentially discuss with service provider.

Table 4. 15 Friendly Welcome, Judgmental Attitude, Same Gender Service Provider and Confidentiality in service provider (n=270)

Enabling Factors	Frequency (n)	Percentage (%)	Cumulative Percent (%)
Friendly Welcome by Service Provider			
Yes	54	20.0	20.0
No	39	14.4	34.4
Don't Know	177	65.6	100.0
Judgmental Attitude of Service Provider			
Yes	85	31.5	31.5
No	27	10.0	41.5
Don't Know	158	58.5	100.0
Same Gender Service Provider			
Yes	77	28.5	28.5
No	29	10.7	39.3
Don't Know	164	60.7	100.0
Confidentiality in Discussion with Service Provider			
Yes	77	28.5	28.5
No	26	9.6	38.1
Don't Know	167	61.9	100.0

c) Need Factors

4.11 Experience on sexual intercourse and Age group at first sexual intercourse

Among 270 respondents, 12.6% have experienced sexual intercourse. The mean age at first sexual intercourse was 20 years (Standard deviation- 2.62), and the age range

was from 15 to 24 years. The age at first sexual intercourse was described by age group as shown in table 4.16.

Table 4. 16 Experience on sexual intercourse and Age group at first sexual intercourse

Need Factors	Frequency (n)	Percentage (%)	Cumulative Percent (%)
Have Experienced Sexual Intercourse (n=270)			
Yes	34	12.6	12.6
No	236	87.4	100
Age group at 1st sexual intercourse (n=34)			
15-16 years	6	17.6	17.6
17-19 years	9	26.5	44.1
20-24 years	19	55.9	100
Mean = 19.53, SD= 2.62 Range= 15-24, Mode= 20			

4.12 First Sexual Intercourse

As shown in table 4.17, majority of sexually active respondents' partners for first sexual intercourse were their boyfriends or girlfriends (82.4%). 5.9% were with commercial sex partner and 11.8% with causal encounter. 94.1% of them used contraception at first sex, and about half of them used modern contraceptive methods.

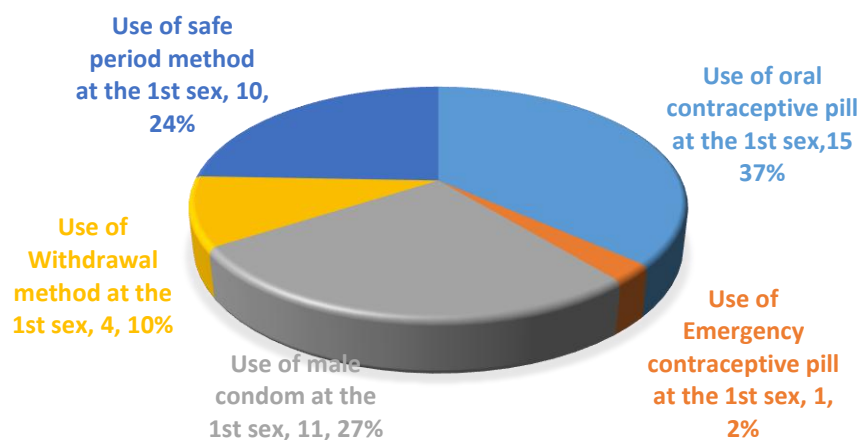
Figure 4.4, likewise, reveals that the use of each contraceptive method at the first sexual intercourse. Oral contraceptive pill was used the most (37%), condom was 27% and emergency contraceptive pill was only 2%. As traditional contraceptive methods, 24% used safe period and 10% used withdrawal method.

Table 4. 17 First Sexual Intercourse (n=34)

Need Factors	Frequency (n)	Percentage (%)	Cumulative Percent (%)
Type of Partner at first sexual intercourse			
Boyfriend/Girlfriend	28	82.4	82.4
Commercial Sex Partner	2	5.9	88.2
Casual Encounter	4	11.8	100.0
Use of Contraception at first sexual intercourse			
Yes	32	94.1	94.1
No	2	5.9	100.0
*Use of Contraceptive method at first sexual intercourse			
Only Modern Contraceptive Method	18	52.9	52.9
Only Traditional Method	10	29.4	82.4
Both Modern and Traditional Methods	4	11.8	94.1
Use Neither	2	5.9	100.0

*Multiple Responses

USE OF CONTRACEPTIVE METHODS AT 1ST SEXUAL INTERCOURSE

**Figure 4. 4 Use of contraceptive method at the first sexual intercourse (n=32)**

*Multiple Responses

4.13 Sex by Peer Pressure and Use of Contraception

Table 4.18 shows that 26.5% of sexually active respondents had sex by peer pressure. Among them, 66.7% also got peer pressure to use contraceptive method, and 55.6% used contraceptive methods at those times. Nevertheless, Figure 4.5 reveals that over half of used contraceptive method was traditional methods.

Table 4. 18 Sex by Peer Pressure and Use of Contraception

Need Factors	Frequency (n)	Percentage (%)	Cumulative Percent (%)
Sex by Peer Pressure (n=34)			
Yes	9	26.5	26.5
No	25	73.5	100.0
Peer Pressure to use Contraceptive method (n=9)			
Yes	6	66.7	66.7
No	3	33.3	100.0
Use of Contraception when sex by Peer Pressure (n=9)			
Yes	5	55.6	55.6
no	4	44.4	100.0
* Use of Contraceptive method when sex by Peer Pressure (n=9)			
Only Modern Contraceptive Method	1	11.1	11.1
Only Traditional Contraceptive Method	3	33.3	44.4
Both Modern and Traditional Methods	1	11.1	55.6
Neither	4	44.4	100.0

*Multiple Responses

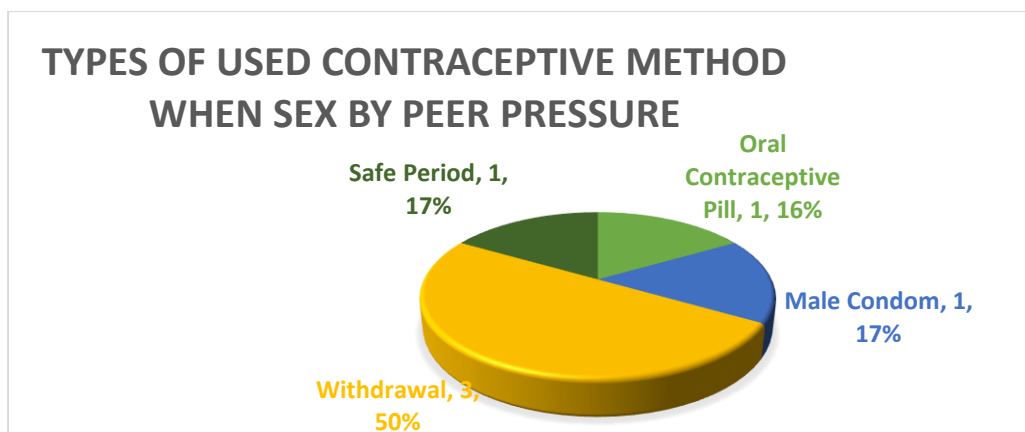


Figure 4. 5 Types of use contraceptive method when sex by peer pressure (n=9)

*Multiple Responses

4.14 Sex with Commercial Partner and Use of contraception

Among 34 sexually active respondents, as shown in table 4.19, 14.7% had sex with commercial sex partner. All of the respondents who had sex with commercial sex-partner used contraceptive methods: 80% used male condom and 20% used withdrawal method.

Table 4. 19 Sex with Commercial Partner and Use of Contraception

Need Factors	Frequency (n)	Percentage (%)	Cumulative Percent (%)
Sex with Commercial Sex-Partner (n=34)			
Yes	5	14.7	14.7
No	29	85.3	100.0
Use of Contraception when sex with Commercial Sex-Partner (n=5)			
Yes	5	100	100.0
*Use of Contraceptive method when sex with Commercial Sex-Partner (n=5)			
Only Modern Contraceptive Method (Male Condom)	4	80	80
Only Traditional Contraceptive Method (Withdrawal)	1	20	100.0

*Multiple Response

4.15 Number of Sexual Partner

Table 4.20 also showed numbers of sexual partners for sexually active respondents, 82.4% had 2 or fewer partners, 11.8% had 3-5 partners and 5.9% had more than 10 partners.

Table 4. 20 Number of Sexual Partner (n=34)

Number of Sexual Partner	Frequency (n)	Percentage (%)	Cumulative Percent (%)
2 or fewer	28	82.40	82.4
3 -5 partners	4	11.80	94.1
More than 10	2	5.90	100.0

4.16 Use of Contraception at the latest sexual intercourse

Table 4.21 reveals that 79.4% used contraception at the latest sexual intercourse.

Figure 4.6 describes that 37% used safe period and 12% used withdrawal as their contraceptive methods. As modern contraceptive methods, 27% used oral contraceptive pills, 21% used male condom, and 3% used injection.

Furthermore, figure 4.7 reveals that the reasons why 20.6% of respondents (7 respondents) did not use any contraceptive method at the latest sexual intercourse, and about 43% of them answered that their partner did not want to use.

Table 4. 21 Use of Contraception at the latest sexual intercourse (n=34)

Use of Contraception at the latest sexual intercourse	Frequency (n)	Percentage (%)	Cumulative Percent (%)
Yes	27	79.4	79.4
No	7	20.6	100.0
*Use of contraception at the latest sexual intercourse			
At least one Modern Contraceptive Method	15	44.1	44.4
Only Traditional Contraceptive Method	12	35.3	79.4
Neither	7	20.6	100.0

*Multiple Responses

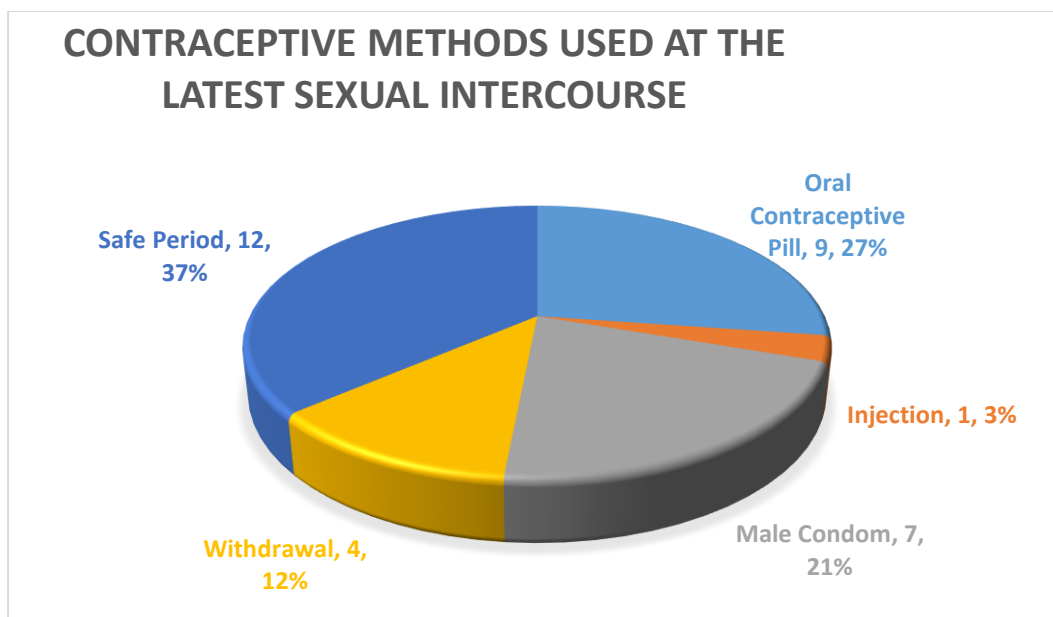


Figure 4. 6 Use of contraceptive method at the latest sexual intercourse (n=27)

*Multiple Responses

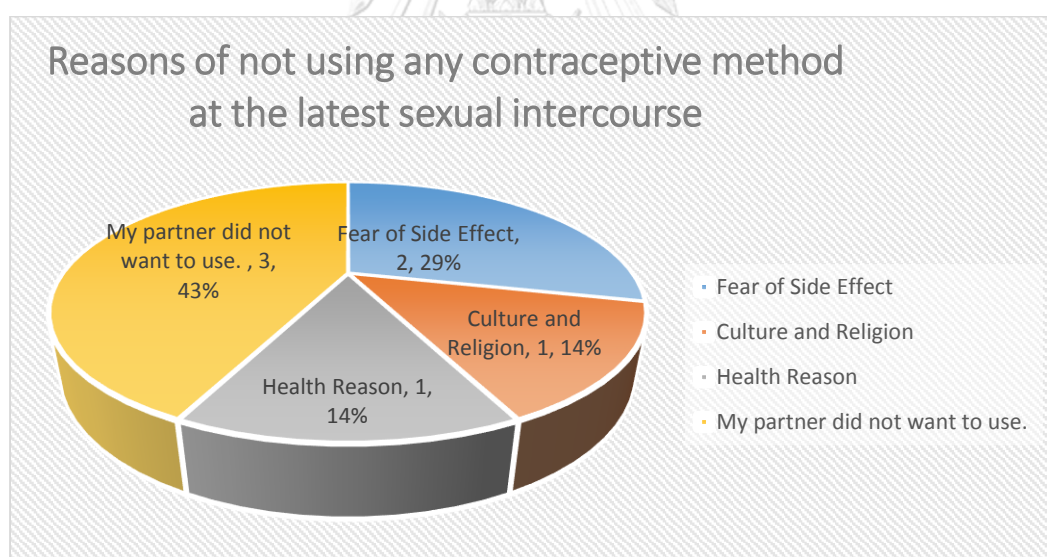


Figure 4. 7 The Reasons of not using any contraceptive method at the latest sexual intercourse (n=7)

4.17 Always Use of Contraception in the Life-time

Table 4.22 and figure 4.8 describe that only 38% of sexually active respondents used always contraception, and 43% of them always used oral contraceptive pills or safe period. Always use male condom was only 7% (1 respondent).

Table 4. 22 Always Use of Contraception in the Life-time (n=34)

Always Use of contraception	Frequency (n)	Percentage (%)	Cumulative Percent (%)
Yes	13	38.2	38.2
No	21	61.8	100.0
*Always Use of contraceptive method			
Always use at least one Modern Contraceptive Method	6	17.6	17.6
Always use only Traditional Contraceptive Method	7	20.6	38.2
Neither	21	61.8	100.0

*Multiple Responses

**Figure 4. 8 Types of always use contraceptive method (n=13)**

*Multiple Responses

4.18 Intended Use of Contraception in the Future

Table 4.23 reveals that 57% of total respondents intended to use contraception in the future. 125 (53%) out of 236 non sexually-active respondents, and 30 (88.2%) out of 34 sexually-active respondents intended to use contraception in the future.

Regarding contraceptive methods, in table 4.24, 45%, 4%, and 8% of total 270 respondents intended to use only modern method, only traditional method and both

method respectively while 43% did not intend to use any contraceptive method in the future.

Figure 4.9 describes about each methods for the respondents who intended to use contraception in the future. 32 % of them intended to use oral contraceptive pill, and 30% intended to use injection. Only 16% intended to use male condom while 14 % intended to use traditional methods such as withdrawal (10%) and safe period (4%).

Table 4. 23 Intended Use of contraception in the future and sexual activity status (n=270)

Intended Use of Contraception	Sexually Active	Non Sexually-Active	Total
Intended to Use	30(88.2%)	125 (53.0%)	155 (57.4%)
Intended to Use Neither Method	4 (11.8%)	111 (47.0%)	115 (42.6%)
Total	34 (100.0%)	236 (100.0%)	270 (100.0%)

Table 4. 24 Intended Use of contraceptive Methods in the future (n=270)

Intended Use of Contraceptive Method	Sexually Active	Non Sexually-Active	Total
Intended Use of only modern method	20 (58.8%)	101 (42.8%)	121 (44.8%)
Intended Use of both methods	8 (23.5%)	14 (5.9%)	22 (8.1%)
Intended Use of only traditional method	2 (5.9%)	10 (4.24%)	12 (4.4%)
Intended Use of Neither Method	4 (11.8%)	111(47.0%)	115 (42.6%)
Total	34 (100%)	236 (100%)	270 (100%)

*Multiple Responses

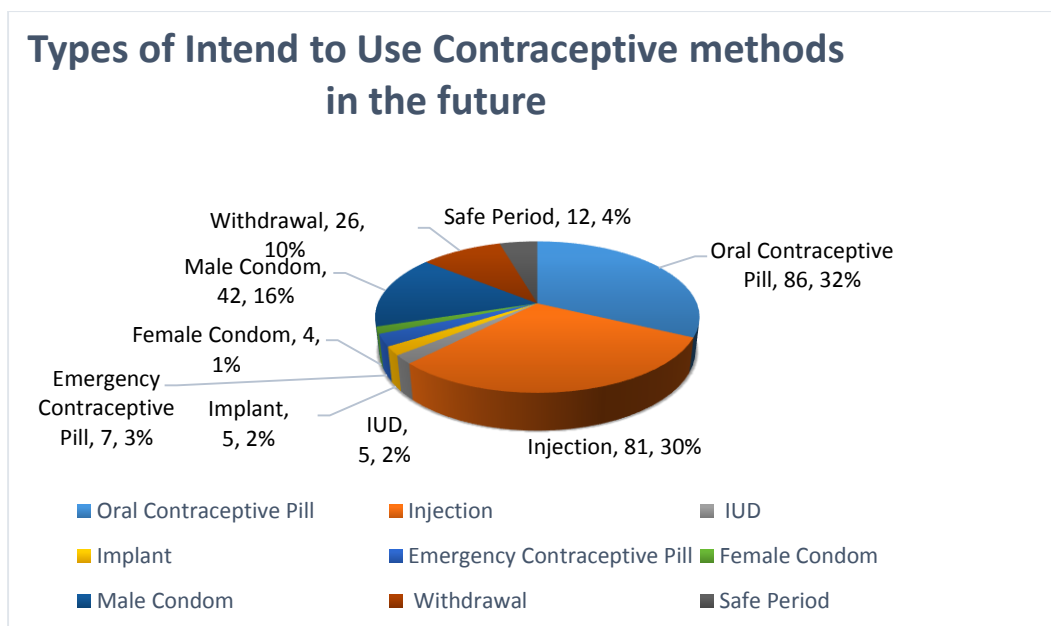


Figure 4. 9 Types of intend to use contraceptive methods in the future (n=155)

*Multiple Responses

4.19 Comparison between Actual Use and Intended Use of Contraception among Sexually Active respondents

Table 4.25 shows that use of contraception at the first sexual intercourse among sexually active respondents was 94.1% but use of contraception in the latest sexual intercourse (79.4%) was lower than the first sexual intercourse. Moreover, always use in the life-time was only 38.2%.

Table 4. 25 Comparison between Actual Use and Intended use of contraception among sexually active respondents (n=34)

Actual Use and Intended Use of Contraception	Use of Modern and Traditional Contraception		
	At least one Modern Method*	Only Traditional Method	Total
Use at the first sexual intercourse	22 (64.7%)	10 (29.4%)	32 (94.1%)
Use at the latest Sexual Intercourse	15 (44.1%)	12 (35.3%)	27 (79.4%)
Always Use in the life-time	6 (17.6%)	7 (20.6%)	13 (38.2%)
Intended Use in the future	28 (82.3%)	2 (5.9%)	30 (88.2%)

*Use at least one modern method= Use of only modern method + Use of both methods

Part II: Inferential Statistics

Bivariate Analysis

Chi square test was used to analyze the association between all independent variables and ten dependent variables: 6 dependent variables for actual use and 4 dependent variables for intended use. For some cells with the frequency less than 5, Fisher exact test was used. 10 dependent variables are as follow.

6 dependent variables for Actual Use (34 sexually active respondents)

1. Use of at least one modern contraceptive method at the latest sexual intercourse
2. Use of only traditional contraceptive method at the latest sexual intercourse
3. Not use any contraceptive method (use neither) at the latest sexual intercourse
4. Always use at least one modern contraceptive method in the life-time
5. Always use only traditional contraceptive method in the life-time
6. Not always use any contraceptive method in the life-time

4 dependent variables for Intended Use in the future (all 270 respondents)

7. Intend to use only modern contraceptive method in the future
8. Intend to use both contraceptive methods in the future
9. Intend to use only traditional contraceptive method in the future
10. Not intend to use any contraceptive method in the future

In this study, age of the respondents and age at the first sex were grouped as three categories. Occupation includes student, private employee, government employee, general/random laborer, hawker, and unemployed. Agriculture and tailor

were included in others option. However, they were also inserted separately because significant population was found for both agriculture and tailor.

For knowledge, attitude and belief, three levels were defined. For knowledge, the level was set up by using Bloom criteria as <60%, 60-80% and >80%. For attitude and belief, the levels were defined by calculating mean and standard deviation.

Only some variables that showed significant associations were described by tables as many independent and dependent variables were included in this study.

I. Use of contraception at the latest sexual intercourse

A. Association between all independent variables and use at least one modern contraceptive method at the latest sexual intercourse for 34 sexually active respondents

Firstly, the association between all independent variables and use of at least one modern contraceptive method at the latest sexual intercourse were analyzed.

Table 4.26 shows there was a significant negative association between living and sharing most of the meals together with parents in past three months and use of at least one modern contraceptive method at the latest sexual intercourse with p value 0.033. The result reveals that respondents who lived together with parents were less likely to use at least one modern contraceptive method at their latest sexual intercourse.

Table 4. 26 Bivariate analysis of use at least one modern contraceptive method at the latest sexual intercourse and living arrangement (n=34)

Variables	Use at least one modern contraceptive method N (%)	Use only traditional method and neither method N (%)	X ²	P value
Living Arrangement				#0.033*
With parents	9 (33.3%)	18 (66.7%)		
With father only	2 (100.0%)	0 (0.0%)		
With mother only	1 (100.0%)	0 (0.0%)		
With relatives	2 (100.0%)	0 (0.0%)		
With friends	1 (50.0%)	1 (50.0%)		

Since frequency of the cell was less than 5, only Fisher's exact test was used.

Fisher's Exact test, * p value <0.05

B. Association between all independent variables and use only traditional contraceptive method at the latest sexual intercourse for 34 sexually active respondents

All independent variables and use only traditional contraceptive method at the latest sexual intercourse were analyzed to find the association between them. However, there is no association between any independent variables and use of only traditional contraceptive method at the latest sexual intercourse, and they were not shown by tables.

C. Association between all independent variables and use neither method at the latest sexual intercourse for 34 sexually active respondents

When bivariate analysis was carried out to find association between all independent variables and use neither method at the latest sexual intercourse, the result reveals that there are three need factors which had significant positive associations with use of contraception. Table 4.27 describes the association between them with p values.

Table 4. 27 Bivariate Analysis of use neither method at the latest sexual intercourse and three need factors

Variables	Use Neither N (%)	Use at least one modern method and only traditional method N (%)	X2	P value
Use of contraception at 1 st sexual intercourse (n=34)				#0.037*
Yes	5 (15.6%)	27 (84.4%)		
No	2 (100.0%)	0 (0.0%)		
Use of contraception when sex by peer pressure (n=9)				#0.008*
Yes	0 (0.0 %)	5 (100.0%)		
No	4 (100.0%)	0 (0.0%)		
Use of contraceptive method when sex by peer pressure (n=9)				#0.024*
Only Modern contraceptive method	0 (0.0%)	1 (100.0%)		
Only traditional contraceptive method	0 (0.0%)	3 (100.0%)		
Both contraceptive methods	0 (0.0%)	1 (100.0%)		
Neither	4 (100.0%)	0 (0.0%)		

Since the frequencies of all cells were less than 5, only Fisher's Exact test was used.
Fisher's Exact test, * p value <0.05

II. Always use of contraception in the life-time

A. Association between all independent variables and always use at least one modern contraceptive method in the life-time for 34 sexually active respondents

Always use at least one modern contraceptive method in the life time and all independent variables were analyzed, and there was a significant negative association with age group at 1st sexual intercourse as shown in table 4.28. The analysis reveals that respondents with first sexual onset at 15-16 years was the most likely to use always at least one modern contraceptive method in the life-time compared to next two age groups.

Table 4. 28 Bivariate Analysis of always use at least one modern contraceptive method in the life-time and age group at 1st sexual intercourse (n=34)

Variables	Always use at least one modern method N (%)	Use only traditional method and neither N (%)	X2	P value
Age group at 1 st sexual intercourse				#0.020*
15-16 years	3 (50.0%)	3 (50.0%)		
17-19 years	2 (22.2%)	7 (77.8%)		
20-24 years	1 (5.3%)	18 (94.7%)		

Since frequency of the cell was less than 5, only Fisher's exact test was used.
Fisher's Exact test, * p value <0.05

B. Association between all independent variables and always use only traditional contraceptive method for 34 sexually active respondents

Among all independent variables, affordability, confidentiality and use of contraceptive methods at 1st sexual intercourse had significant negative association with always use only traditional contraceptive method as shown in table 4.29.

Respondents who answered not affordable and do not know were more likely to use only traditional method compared to the respondents who answered the price of contraception are affordable. The association between them was significant with p value 0.048. In the same way, respondents who answered that there is no confidentiality in discussion with service provider were more likely to use traditional methods, and association could be seen with p value 0.039.

Again, the respondents who used only traditional method at the first sexual intercourse were also the most likely to use always only traditional contraceptive method (p value = 0.027).

Table 4. 29 Bivariate analysis of always use only traditional contraceptive method and affordability to the price of contraception, confidentiality in service provider, use of contraceptive methods at 1st sexual intercourse (n=34)

Variables	Always use only traditional method N (%)	Always use at least one modern method and neither N (%)	X2	P value
Affordability to the price of contraception				#0.048*
Yes	4 (13.8%)	25 (86.2%)		
No	1 (100.0%)	0 (0.0%)		
Don't Know	2 (50.0%)	2 (50.0%)		
Confidentiality in discussion with service provider				#0.039*
Yes	2 (12.5 %)	14 (87.5%)		
No	3 (75.0%)	1 (25.0%)		
Don't Know	2 (14.3%)	12 (85.7%)		
Use of contraceptive method at 1 st sexual intercourse				#0.027*
Only Modern contraceptive method	1 (5.6%)	17 (94.4%)		
Only traditional contraceptive method	5 (50.0%)	5 (50.0%)		
Both contraceptive methods	1 (25.0%)	3 (75.0%)		
Neither	0 (0.0%)	2 (100.0%)		

Since the frequencies of all cells were less than 5, only Fisher's Exact test was used.
Fisher's Exact test, * p value <0.05

C. Association between all independent variables and always use neither contraceptive method in the life time for 34 sexually active respondents

No significant association was found in bivariate analysis between all independent variables and always use of neither method in the life-time, and not shown by table.

III. Intend to Use contraception in the future

A. Association between all independent variables and intended use of only modern contraceptive method in the future for all 270 respondents

There were significant positive associations between 6 variables in predisposing factors, 3 variables in enabling factors and intend to use only modern contraceptive method in the future. The result shows the older the age group, the higher of intend to use only modern contraceptive method in the future, and the association between them were significant positive with p value 0.002. In the same way, respondents who have own income were more likely to intend to use only modern contraceptive method in the future (p value= 0.001). Furthermore, there was a positive significant association between the level of correct belief and intend to use only modern contraceptive method in the future with p value less than 0.001. The higher the level of correct belief, the greater to intend to use only modern contraceptive method. All variables that are significantly positive associated with intend to use only modern contraceptive methods are mentioned in the table 4. 30.

Table 4. 30 Bivariate Analysis between 6 predisposing factors, 3 enabling factors and intended use of only modern contraceptive method in the future (n=270)

Variables	Intended use of only modern method	Intend use of both, traditional only or neither	X2	p value
	N (%)	N (%)		
Age group of respondents			12.756	0.002*
15-16 years old	14 (29.8%)	33 (70.2%)		
17-19 years old	25 (34.7%)	47 (65.3%)		
20-24 years old	82 (54.3%)	69 (45.7%)		
Level of Education				#0.008*
Never gone to school but can read and write simple Myanmar language	2 (66.7%)	1 (33.3%)		
Primary School	3 (50.0%)	3 (50.0%)		
Secondary Education	23 (67.6%)	11 (32.4%)		
High School Level	70 (38.0%)	114 (62.0%)		
Higher Education	23 (53.5%)	20 (46.5%)		
Occupation				#0.020*
Student	40 (32.5%)	83 (67.5%)		
Private Employee	11 (57.9%)	8 (42.1%)		
Government Employee	4 (66.7%)	2 (33.3%)		
General/ Random Laborer	13 (46.4%)	15 (53.6%)		
Hawker	14 (58.3%)	10 (41.7%)		
Agriculture	7 (50.0%)	7 (50.0%)		
Tailor	13 (65.0%)	7 (35.0%)		
Unemployed	19 (52.8%)	17 (47.2%)		
Having Own Income			11.439	0.001*
Yes	61 (57.5%)	45 (42.5%)		
No	60 (36.6%)	104 (63.4%)		
Heard of any contraceptive method			7.422	0.006*
Yes	108 (48.6%)	114 (51.4%)		
No	13 (27.1%)	35 (72.9%)		
Level of Correct Belief			18.833	0.000**
Low Level of Correct Belief	12 (21.4%)	44 (78.6%)		
Fair Level of Correct Belief	63 (46.3%)	73 (53.7%)		
High Level of Correct Belief	46 (59.0%)	32 (41.0%)		
Ever Received HE Material			4.055	0.044*
Yes	56 (52.3%)	51 (47.7%)		
No	65 (39.9%)	98 (60.1%)		
Affordable to the price of Contraception				#0.041*
Yes	36 (59.0%)	25 (41.0%)		
No	3 (37.5%)	5 (62.5%)		
Don't Know	82 (40.8%)	119 (59.2%)		
Same Gender Service Provider			12.274	0.002*
Yes	40 (51.9%)	37 (48.1%)		
No	20 (69.0%)	9 (31.0%)		
Don't Know	61 (37.2%)	103 (62.8%)		

Fisher's Exact test, * p value <0.05, **p value <0.001

B. Association between all independent variables and intended use of both contraceptive methods in the future for all 270 respondents

All independent variables and intended use of both methods in the future were analyzed by bivariate analysis. Males were more likely to use both methods than female and there was a significant association between sex and intend to use both method with p value 0.002. Besides, level of attitude also has a significant positive association with intended to use both contraceptive methods (p value= 0.005). The higher the level of attitude, i.e., positive attitude, the greater of intending to use both methods in the future. Moreover, there were also significant positive association between transportation, time-taken, experienced sexual intercourse and intended use of both contraceptive methods in the future. The associations were shown in table 4.31.

Table 4. 31 Bivariate Analysis of intended use of both methods and sex, level of attitude, transportation, time-taken, experienced sexual intercourse (n=270)

Variables	Intended use of both methods	Intended use of either and neither	X2	p value
	N (%)	N (%)		
Sex			9.477	0.002*
Male	17 (13.7%)	107 (86.3%)		
Female	5 (3.4%)	141 (96.6%)		
Level of Attitude				#0.005*
Negative Attitude	2 (5.0%)	38 (95.0%)		
Neutral Attitude	10 (5.5%)	172 (94.5%)		
Positive Attitude	10 (20.8%)	38 (79.2%)		
Transportation				#0.005*
Walking	5 (8.9%)	51 (91.1%)		
Public Vehicle	3 (11.5%)	23 (88.5%)		
Private Vehicle	9 (21.4%)	33 (78.6%)		
Ask someone to buy	1 (5.9%)	16 (94.1%)		
Don't know	4 (3.1%)	125 (96.9%)		
Time Taken				#0.013*
<30mins	9 (14.8%)	52 (85.2%)		
30mins-1hr	5 (13.9%)	31 (86.1%)		
1-2 hours	2 (8.2%)	22 (91.7%)		
Over 2 hours	1 (20.0%)	4 (80.0%)		
Don't know	5 (3.5%)	139 (96.5%)		
Have Experienced Sexual Intercourse				#0.003*
Yes	8 (22.9%)	27 (77.1%)		
No	14 (6.0%)	221 4.0%)		

Fisher's Exact test, * p value <0.05

C. Association between all independent variables and intended use of only traditional contraceptive method in the future for all 270 respondents

The result shows that males were more likely to use traditional method only in the future than female (p value < 0.001). Respondents with transportation to the source of contraception by private vehicle were the most likely to use traditional method only, and there was a significant positive association between them with p value 0.009. Moreover, time-taken to reach to the nearest source of contraception was significantly positive associated with intend to use only traditional method (p value= 0.004). Respondents with time-taken over 2 hours to reach to the nearest source of contraception were the most likely to use traditional method only in the future. In addition, respondents who answered “No” for affordable to the price of contraception, and friendly welcome by service provider were more likely to use traditional method only in the future than who answered yes and do not know for those questions. Table 4.32 describes the independent variables which were significantly associated with intended use only traditional contraceptive method in the future with p values.

Table 4. 32 Bivariate analysis of intended use of only traditional methods and sex, transportation, time-taken, affordability, friendly welcome and use of contraceptive method at 1st sexual intercourse

Variables	Intended use of only traditional method	Intended use of modern method, both and neither	X ²	p value
	N (%)	N (%)		
Sex (n=270)			14.786	0.000**
Male	12 (9.7%)	112 (90.3%)		
Female	0 (0.0%)	146 (100.0%)		
Transportation (n=270)				#0.009*
Walking	3 (5.4%)	53 (94.6%)		
Public Vehicle	2 (7.7%)	24 (92.3%)		
Private Vehicle	5 (11.9%)	37 (88.1%)		
Ask someone to buy	1 (5.9%)	16 (94.1%)		
Don't know	1 (0.8%)	128 (99.2%)		
Time Taken (n=270)				#0.004*
<30mins	4 (6.6%)	57 (93.4%)		
30mins-1hr	2 (5.6%)	34 (94.4%)		
1-2 hours	2 (8.3%)	22 (91.7%)		
Over 2 hours	2 (40.0%)	3 (60.0%)		
Don't Know	2 (1.4%)	142 (98.6%)		
Affordable to the price of Contraception (n=270)				#0.02*
Yes	6 (9.8%)	55 (90.2%)		
No	1 (12.5%)	7 (87.5%)		
Don't know	5 (2.5%)	196 (97.5%)		
Friendly Welcome by Service Provider(n=270)				#0.03*
Yes	2 (3.7%)	52 (96.3%)		
No	5 (12.8%)	34 (87.2%)		
Don't know	5 (2.8%)	172 (97.2%)		
Use of contraceptive method at 1st sexual intercourse (n=34)				#0.027*
Only Modern contraceptive method	0 (0.0 %)	18 (100.0%)		
Only traditional contraceptive method	0 (0.0%)	10 (10.0%)		
Both contraceptive methods	1 (25.0%)	3 (75.0%)		
Neither	1 (50.0%)	1 (50.0%)		

Fisher's Exact test, * p value <0.05

D. Association between all independent variables and intended use of neither contraceptive method in the future for all 270 respondents

Association between socio-demographic characteristics and intended use of neither contraceptive method in the future

Table 4.33 shows that the age group 15-16 were more likely intended not to use any contraceptive method (use neither) in the future than other age groups. Education level and intended to use contraception also reveals that higher education level (university education) had the lowest percentage for intended not to use contraception in the future compared to other education levels, and hence, significant positive association was found between level of education and intended to use contraception (p value= 0.035).

Occupation level, likewise, had significant positive association with intended to use contraception (p value= 0.042). Students and respondents who did not have own income were more likely intend not to use any contraceptive method in the future. Table 4.32 reveals the socio-demographic characteristics that had significant association with intended not to use any contraceptive method (use neither) in the future with respective p values.

Table 4. 33 Bivariate analysis of socio-demographic characteristics and intended use of neither contraceptive method in the future (n=270)

Variables	Intended use of neither method	Intended Use of Either or Both	X2	p value
	N (%)	N (%)		
Age group of respondents			23.722	0.000**
15-16 years old	30 (63.8%)	17 (36.2%)		
17-19 years old	40 (55.6%)	32 (44.4%)		
20-24 years old	45 (29.8%)	106 (70.2%)		
Level of Education				#0.035*
Never gone to school but can read and write simple Myanmar language	1 (33.3%)	2 (66.7%)		
Primary School	2 (33.3%)	4 (66.7%)		
Secondary Education	10 (29.4%)	24 (70.6%)		
High School Level	90 (48.9%)	94 (51.1%)		
Higher Education (University Level)	12 (27.9%)	31 (72.1%)		
Occupation				#0.042*
Student	67 (54.5%)	56 (45.5%)		
Private Employee Government	7 (36.8%)	12 (63.2%)		
Employee General/ Random	1 (16.7%)	5 (83.3%)		
Laborer	8 (28.6%)	20 (71.4%)		
Hawker	8 (33.3%)	16 (66.7%)		
Unemployed	11 (30.6%)	25 (69.4%)		
Agriculture	6 (42.9%)	8 (57.1%)		
Tailor	7 (35.0%)	13 (65.0%)		
Having Own Income			9.374	0.002*
Yes	33 (31.1%)	73 (68.9%)		
No	82 (50.0%)	82 (50.0%)		

#Fisher exact test, *p value <0.05**, p value <0.001

Association between predisposing factors and intended use of neither contraceptive method in the future

Table 4.34 reveals that heard of any contraceptive method had a significant negative association with not intended to use contraception in the future (p value < 0.001). In addition, there were also significant negative association between level of

knowledge, attitude, and correct belief and intended not to use contraception in the future with p value 0.021, 0.048 and <0.001 respectively. The higher the level of knowledge, attitude, and correct belief, the more likely to use contraception in the future.

Table 4. 34 Bivariate analysis of Pre-disposing factors and Intended use of neither contraceptive method in the future (n=270)

Variables	Intended use Neither	Intended Use Either or Both	X2	p value
	N (%)	N (%)		
Heard of any contraceptive method			19.042	0.000**
Yes	81 (36.5%)	141 (63.5%)		
No	34 (70.8%)	14 (29.2%)		
Level of Knowledge				#0.021*
Poor Level of Knowledge	109 (45.2%)	132 (54.8%)		
Fair Level of Knowledge	6 (22.2%)	21 (77.8%)		
Good Level of Knowledge	0 (0%)	2 (100.0%)		
Level of Attitude			6.071	0.048*
Negative Attitude	20 (50.0%)	20 (50.0%)		
Neutral Attitude	82 (45.1%)	100 (54.9%)		
Positive Attitude	13 (27.1%)	35 (72.9%)		
Level of Correct Belief			15.495	0.000**
Low Level of Correct Belief	36 (64.3%)	20 (35.7%)		
Fair Level of Correct Belief	55 (40.4%)	81 (59.6%)		
High Level of Correct Belief	24 (30.8%)	54 (69.2%)		

#Fisher exact test, *p value <0.05, **p value <0.001

Association between enabling factors and intended use of neither contraceptive method in the future

Table 4.35 shows significant negative association between ever received health education session, ever received health education material, easily availability of

contraception when needed and intend not to use contraception in the future, i.e. respondents who had ever received health education session, health education materials, and can get contraception easily in need were more likely to intend to use contraception in the future.

Furthermore, respondents who responded do not know in transportation to the source of contraception, time-taken to reach to the source of contraception, affordability to the price of contraception, friendly welcome by service provider, judgmental attitude of service provider, gender preference of service provider and confidentiality in discussion with service providers were the most likely to intend not to use any contraceptive method in the future. The association between them were statistically significant as shown in table 4.36.

Table 4. 35 Bivariate analysis of Ever received HE session, HE materials, Availability of contraception in need easily and Intended use of neither contraceptive method in the future

Variables	Intended use of neither method	Intended use of Either or Both	X ²	p value
	N (%)	N (%)		
Ever received HE session			5.571	0.018*
Yes	42 (34.7%)	79 (65.3%)		
No	73 (49.0%)	76 (51.0%)		
Ever Received HE Material			10.01	0.002*
Yes	33 (30.8%)	74 (69.2%)		
No	82 (50.3%)	81 (49.7%)		
Availability of Contraception Easily in Need			19.107	0.000**
Yes	29 (26.6%)	80 (73.4%)		
No	86 (53.4%)	75 (46.6%)		

#Fisher exact test, *p value <0.05, **p value <0.001

Table 4. 36 Bivariate analysis of Time-taken, Transportation, Affordability, Friendly Welcome, Judgmental Attitude, Gender Preference, Confidentiality and Intended use of neither contraceptive method in the future (n=270)

Variables	Intend to use neither method	Intend to Use Either or Both	X2	p value
	N (%)	N (%)		
Transportation			28.189	0.000**
Walking	18 (32.1%)	38 (67.9%)		
Public Vehicle	5 (19.2%)	21 (80.8%)		
Private Vehicle	11 (26.2%)	31 (73.8%)		
Ask someone to buy	5 (29.4%)	12 (70.6%)		
Don't know	76 (58.9%)	53 (41.1%)		
Time Taken				#0.000**
<30mins	15 (24.6%)	46 (75.4%)		
30mins-1hr	12 (33.3%)	24 (66.7%)		
1-2 hours	7 (29.2%)	17 (70.8%)		
Over 2 hours	1 (20.0%)	4 (80.0%)		
Don't know	80 (55.6%)	64 (44.4%)		
Affordable to the price of Contraception				#0.000**
Yes	10 (16.4%)	51 (83.6%)		
No	3 (37.5%)	5 (62.5%)		
Don't know	102 (50.7%)	99 (49.3%)		
Friendly Welcome by Service Provider			11.963	0.003*
Yes	13 (24.1%)	41 (75.9%)		
No	14 (35.9%)	25 (64.1%)		
Don't know	88 (49.7%)	89 (50.3%)		
Judgmental Attitude of Service Provider			11.256	0.004*
Yes	29 (34.1%)	56 (65.9%)		
No	6 (22.2%)	21 (77.8%)		
Don't know	80 (50.6%)	78 (49.4%)		
Same Gender Service Provider			15.522	0.000**
Yes	24 (31.2%)	53 (68.8%)		
No	6 (20.7%)	23 (79.3%)		
Don't know	85 (51.8%)	79 (48.2%)		
Confidentiality in discussion with Service Provider			7.958	0.019*
Yes	26 (33.8%)	51 (66.2%)		
No	7 (26.9%)	19 (73.1%)		
Don't know	82 (49.1%)	85 (50.9%)		

#Fisher exact test, *p value <0.05, **p value <0.001

Association between need factors and intended use of neither contraceptive method in the future

Table 4.37 describes that sexually inactive respondents (respondents who did not have experienced sexual intercourse) were more likely to intend not to use any contraceptive method in the future than sexually active respondents. There was a significant association between them with p value <0.001.

Table 4. 37 Bivariate Analysis of having experience sexual intercourse and intended use of neither contraceptive method in the future (n=270)

Variables	Intend to Use neither method	Intend to Use	X2	p value
	N (%)	N (%)		
Have Experienced Sexual Intercourse			15.119	0.000**
Yes	4 (11.8%)	30 (88.2%)		
No	111 (47.0%)	125 (53.0%)		

**p value <0.001

Multi-variable Logistic Regression Analysis

Multi-variable logistic regression was used to analyze the relationship between independent variables whose p values are less than 0.2 in bivariate analysis and some variables that are theoretically important in previous studies (even >0.2 in bivariate analysis), and 10 dependent variables from use of contraception at the latest sexual intercourse, always use of contraception in the life-time and intend to use contraception in the future.

As theoretically important in previous studies, sex (36), education (42, 44) level of knowledge (4, 56), and availability of contraception when needed (67) were included.

I. Use of Contraception at the latest sexual intercourse and Always Use of contraception in the life-time for 34 sexually active respondents

In order to find out the association with use of at least one modern contraceptive method, use only traditional method and use of neither method for the latest sexual intercourse, and sex in the life-time, twenty-one variables were put into the first step of logistic regression model. Those twenty-one variables are sex, living arrangement, level of education, level of knowledge, level of correct belief, availability of contraception easily in need, source of contraception in need, affordability to the price of contraception, transportation to the nearest source of contraception, time-taken to reach to the nearest source of contraception, judgmental attitude of service provider, confidentiality in discussion with service provider, age group at first sexual intercourse, use of contraception at the first sexual intercourse, use of contraceptive method at the first sexual intercourse, sex by peer pressure, peer pressure to use contraception, use of contraception when sex by peer pressure, use of contraceptive method when sex by peer pressure, sex with commercial sex partner and number of sexual partner. As a result, all variables lost their significances, and therefore, they were not shown in a table.

II. Intended use of contraception in the future

Twenty-six variables: age group of respondent, sex, level of education, living arrangement, occupation, having own income, level of monthly income, ever heard of any contraceptive method, level of knowledge, level of attitude, level of correct belief, ever received health education session, ever received health education material, availability of contraception easily in need, source of contraception in need, transportation to the nearest source of contraception, time-taken to reach to the nearest source of contraception, affordability to the price of contraception, friendly welcome by service provider, judgmental attitude of service provider, same gender service provider, confidentiality in discussion with service provider, have experienced sexual intercourse, use of contraception at the first sexual intercourse, use of contraceptive method at the first sexual intercourse, and number of sexual partner were included in the first step of logistic regression model to find the association between those variables

and intended to use only modern contraceptive method, only traditional method, both methods and neither methods in the future.

A. Intended use of only modern contraceptive method in the future

When intend to use only modern contraceptive method in the future was dependent variable, 3 variables maintained significance (<0.05), and 1 variable (sex) became significant as a result of first step of regression model. Those variables that maintained or became significant at the first step were contained in the final model as shown in table 4.38.

Female were 1.7 times more intended to use only modern contraceptive method in the future than male. Respondents with having own income were more likely to use only modern contraceptive method in the future than respondents with no income. Level of correct belief has positive strong association with intend to use only modern contraceptive method in the future. Respondent with fair level and high level of correct belief were about 3 times and 4 times more likely to intend to use contraception in the future, respectively.

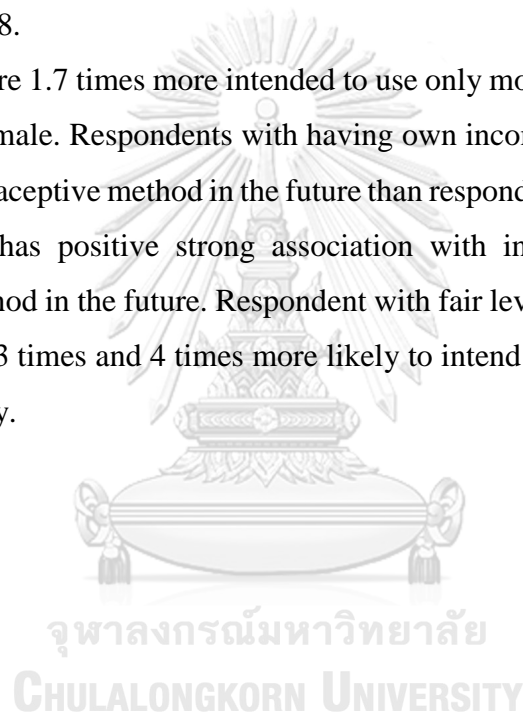


Table 4. 38 Logistic regression analysis of sex, income, level of correct belief, same gender service provider and intended use of only modern contraceptive method in the future (n=270)

Variables	B	S.E	Sig.	Crude OR (95% C.I)	95.0% C.I	
					Lower	Upper
Female (Ref: Male)	0.553	0.274	0.044*	1.738	1.016	2.973
No own income (Ref: Have own income)	-0.674	0.272	0.013*	0.51	0.299	0.869
Level of Correct Beliefs (Ref: Low Level of Correct Belief (≤ 1))			0.002*			
Fair Level of Correct Belief (2-4)	1.128	0.383	0.003	3.09	1.458	6.546
High Level of Correct Belief (≥ 5)	1.483	0.418	0.000	4.408	1.942	10.003
Same Gender Service Provider (Ref: Yes)			0.003*			
No	0.789	0.498	0.113	2.202	0.83	5.839
Don't Know	-0.646	0.301	0.032	0.524	0.291	0.946

*p value <0.05

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B. Intended use of both contraceptive methods in the future

Again, intend to use both contraceptive methods in the future became dependent variable. Have experienced sexual intercourse and level of correct belief maintained their significant after first step. Those variables were then included into the final model by table 4.39.

No experience of sexual intercourse and intend to use both contraceptive methods in the future had negative strong association (p value <0.001). Respondents who had experienced sexual intercourse intended to use both methods more than sexually inactive respondents. Besides, respondents with high correct belief level

intended to use both methods in the future about 6 times more than the respondents with low level of correct belief.

Table 4. 39 Logistic regression analysis of have experienced sexual intercourse, level of correct belief and intended use of both contraceptive methods in the future

Variables	B	S.E	Sig.	Crude OR (95%CI)	95.0% C.I	
					Lower	Upper
No experience sexual intercourse (Ref: have experience)	-2.026	0.558	0.000**	0.132	0.044	0.394
Level of Correct Belief (Ref: Low Level of Correct Belief)			0.001*			
Fair Level of Correct Belief	-0.203	0.826	0.806	0.816	0.162	4.117
High Level of Correct Belief	1.771	0.837	0.034	5.879	1.139	30.349

*p value <0.05, **p value < 0.001

C. Intended use of only traditional method in the future

When intend to use only traditional method in the future became dependent variable, no variable showed the significance after the first step of regression model.

D. Intended use of neither contraceptive method in the future

Finally, intend to use neither method was performed as dependent variable, 3 variables maintained significance (<0.05) as a result of first step of logistic regression model. Those variables that maintained significance at the first step were contained in the final model and shown in table 4.40.

Age group had a strong negative association with intend to use neither contraceptive method in the future (p value < 0.001). 17-19 age group intended to use neither method 0.75 times less than 15-16 age group, and also, 20-24 age group intended 0.3 times less than 15-16 age group. Not ever heard about contraception (p value = 0.003) and not availability of contraception easily in need (p value <0.001) was a strong positive association with intend to use neither method. Respondents who had

ever heard about contraception intended to use neither method almost 3 times more than ever heard respondents. In the same way, respondents who answered no availability of contraception easily in need about 3 times more intended to use neither method in the future when compared to respondents with easily availability.

Table 4. 40 Logistic regression analysis of age group, heard of contraception, easily availability of contraception when needed and intended use of neither contraceptive method in the future (n=270)

Variables	B	S.E	Sig.	Crude OR (95% C.I)	95.0% C.I	
					Lower	Upper
Age group (Ref: 15-16 years)			0.000**			
Age group (17-19 years)	-.287	.408	0.482	0.751	0.338	1.669
Age group (20-24 years)	-1.263	.373	0.001	0.283	0.136	0.588
Not ever Heard about Contraception (Ref: ever heard about contraception)	1.086	.366	0.003*	2.962	1.445	6.072
Not Availability of Contraception Easily in Need (Ref: easily available)	1.114	.287	0.000**	3.048	1.737	5.347

*p value <0.05, **p value < 0.001

CHAPTER V

DISCUSSION, CONCLUSION AND RECOMMENDATION

The main purpose of this research was to study about characteristics and factors affecting modern and traditional contraceptive utilization, for both actual and intended uses, among unmarried youths in rural Yangon based on predisposing factors such as socio-demographic characteristics, knowledge, attitude and belief, enabling factors, and need factors. In this chapter, use of contraception indicates use of either modern or traditional contraceptive method, or both contraceptive methods if the specific method is not mentioned.

5.1. Discussion on Predisposing Factors

5.1.1 Socio-demographic Characteristics

Age Group

The sample population of youths in this study included 270 unmarried youths who were in age range from 15 to 24 years, and categorized into three groups as 15-16, 17-19, and 20-24. The mean age of this study was 20 years, and 151 unmarried youths (56%) were included in 20-24 years age group.

Intended to use only modern contraceptive method had a significant positive association with age group (p value = 0.002). Age group had also a significant strong positive association with intended use of contraception in the future (p value < 0.001). The older the age group, the more likely to intend to use contraception in the future. Multiple logistic regression revealed that age group still maintained its significance with intended use of neither method in the future (p value < 0.001).

Those results may be explained that younger respondents were afraid of receiving and using contraceptive methods especially modern contraceptive method which can be discovered by their parents or other people. Moreover, it can also be due to low awareness on contraception of younger respondents. This is because the further analysis between age group and heard of contraceptive method showed a significant

positive association (p value= 0.001). Association between these two independent variables revealed that the older the age group, the higher the probability of ever heard of contraceptive method that may cause greater intention to use contraception in the future. Similarly, a study on 15-24 years old youths who lived in Kisumu town in western Kenya mentioned that a significant association between age and contraceptive practice with p value 0.02. Though it is difficult to find similar study which concentrated only on unmarried youths' contraceptive utilization to compare the results, over 83% of youths in that study were single. That study also found out that the younger youth was less likely to have consistent use and current use of contraception than the older youths (84).

Sex

Out of 270 respondents, 146 (54%) were female, and 124 (46%) were male. Sex and intend to use both contraceptive methods in the future had a significant association (p value= 0.002). The result showed that male were more likely to intend to use both contraceptive method in the future. Besides, sex and intended to use only traditional method, likewise, had a significant association ($p < 0.001$). No female in this study intended to use only traditional method in the future. Multiple logistic regression again showed that sex got its significance with intend to use only modern contraceptive method in the future (p value= 0.044). Female were 1.7 times more likely to use modern contraceptive method in the future. Hence, the results in this study clearly showed that women's preference on modern contraceptive methods.

However, a study in 2009 on both married and unmarried 15-24 years old youths of Myanmar migrant workers in Bang Bon district, Bangkok did not show significant association between sex and contraceptive utilization (18). Moreover, another study among in and out of school adolescents (10-19 years old) in Addis Ababa city, Ethiopia found out that male used modern contraceptive methods more than female (50).

The different result in this study can be due to availability of contraception and information at the study area. In this study area, only oral contraceptive pill and injection were easily available compared to other modern contraceptive methods. Although condom can be available easily, the practice of condom was low. For female, they may obtain more contraceptive information from their mothers or at the clinic, and

their intention to use modern contraceptive methods such as oral contraceptive pill and injection was higher than male.

Although similar result was not found for youths, the result from US National Health Statistics Reports on reproductive age sexually active male and female showed similar findings. According to the result from 2013 National Health Statistics Reports for United States, 99% of sexually active women with age range from 15 to 44 years used at least one contraceptive method between 2006 and 2010. In addition, 88% of them used modern contraceptive method (85).

Religion

Out of 270 unmarried youths, 269 (99.6%) were Buddhist whereas only one respondent (0.4%) answered an atheist. Therefore, the association with religion could not be analyzed in this study.

Level of Education

In this study, all respondents were literate. Youths with higher education (University level) were the most likely to intend to use contraception in the future. Again, respondents with secondary school level education were the most likely to use only modern contraceptive method compared to respondents with other education level (p value= 0.008). However, their significances disappeared at the multiple logistic regression.

This finding was also similar to the study on 15-24 years old sexually active youths of Myanmar migrant workers in Bang Bon district, Bangkok. In that study, education had a significant positive association with current contraceptive utilization in premarital sex and marital sex of unmarried and married youths. The result of that study, likewise, showed that level of education lost its significance at multivariate analysis (18).

Living Arrangement

207 unmarried youths (76.7%) lived and shared most of the meals together with their parents in the past three months while other 63 youths (23.3%) were with their father only, mother only, relatives or friends. Bivariate analysis described a significant

association between living arrangements and use at least one modern contraceptive method at the latest sexual intercourse (p value = 0.033). Unmarried youths who lived together with their parents were the least likely to use at least one modern method at the latest sexual intercourse.

This result may be explained by being afraid of their parents to look for contraception if they use. A survey from the National Campaign to Prevent Teen and Unplanned Pregnancy in US, 2015 got the similar result. 68% of teenagers revealed that the primary reason why they did not use modern contraceptive method was being afraid their parents will find out (86). Despite the similar study which focused only on unmarried youths in Asia was not found, a study among students aged 12 to 19 years in Negeri Sembilan, Malaysia described that youths who lived together with family or parents were less sexually active and less utilization of contraception than the respondents who lived with single parents (47).

Occupation

As occupation, 123 youths (45.6%) were students, and 36 youths (13.3%) were unemployed. The left 111 respondents (41%) were private employee, government employee, hawker, doing agriculture and tailor. In bivariate analysis, occupation was significantly associated with intended use of only modern contraceptive method (p value= 0.02), and intended use of neither method in the future (p value= 0.042). Students were the least likely to intend to use contraception in the future.

Most of the students in this study were younger than the respondents who were working or unemployed. The younger the age group, the higher the probability of living under the supervision of their parents or guardians, and the greater the level of being afraid to use modern contraceptive methods. Moreover, it can be also explained by their age immaturity and economic incapacity of students compared to out of school youths. The similar result was shown in previous study on 15-24 years old youths who lived in Kisumu town in western Kenya in 2002 (84). In that study, in school youths were less likely to use contraception than out of school youths.

Again, in this study, contraceptive utilization among employed and unemployed youths was not different. This is because some employed respondents except government or private employees did not have own income because they were working

together with their families. Therefore, employed and unemployed respondents might have similar circumstance in this study. However, the significance of occupation in this study lost in regression.

Income

The findings for income showed that 106 respondents (39.3%) had monthly own income, and having own income had the significant positive association with intended use of contraception (p value= 0.002), and intended use of only modern contraceptive method in the future (p value= 0.001). Multiple logistic regression also described that income remained its significance with intended use only modern contraceptive method in the future (p value= 0.013).

Therefore, all these results in this study revealed that unmarried youths with no income were less likely to intend to use contraception in the future than the youths with own income. Hence, it can be concluded that having own income was the encouraging factor to use modern contraceptive method. The previous study on married youths in rural area of Ayeyarwaddy, Myanmar revealed the similar finding of the significant positive association between having own income and contraceptive utilization (87).

Nevertheless, the level of monthly income in this study did not show any association with modern or traditional contraceptive utilization. A study on Myanmar migrant married and unmarried youths in Bang Bon District, Bangkok in 2009 also found out that there was no significant association between level of income and contraceptive utilization (18).

5.1.2 Ever Heard of any Contraceptive Method and Level of Knowledge

Out of 270 respondents, 222 of them (82%) had ever heard of contraceptive method. Heard of any contraceptive method also asked by prompt if the respondents were not able to answer without prompt. It could be seen that oral contraceptive pill (22%) and injection (21%) were the most well-known contraceptive methods without prompts among those unmarried youths because they were easily available at the drug store and clinic in rural Yangon, Myanmar. Male sterilization was the least well-known methods since it cannot be available for unmarried youths in Myanmar (23). Moreover, respondents who have not heard about any contraceptive methods were three times less

likely to use of contraception in the future. In other words, respondents who have ever heard about contraception were more likely to use contraception in the future.

Majority of youths (89%) in this study had poor level of knowledge whereas only 2 respondents (0.7%) had good level of knowledge. Moreover, the result shows the significant positive association between level of knowledge and intended use of contraception in the future (p value=0.021) in bivariate analysis. However, the significance also disappeared in logistic regression.

A study on Myanmar migrant sexually active 15-24 years old youths in Bang Bon district, Bangkok showed over 90% of youths had ever heard about contraception (18). That percentage was slightly higher than this study (82%). This is because that study was done on only sexually active youths whereas this study was for both sexually active and non-active youths. Moreover, that study also showed a significant positive association between level of knowledge and current use of contraception. Although the study on contraceptive related knowledge of unmarried youths in Myanmar was not found, a study among rural pregnant women in Salin Township, Myanmar also supported this finding. In that study, most of the pregnant women (78.4%) were the age between 20 and 35 years. That study, likewise, found out that women with good level of knowledge on contraception were more likely to have good birth spacing than poor and fair level of knowledge (88).

5.1.3 Level of Attitude

Furthermore, level of attitude also has a significant positive association with intended use of contraception (p value=0.048), and intended to use both methods in the future (p value= 0.005). The similar result could also be found in previous two studies in Salin Township, Myanmar and Myanmar migrant youths in Thailand that were mentioned in discussion about level of knowledge (18, 88). In these two studies also revealed that the significant positive association between level of attitude and contraceptive utilization.

5.1.4 Level of Correct Belief

The high level of correct belief, likewise, had strong significant positive associations with intended use of contraception (p value <0.001), and intended use of

only modern contraceptive method in the future (pvalue <0.001). Level of correct belief still remained its positive significance at multivariate analysis with intended use only modern contraceptive method (p value= 0.002).

Therefore, the results in this study clearly revealed that higher level of correct belief can be leading to higher contraceptive utilization in the future. The study on Myanmar migrant sexually active youths in Bang Bon, Bangkok also found out the significant positive association between level of correct belief and contraceptive utilization but its significance lost in regression (18). Another study on Myanmar migrant married women with age of 15-49 in Phang-Nga Province, Thailand again showed that the significant positive association between level of belief and contraceptive utilization (55). However, the significance was not found after multiple logistic regression in that study.

5.2 Enabling Factors

5.2.1 Availability of Contraceptive Information

Ever received health education session and health education materials had significant positive association with intended use of contraception in the future with p values 0.018 and 0.002 respectively. Moreover, there was a significant positive association between health education materials and intended use of only modern contraceptive methods in the future (p value= 0.044) by bivariate analysis. However, the significance lost in logistic regression.

These results revealed that health education session and health education materials can lead youths to use contraception in the future. Previous studies also revealed the similar results (18, 51). The previous study on married and unmarried Myanmar migrant youths in Thailand also found out the association between health education session and material, and current contraceptive utilization (18). Despite the study on unmarried youths in Myanmar could not be found to compare the result, a study on reproductive age married women in Mandalay, Myanmar further stated that the significant positive association between contraceptive utilization and receiving reproductive health information (51).

5.2.2 Availability and Accessibility to Contraceptive Method

Easy Availability of contraception when needed

109 respondents (40%) answered that contraception can be easily available when they are in need, and 77 unmarried youths out of 109 responded that the source of contraception as drug store, but government clinic was the least frequent answer among the options for the source of contraception. That indirectly revealed that unmarried youths feel more comfortable to receive contraception from the drug store or their friends because of privacy and confidentiality.

Bivariate analysis showed that availability of contraception in need easily had a significant strong positive association with intended use of contraception in the future (p value < 0.001). Multivariate analysis also revealed their significance with p value less than 0.001.

Hence, the result in this study mentioned that availability of contraception easily can encourage youths to use contraception. Also a previous study among youths in Bang Bon district, Bangkok showed a significant strong positive association between availability of contraception and current use of contraception with p value less than 0.001 (18). UNFPA annual report 2004 for reproductive health and family planning further stated that the prevalence of modern contraceptive method was significantly higher in the countries in which contraception can be easily accessible (89). A study on pharmacies and primary health facilities in Armenia again found out that the major barrier to access contraception was lack of availability of contraception at the pharmacies (90). Therefore, it cannot be denied that easily availability is essential to access contraception for youths.

Affordability to the Price of Contraception

In term of affordability, there was a significant strong positive association between affordability and intended use of contraception in the future (pvalue < 0.001). Moreover, a significant positive association was found between affordability and intended use of only modern contraceptive method (p value= 0.041). Again, there were a significant negative association between affordability and intended use of only traditional contraceptive method (p value= 0.02), and a marginally significant negative

association between affordability and always use of traditional contraceptive method in the life-time (p value= 0.048). However, all significances lost in multiple logistic regression.

These results in bivariate level pointed out the importance of affordability to use modern methods among youths. To compare the result of affordability to the price of contraception and contraceptive utilization among unmarried youths, a similar study in Myanmar was not found. However, a previous study on Myanmar migrant married women with the age of 15-49 years indicated a similar result. In that study, current usage of contraception had a significant positive association with the perception on cost of contraception (55). Again, a descriptive study report on pharmacies and primary health facilities in Armenia in 2008 also confirmed the importance of affordability, and indirectly showed a similar result (90). That study report mentioned that the reason of 37% of women in reproductive age who used traditional contraceptive method over modern contraceptive method were concerned with the cost of modern contraceptive method.

Transportation and Time-Taken to the nearest source of contraception

In this study, unmarried youths who did not know about transportation and time-taken to the nearest source of contraception were the least likely to intend to use contraception in the future (p value< 0.001). This result can be interpreted that lack of knowledge to reach to the source of contraception was a barrier for unmarried youths to use contraception when they are in need or in the future. However, the significance lost in multiple logistic regression. A similar result was found in previous study of sexually active Myanmar migrant youths in Bang Bon, Bangkok. That study also showed significant association between current contraceptive utilization and transportation, and time-taken to reach to the source of contraception by bivariate analysis (18).

Friendly-welcome, Judgmental Attitude, Same-gender Service Provider and Confidentiality in service provider

Furthermore, friendly welcome by service provider showed a significant positive association with intended use of contraception in the future (p value= 0.003).

However, it was a significant negative association with intended use of only traditional method in the future (p value= 0.03). Intended use of contraception in the future showed a significant negative association with judgmental attitude (p value= 0.004). Again, confidentiality in discussion with service provider had a significant positive association with intended use of contraception in the future (p value= 0.019). Nevertheless, it was a significant negative association with always use of only traditional method (p value = 0.039).

Therefore, the result indirectly pointed out that friendly welcome by service provider, confidentiality in discussing with service provider, and no judgmental attitude of service provider would motivate youths to use modern contraceptive method. Moreover, use of traditional contraceptive method can also be reduced by increasing friendly welcome and confidentiality of service. Similar results showed in previous study among 15-24 Myanmar migrant youths in Bang Bon district, Bangkok (18).

The result in this study also revealed that respondents who believed same gender service provider can be available were more likely to intend to use contraception, and modern contraceptive method in the future than the respondent who did not aware of contraceptive service. At the logistic regression, the result showed that respondent who did not aware of same gender service provider were 0.5 time less likely to use only modern method in the future (p value= 0.032) than those respondents who believed availability of same gender service provider. Although the result also pointed out that youths who did not believe on gender preference intended to use only modern method about 2 times more than who believed on same gender service provider, p value was not significant (p value= 0.113).

Even though unmarried youths would like to use only modern contraceptive methods, they answered that they do not believe same gender service providers can be available when they go to clinic. This result can be explained by low knowledge and awareness of rural youths about youth centers and same gender service provider. In Myanmar, mostly, same gender service provider is not available in public clinics. That service can only be available NGO provided youth projects. A similar finding was found in previous study on Myanmar migrant youths (18). The result of that study also revealed that percentage of respondents who currently used contraception and did not

believe to get same gender service provider were more than that of respondents who currently used contraception and believed to get same gender service provider.

Besides, the results in this study also showed that unmarried youths who did not have knowledge on accessibility of contraceptive service such as friendly welcomed by service provider, judgmental attitude, confidentiality and same gender service provider were the least likely to intend to use contraception in the future. Around 50% of youths in this study did not aware on friendly-welcome, judgmental attitude, same gender service provider and confidentiality in discussion with service provider when they will go to NGO or public or private clinic to receive contraception. This is because of the unpopularity of adolescents-friendly clinics or youth centers in this study area. This can also be due to social and cultural norms for unmarried youths to reach to those clinics and receive information. WHO also stated that adolescents and unmarried youths could not access to contraception even though they would like to receive. This is because of judgmental behavior of service provider, fear of not to have privacy and confidentiality (91). Therefore, providing youth friendly clinic or youth centers are needed to improve the access of contraception for youths.

5.3 Need Factors

5.3.1 Sexual Activity Status

In this study, 12.6% of unmarried youths had experienced sexual intercourse. The mean age of sexual onset was 20 years, and the age range was 15-24 years.

This prevalence was slightly higher than the previous study among 15-24 community youths which revealed as 11.9% (24). That study chose the youths from upper, middle and lower regions of Myanmar to obtain representative youth sample population. The mean age at first sexual intercourse in that study was 17.6, and the age range of sexual onset was 16-24. Slightly difference between these two studies can be explained by different study sites. Moreover, another study on never-married out of school youths from lower social class in Pyin-Oo-Lwin, Myanmar explored the reality of premarital sex in Myanmar youths although it was not discussed in the polite society of Myanmar (77). Furthermore, that study stated that sexually experience was initiated at 10 years of age among those vulnerable youths according to the suggestion by

participatory sex census. However, in the interview of that study, respondents answered that premarital sex was initiated around 16-20 years (77).

Sexually active respondents were more likely to use contraception, and both contraceptive methods in the future than non-sexually active respondents. Multiple logistic regression showed that non-sexually active respondents were 0.13 times less likely to use both contraceptive method in the future than sexually active respondents (p value < 0.001).

According to these results, it may be concluded that sexually active respondents more intended to use contraception in the future compared to sexually inactive youths. This can also be due to lower knowledge and awareness on contraceptive method in unmarried non-sexually active youths than sexually active youths. The further analysis between heard of contraceptive method and sexual activity among youths in this study also showed that heard of any contraceptive method was significantly lower in non-sexually active respondents. 2001-2002 Zambia Demographic Health Survey on nationally representative sample with the age of 15-59 also observed that sexually active respondents had higher knowledge on contraception than non-sexually active respondents (92).

5.3.2 Sexual History

First Sexual Intercourse

32 respondents (94%) out of 34 sexually active respondents used contraception at their first sexual intercourse, and about half of them (53%) used only modern contraceptive method, and 12% used both modern and traditional contraceptive methods at their first intercourse. A significant negative association was found between age group at 1st sexual intercourse and always use of contraception in the life-time (p value=0.02). This showed that the earlier the sexual onset, the higher to use at least one modern contraceptive method in their life-time.

This result may be explained by being more afraid of pregnancy, less intention to take responsibility, and more likely to use effective contraceptive method since they started their sexual onset early. All 6 sexually active respondents (100%) who answered their sexual onset age as 15-16, and 5 out of 9 respondents (55.6%) whose sexual onset

age at 17-19 were currently included in 20-24 age group. Therefore, the answer can also be reflected by their current knowledge and perceptions. However, that significance was lost in logistic regression.

This result was different from other studies on sexually active 15-24 Nepalese youths who were residing in the urban area of Kathmandu Valley (38). There was a strong significant positive association between age at the first sexual intercourse and contraceptive utilization at that sexual intercourse. Hence, the later the sexual onset, the higher the probability to use contraception at the first sexual intercourse. However, age at first sexual intercourse did not effect on current use of contraception in that study. The differences between these two studies could also be due to different study areas of rural and urban, and also, very small sample size of sexually active respondents in this study while the study on Nepalese youths focused only on sexually active youths.

The result in this study additionally revealed that 2 respondents who did not use any contraceptive method at the first sexual intercourse did not also use any contraceptive method at the latest sexual intercourse (p value= 0.008), and more likely to use only traditional methods in the future (p value= 0.027). Besides, respondents who use only traditional method at the first sexual intercourse were the most likely to use only traditional contraceptive in their life-time.

All these associations described that contraceptive utilization at the first sexual intercourse could reflect their use in latest sex, life-time, and even for the future use. Despite there was no study on similar population to compare the result, the previous study which focused on sexual activity, contraceptive utilization and pregnancy of US young adolescents with the age of 10-12 years also confirmed that contraceptive use at the first sex had been an indicator for later and consistent utilization (93). Another study on sexually active adolescents with the age of 12-18 years in US found out that condom use at the first sexual intercourse was related to increased use of condom at most recent sex, and consistent use of condom in the life-time (94).

In term of type of partner at the first sexual intercourse, 28 respondents out of 34 sexually active respondents in this study mentioned that their first sexual intercourse were with their boyfriend or girlfriend. There was no significant association between contraceptive utilization and type of partner.

Sex by Peer Pressure

1 out of 9 (11%) of sexually active respondents who had sex by peer pressure revealed that they used only modern contraceptive method, and another 11% used both modern and traditional method when sex by peer pressure. Besides, the analysis again shows that all 4 unmarried youths who did not use contraception when sex by peer pressure did not also use contraception at the latest sex (p value=0.024). That result pointed out the consistent non-use of contraception among the respondents. However, there was no association between peer pressure and use of contraception. Contradictory, a study among adolescents who were residing in poor neighborhoods of Managua, Nicaragua in 2011 indicated that peer pressure had a significant association with consistent use of condom (95). In that study, adolescents who did not get peer pressure to have sex were more likely to use condom in last three sexual intercourse. The different results can be explained by very small sample population of this study.

Sex with Commercial Sex-Partner

In addition, all 5 sexually respondents who had experienced on sex with commercial sex-partner answered that they used contraception when they had sex with commercial sex-partners. 4 (80%) out of these 5 respondents used male condom when they had sex with them but 1 respondent (20%) used only withdrawal method. This result described that most respondents were aware to use condom to prevent HIV/AIDS. Condom use in this study was the highest when sex by commercial sex-partner compared to other sexual intercourses.

That result indirectly showed the respondents' perception on condom use. Most of the respondents thought that condom should be used only when sex with commercial sex-partner. That answer was contradicted with the previous study on sexually active Nepalese youths from the urban area of Kathmandu Valley (38). In that study, sexually active youths preferred to use condom in their intercourses, and they used condom for over two-third of their sexual relationships. Next to condom, oral contraceptive pills and injectable were used. The lower use of condom in sexual intercourses except sex with commercial-sex partner, in this study, can also be explained by availability of condom and social norms to receive condoms among unmarried youths in this study.

Number of Sexual Partner

Regarding number of sexual partner, 28 respondents (82%) had 2 or fewer sexual partner, 4 (12%) sexually active youths had 3-5 partners and 2 respondents (6%) revealed that they had more than 10 sexual partners. A previous secondary data analysis stated that 70% of unmarried male university students with the age of 15-29 in Korea, and 30% of young rural married or unmarried men in North/ North-east Thailand had more than two sexual partner (96). These different results can be explained by different cultures in different countries. There was no significant association between number of sexual partner and contraceptive utilization in this study.

5.4 Modern and Traditional Contraceptive Utilization

Use of Contraception at the Latest Sexual Intercourse

Out of 34 sexually active respondents, 27 (79%) used contraception at their latest sexual intercourse. Nevertheless, there were only 15 respondents (44%) who used at least one modern contraceptive method in their latest sexual intercourse. 12 youths (35%) used only traditional method and 7 (21%) respondents did not use any contraceptive method at the latest sexual intercourse. Therefore, the prevalence of modern contraceptive method (44%) in this study area was slightly lower than the data in 2012 Myanmar and birth spacing overview which described as 46% of prevalence for 15-49 aged women in Myanmar (23). This is because this study did not include married people and age group was only for 15-24 years. The reason for not using contraception at the latest sexual intercourse was that their partner did not want to use (43%), and fear of side effect (29%), Health reason (14%), and culture and religion (14%).

Always Use of Contraception in the Life-time

Only 13 (38%) out of 34 respondents always used contraception in the life-time, however, only 6 respondents (17.6%) always used at least one modern contraceptive method. In this study, always use only traditional method (20.6%) was slightly higher than using modern method. Despite the evidences showed that modern contraceptive methods are more effective than traditional methods, a workshop summary of the recent

fertility trends in Sub-Saharan Africa stated that traditional methods were used worldwide (6.1%) especially in Africa (12%) in 2011 (97). Withdrawal and safe period are the primary used traditional contraceptive methods in worldwide. Moreover, in 2011, a review of DHS reports for eleven countries in East Asia and the Pacific stated that a high proportion of married and unmarried 15-19 years adolescents in Cambodia, Nauru, Papua New Guinea, Philippines, Solomon Islands and Vietnam were more likely to rely traditional methods than modern contraceptive method (98).

Although the study on unmarried youths was not found to compare the always use of contraception, another study on sexually active female adolescents aged 15-19 years who lived in Kaohsiung County, Taiwan revealed that 39.6% of them always used modern contraceptive method (99). The reason of different results may be different culture, social norm, and accessibility. However, that study also revealed that their respondents were more likely to use withdrawal method but less likely to use oral contraceptive pill when compared to the consistent contraceptive utilization in US among young women with the age of 15-19 (99). Those different results among the countries might be explained by different cultures and availability of contraception and reproductive health service for youths and adolescents.

Intended Use of Contraception in the Future

Out of 270 unmarried youths, 121 respondents (44.8%) intended to use only modern contraceptive methods in the future and 22 respondents (8.1%) intended both modern and traditional contraceptive method. However, 12 respondents (4.4%) intended to use only traditional contraceptive methods, and 115 (42.6%) did not intend to use any contraceptive method in the future.

In a previous study among in and out of school adolescents who were residing in city of Addis Ababa, Ethiopia, about 77% of adolescents intended to use modern contraceptive method in the future (50). Very low prevalence of intended use (44.8%) in this study may be explained by very limited modern contraceptive method in this study area where only oral contraceptive pill and injection can be easily available. Therefore, expanding contraceptive option and access for unmarried youths in rural area is very important to increase contraceptive use in the future (100).

Although intended use of contraception in sexually-active respondents was high (88.2%), actual use of contraception in the latest sexual intercourse (79%), and always use in the life-time (38%) were low. For modern contraceptive method, 28 (82.3%) sexually-active respondents intended to use at least one modern contraceptive method (58.8% for only modern method + 23.5% for both modern and traditional method). Nevertheless, 44% of sexually-active respondents used at least one modern method in the latest sexually intercourse, and always use at least one modern method in the life-time was 17.6%. These results indirectly pointed out that there were barriers for unmarried sexually-active youths for actual use of contraception, especially modern contraceptive method.

Moreover, use of at least one modern contraceptive method among sexually-active unmarried youths at the first sexual intercourse was 64.7% (52.9% for only modern method + 11.8% for both method). Compared to first sexual intercourse, use of at least one modern contraceptive method was lower at the latest sexual intercourse (44%), and always use in life-time (17.6%). This result may be explained by that unmarried youths were more afraid of being pregnant or being infected by sexually transmitted diseases at their first time. However, their fear on being pregnant may be reduced in the later sexual intercourses as they had experienced on sexual intercourse, and also, their partners and they might know more each other that may lead not to worry about sexually transmitted infections.

A similar study which focused on contraceptive utilization by three parts .i.e. first sexual intercourse, latest sexual intercourse and always use in life-time, could not be found among unmarried youths to compare the results. However, a cross sectional comparative study on out of school and in school adolescents aged 15-19 in Addis Ababa, Ethiopia, in 2003 showed a different result (50). In that study, use of contraception was higher in latest sexual intercourse compared to using in the first sexual intercourse. Use of modern contraceptive method in the first sexual intercourse in that study was 62.9% for out of school adolescents and 76.7% for in school adolescents whereas use of contraception at the last time were 87.4% and 82.2% for out of school and in school adolescents respectively. This different result may be due to different age group of adolescents and youths. Adolescent sexually active respondents may be more afraid of being pregnant compared to youths. In addition, the different

result can also be due to different study area as this study was only for rural unmarried youths in Yangon region. In that study, nevertheless, consistent or ever use of modern contraceptive method (28.6% for out of school and 49.3% for in school adolescents) was remarkably lower than the first and last sexual intercourses, and that was similar to this study. Therefore, always use of modern contraceptive method among adolescents and youths is still needed to improve.

5.5 Conclusion

In general, the results suggest the low prevalence of contraceptive utilization and the factors that have associations with actual use in the latest sex and in the life-time, and intended use in the future. In bivariate analysis, eight variables showed significant association with actual use of contraception. They are living arrangement, affordability, confidentiality, age group at the first sexual intercourse, use of contraception at the first sexual intercourse, use of contraceptive method at the first sexual intercourse, use of contraception when sex by peer pressure, and use of contraceptive method when sex by peer pressure. However, all these variables lost its significances in multiple logistic regression.

For intended use in the future, twenty-two variables showed significant associations. These significant variables are age group of respondent, sex, level of education, living arrangement, occupation, having own income, ever heard of contraceptive method, level of knowledge, level of attitude, level of correct belief, health education session, health education material, easy availability of contraception, transportation, time-taken, affordability, friendly welcome, judgmental attitude, same gender service provider, confidentiality, experience on sexual intercourse and use of contraceptive method at the first sexual intercourse. In multiple logistic regression, nine factors still held their significances at the final model of regression.

1. **Age group of respondent:** There was a strong significant positive association between age group of the respondents and intended use of contraception in the future (p value<0.001).

2. **Sex:** Sex was associated with intended use of only modern method in the future. Female were 1.7 times more likely to intend to use of only modern contraceptive method in the future (p value = 0.044).
3. **Having own income:** There was a significant positive association between having own income and intended use of only modern method (p value= 0.013).
4. **Attitude towards Premarital Sex and Contraception:** Respondents with good level of attitude were about 6 times more likely to use both contraceptive method in the future than those with poor level of attitude (p value=0.034).
5. **Beliefs upon Premarital Sex and Contraception:** There was a significant positive association between level of correct belief and intended use of only modern contraceptive method in the future (p value= 0.002).
6. **Ever heard about contraception:** There was a significant positive association between ever heard about contraception and intended use of contraception in the future (p value= 0.003).
7. **Easy availability of contraception in need:** Easy availability of contraception in need and intended use of contraception in the future had a strong significant positive association (p value< 0.001).
8. **Same gender service provider:** Respondents who did not believe to get same gender service provider were 2 times more likely to use only modern contraceptive method in the future than the respondents who believe on availability of same gender service provider but it was not significant (p value= 0.113). Respondent who did not know about same gender service provider were 0.5 times less likely to use only modern method in the future compared to the respondents who believed same gender service (p value= 0.032).
9. **Sexual Activity Status:** There was a strong positive significant association between experience on sexual intercourse and intended use of both contraceptive methods in the future (p value< 0.001).

5.6 Strengths and Limitations

Strengths

- This is the first community based research study which emphasizes specifically on unmarried youths' contraceptive utilization with their characteristics and associated factors in rural Yangon, Myanmar.
- Interview was conducted by same gender interviewer to achieve more sincere answers as the interviewee could feel comfortable.
- Interviewer-administered questionnaire was asked by young adult researchers who had experience on reproductive health research.
- Furthermore, interviewer-administered questionnaire could help to get correct answers for the questions that can be misunderstood by some young and sexually inactive respondents if used self-administered questionnaire.
- Sensitive questions for sexual activity status and sexually history were answered by self-administered questionnaire in order to increase sincere answers on their experiences because participants were not shy to disclose their sexual experiences.

Limitations

- This study had to take consents from the parents or guardians for the respondents who are under 18 years old, and this research could not get data from the unmarried youths who were not allowed to answer by their parents or guardians. Therefore, the under 18 respondents could not represent all under 18 youths in rural Yangon, Myanmar. Moreover, under 18 years old respondents' responses might have bias.
- Since this study assessed the independent and dependent variables simultaneously as a cross-sectional study, there was no evidence of a temporal relationship between independent and dependent variables. Besides, this research could not determine cause and effect relationship.
- Moreover, the answers of this study could include researchers' bias as three research assistants were recruited for this study.

- Furthermore, there were only 34 sexually active youths in this study, and therefore, analysis for actual use was based on this very small sub-sample which could create some different results from other studies on sexually active adolescents and youths.

5.7 Recommendations

Based on this findings of the study, recommendations for improving contraceptive utilization in premarital sexual relationship among unmarried youths in rural areas of Yangon Region were divided into program level and future research.

Recommendations for Program Implementation Level

- To provide sexual and reproductive health information, Youth Information Corners have been established in Rural Health Centers of some selected townships by the Health Education Division under the Ministry of Health and Sports since 2002 with the support of UNFPA (101). In this study, over half of respondents had never received health education session or health education materials about contraception. Therefore, those youth information corners should also be provided in this study area or nearby village tracts.
- Since low level of knowledge especially for emergency contraceptive pill and IUD was seen in majority of youths in this study, providing sexual and reproductive knowledge by conducting comprehensive sexual and reproductive health education in middle and high schools (that is now implementing in some government schools), and delivering more information about contraceptive methods such as emergency contraceptive pill and IUD through Facebook, mobile application and edutainment program in TV channels should be implemented.
- Under the Department of Social Welfare, training on reproductive health issues are provided in Youth Training Schools (102). However, those trainings and youth training schools are not available yet for youths who are residing in this study area and other rural townships of Yangon region because most of the NGOs and government projects are interested only on rural areas of other states

and regions in Myanmar, and peri-urban areas of Yangon region. Therefore, those trainings should be reached to rural youths in Yangon region.

- Limited choice of modern contraceptive method could be seen in this study, and hence, expanding the choice and availability of contraceptive methods in the rural areas should also be planned and implemented by cooperating government sector and NGOs such as Burnet Institute and PSI that are planning and implementing reproductive health research projects in Myanmar.
- The result in this study also pointed out that friendly welcome by service provider, judgmental attitude of service provider, confidentiality in discussion with service provider were encouraging factors to use contraception for unmarried youths. Therefore, unbiased and respectful care should be provided to both married and unmarried youths who seek reproductive health care or contraceptive service at the public, private and NGO clinics.

Recommendations for Future Research

- Qualitative research should be conducted among rural unmarried youths to know the reasons behind low intention to use modern and traditional contraceptive methods in the future.
- The next quantitative research should add the questions on why they did not use contraception at the first sexual intercourse, and at every intercourse so that the researcher can know the reason why use of contraception was lower at the latest sexual intercourse and in the life-time compared to the first sexual intercourse.
- The next quantitative research which will focus on larger sample size of unmarried sexually active youths is needed by using the findings from this study.

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APPENDIX



จุฬาลงกรณ์มหาวิทยาลัย
CHULALONGKORN UNIVERSITY

Appendix A

Participant Information Sheet

Title of Research: “Characteristics and Factors Affecting Contraceptive Utilization in Premarital Sexual Relationship among Unmarried Youths in Rural Yangon, Myanmar”

Principal Researcher’s Name: Ms. Hnin Ei Lwin

Position: Master of Public Health Student

Home Address: No 730, Maga 4th street, 12 Ward, South Okkalapa, Yangon, Myanmar.

Cell Phone: 09799584658

E-mail: hnineilwin.286@gmail.com

1. You are being invited to participate in this research project. Before you decide to participate, it is important for you to understand why this 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 to know more information.
2. The research project involves interviewing participants about different factors such as socio-demographic characteristics, contraceptive knowledge, attitudes and beliefs on premarital sex and contraception, availability of contraception, accessibility to contraception, and self-report questionnaire for sexual activity status, sexual history of unmarried youths and contraceptive utilization.
3. Objectives of the research
 - To determine the predisposing factors such as socio-demographic characteristics, the level of contraceptive knowledge, attitudes and beliefs towards premarital sex and contraception among unmarried youths in rural Yangon, Myanmar
 - To assess the enabling factors such as availability of contraceptive information and accessibility to contraception among unmarried youths in rural Yangon, Myanmar
 - To assess the need factors such as sexual status and sexual history of unmarried youths in rural Yangon, Myanmar
 - To determine the prevalence of modern and traditional contraceptive utilization in premarital sexual relationship among unmarried youths in rural Yangon, Myanmar

- To evaluate the association between predisposing, enabling, need factors and contraceptive utilization in premarital sexual relationship among unmarried youths in rural Yangon, Myanmar
4. The sample will be selected at the village leader's house according to the updated list of 15-24 unmarried youths. Then, the principal researcher and research assistants will go to the selected participants' houses by bike or car with the guidance of community health workers and village leader. Participants selected for this study will be unmarried youths who are in age of 15-24, willing to participate and give informed consents. Unmarried youths who are mentally unsound, and youths who are divorced, separated and ever married will not be included in this study. For unmarried youths with the age between 15 and 17, consent from the parent or guardian is required to participate in this study. Unmarried youths under 18 years old whose parents or guardians do not give consent will be excluded. This study will need at least 305 participants. You are invited to participate in this study because you meet with required criteria.
 5. All information about the questionnaires (Part I: predisposing factors, Part II: enabling factors, Part III: need factor and Part IV: contraceptive utilization) will be given to you before the interview so that you can decide whether you would like to participate. Part I and Part II will be interviewed by researcher by using interviewer-administered questionnaire. However, Part III and Part IV will have to answer by self-report method by using self-administered questionnaire because they are assumed as sensitive issues for unmarried youths. For illiterate participant, the researcher can help you in reading out the questions of self-administered questionnaire if you allow it, but the researcher will not influence on your answer. After answering the self-administered questionnaire, you can give the questionnaire back to researcher by folding in half and staple by stapler at the middle of wide opening edge of the fold. Then, the research assistant will keep both interviewer-administered and self-administered questionnaires in an opaque file confidentially. There are totally 46 questions in the questionnaire, 1-27 as interviewer-administered questionnaire, and 27-46 as self-administered questionnaire. The researchers will not allow the parent or guardian to view the participant answer. The paper questionnaires and data files will be destroyed after final report or the research is completed.
 6. The principal researcher or research assistants will explain you all necessary information regarding this study verbally.
 - 6.1 By giving the written consent, it means you are willing to participate in this study.

- 6.2 If the potential participants are illiterate, the researcher will explain clearly to the participants to get informed consent by taking thumbprint. If the target respondent refuse of give a fingerprint in a consented form, he or she can write down one word (initial name) of their names as a traditional way of signing for illiterates in those rural areas. Moreover, a literate witness who is selected by participant but no connection to the researchers will also need to sign on the consent form.
- 6.3 If your age is under 18, the researchers will ask and take consents from both you and your parents or guardians.
- 6.4 If the parents or guardians of under 18 participants are illiterate, the researchers will explain clearly to them to get parental or guardian consents by taking thumbprint. If the parent or guardian of the respondent refuse of give a fingerprint in a consented form, he or she can write down one word (initial name) of their names as a traditional way of signing for illiterates in those rural areas. Moreover, a literate witness who is selected by participants or their parents or guardians but no connection to the researchers will also need to sign on the parental consent form.
- 6.5 The researchers will take your signs only for written consent and they will be kept in separate opaque file from questionnaires. The signs on the consent cannot be traced back to your questionnaires.
- 6.6 The researcher will not take your names or any other details that can identify you on the questionnaires. Your teachers, friends and families will not see your responses because all information will be confidential, anonymous and will not be shared. All consent forms and questionnaires from this study will be stored confidentially.
- 6.7 If you choose to take part in this study, you will be asked to complete a questionnaire. The questionnaires will take approximately 30 minutes to complete. The interview and answering the self-administered questionnaire will be performed at your convenient time and place.
7. If you do not meet with the inclusion criteria after the screening process which will be done by checking with inclusion and exclusion criteria, your response will not be included in this study because it may alter the result of the research. Inclusion criteria for this study will be unmarried youths (both male and female) who are in age of 15-24, willing to participate and give informed consents. Unmarried youths who are mentally unsound, and youths who are divorced, separated and ever officially or traditionally married will be excluded in this

study. For unmarried male and female youths with the age between 15 and 17, consent from the parent or guardian is required to participate in this study. Unmarried youths under 18 years old whose parents or guardians do not give consent will be excluded. If you need any advice related to this study, you can contact the principal researcher.

8. You may feel uncomfortable and inconvenient to answer some questions. It is possible for you not to answer if you do not want to. You can speak to us if you have any concerns or questions before, during or after the questionnaire is complete. For your convenience, we will provide female researcher for female participant and male researcher for male. If you will answer complete questionnaire, we will be very appreciated for your support.
9. Your participation is voluntary. It is your right to withdraw at any time of interviewing without giving any reason. If you choose not to participate in this study, there will not be any negative consequences to you.
10. Your participation in this study is completely voluntary and there is no compensation for participation. However, the researcher will give a small gift such as soaps and napkins to you as appreciation for your participation. Although this study will not give benefits directly to you, it will provide baseline information of unmarried youths' contraceptive usage and some related factors to health authorities for further promoting contraceptive knowledge and utilization.
11. Any information that is directly related to you will be kept confidentially. No names or other identifying information will be included in the report or summaries of this study. The final report can be accessed from the principle researcher and the report will not be used for other purposes. The paper questionnaires and data files will be destroyed after final report or the research is completed.
12. If you have any questions or any complaints about this study, or the researcher does not follow or treat the participant according to these items you can contact to Ms. Hnin Ei Lwin, principal researcher, Master of Public Health student, Chulalongkorn University, Tel: 09799584658, Email: hnineilwin.286@gmail.com, or you can report the incidence to the Research Ethics Review Committee for Research Involving Human Research Participants, Health Sciences Group, Chulalongkorn University (RECCU). Jamjuree 1 Bldg., 2nd Fl., 254 Phayathai Rd., Patumwan district, Bangkok 10330, Thailand, Tel./Fax. 0-2218-3202 E-mail: eccu@chula.ac.th.

Appendix B

Informed Consent Form for Participants

Address

Date

Code number of participant

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

Title: **“Characteristics and Factors Affecting Contraceptive Utilization in Premarital Sexual Relationship among Unmarried Youths in Rural Yangon, Myanmar”**

Principal Researcher’s Name: Ms. Hnin Ei Lwin

Contact Address: No.730, Maga 4th street, 12 Ward, South Okkalapa, Yangon.

Telephone: 09799584658

I have (read or been informed) about rationale and objectives of the project, what I will engage in details, risk/harm and benefit of this research study, and the rights of the participants. I have been given the contact details of the principal researcher. The researcher has explained to me and **I clearly understand with satisfaction.**

I willingly agree to participate in this research and response the questionnaire which are focusing on socio-demographic information of the participant, contraceptive knowledge, attitude and beliefs concerning premarital sex and contraception, availability of contraceptive information, accessibility to contraception, sexual activity status, sexual history and contraceptive utilization. I am acknowledged that I might feel not being comfortable in answering some sexual practice questions which are included in this research questionnaire.

I have been informed that the interview and answering self-administered questionnaire will take about 30 minutes, and will be done only one time.

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.**

The researcher has guaranteed that the procedure will be exactly the same as indicated in the participant information sheet. Any personal information about me will

be maintained confidentially. The results of the study will be described as an overall 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 Research Ethics Review Committee for Research Involving Human Research Participants, Health Sciences Group, Chulalongkorn University (RECCU). Jamjuree 1 Bldg., 2nd Fl., 254 Phyathai Rd., Patumwan district, Bangkok 10330, Thailand, Tel./Fax. 0-2218-3202 E-mail: eccu@chula.ac.th.

I have read the information in this consent form, or it has been read to me. Furthermore, I have received a copy of participant's information sheet and informed consent form.

Sign Sign
 (.....) (.....)
 Researcher Participant

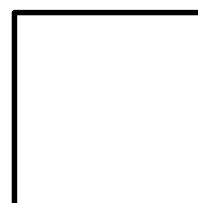
If illiterate

Parents or guardians who are illiterate should include their thumb-prints as well. If the parent or guardian of the respondent refuses to give a fingerprint in a consented form, he or she can write down one word (initial name) of their names, as a traditional way of signing for illiterates in those rural areas. A literate witness must sign (this person should be selected by the parent/guardian and should have no connection to the researchers).

Thumb-print of participant

Sign
 (.....)

Witness



Appendix C

Informed Consent Form for Parent or Guardian

Address.....

Date

Code number of participant

I who have signed here below is (indicate: father/mother/legal guardian) of (name of participant) agree to participate in this research project.

Title: “Characteristics and Factors Affecting Contraceptive Utilization in Premarital Sexual Relationship among Unmarried Youths in Rural Yangon, Myanmar”

Principal Researcher’s Name: Ms. Hnin Ei Lwin

Contact Address: No.730, Maga 4th street, 12 Ward, South Okkalapa, Yangon.

Telephone: 09799584658

I and person under my care have been informed about rational and objective(s) of the project, and what will be done in details upon the person under my care, risk/harm and benefit of this project. I have read details in the information sheet and **clearly understand with satisfaction.**

I willingly **agree** to let the person under my care participate in this project and consent the researcher to response the questionnaire which are focusing on socio-demographic information of the participant, contraceptive knowledge, attitude and beliefs concerning premarital sex and contraception, availability of contraceptive information, accessibility to contraception, sexual activity status, sexual history and contraceptive utilization.

I have read the information that is written in participant information sheet, or it has been read to me. I have had the opportunity to ask questions about it and any questions that I have asked have been answered to my satisfaction. I consent voluntarily to my child participating in this research.

Either the person under my care or I have **the right** to withdraw from this research project at any time as wished, with no need **to give any reason**. This withdrawal **will not have any negative impact upon person under my care or me.**

I have been informed that the interview and answering self-administered questionnaire will take about 30 minutes, and will be done only one time.

Researcher has guaranteed that procedure(s) which will be acted upon the person under my care would be exactly the same as indicated in the information. Any personal information of person under my care will be **kept confidential**. Results of the study will be reported as total picture. Any personal information which could be able to identify person under my care and my self will not appear in the report.

If the person under my care **is not treated as indicated in the information sheet**, I can report to the Research Ethics Review Committee for Research Involving Human Research Participants, Health Sciences Group, Chulalongkorn University (RECCU). Jamjuree 1 Bldg., 2nd Fl., 254 Phyathai Rd., Patumwan district, Bangkok 10330, Thailand, Tel./Fax. 0-2218-3202 E-mail: eccu@chula.ac.th.

I have read the information in this consent form, or it has been read to me. Furthermore, I have received a copy of information sheet, and informed consent form.

Sign

(.....)

Researcher

Sign

(.....)

Participant

Sign

(.....)

Parents or guardian of participant

If illiterate

Parents or guardians who are illiterate should include their thumb-prints as well. If the parent or guardian of the respondent refuses of give a fingerprint in a consented form, he or she can write down one word (initial name) of their names, as a traditional way of signing for illiterates in those rural areas. A literate witness must sign (this person should be selected by the parent/guardian and should have no connection to the researchers).

Thumb-print of parent or guardian

Sign

(.....)

Witness

Appendix D
Questionnaire
Interviewer-Administered Questionnaire

Code Number: -----

**Characteristics and Factors Affecting Contraceptive Utilization in Premarital
Sexual Relationship among Unmarried Youths in Rural Yangon, Myanmar**

Please tick [] on the number of the answers by the respondent.

Part I. Predisposing Factors

A. Socio-demographic Characteristics

1. How old are you now? (Completed years)

----- Years

2. Sex

1. [] Male

2. [] Female

3. What is your religion?

1. [] Buddhist

2. [] Christian

3. [] Hindu

4. [] Muslim

5. [] Others -----

4. What is your level of education?

1. [] Never gone to school

2. [] Never gone to school but can read and write simple Myanmar language

3. [] Primary School

4. [] Secondary Education

5. [] High School Level

6. [] Higher Education (University Level)

5. With whom do you live and share most meals for the past 3 months?

1. [] With my parents

2. [] With my father only

3. [] With my mother only

4. [] With relatives
5. [] With friends
6. [] Alone
7. [] Others -----

6. What is your occupation?

1. [] Student
2. [] Private Employee
3. [] Government Employee
4. [] General/ Random Laborer
5. [] Hawker
6. [] Unemployed
7. [] Others -----

7. Do you have your own income?

1. [] Yes
2. [] No (If no, go to Q.9)

8. If yes, how much is your monthly income?

1. [] <100,000 kyats per month
2. [] 100,000-200,000 kyats per month
3. [] 200000-300000 kyats per month
4. [] >300000 kyats per month

B. Knowledge concerning Contraception

9. Have you ever heard of any contraceptive methods?

1. [] Yes
2. [] No (If no, go to Q.12)

10. What kinds of contraceptive methods have you ever heard? (Tick all responses)

Types of Contraception	No Prompt	Prompt
1. [<input type="checkbox"/>] Oral contraceptive Pill		
2. [<input type="checkbox"/>] Injection		
3. [<input type="checkbox"/>] IUD		
4. [<input type="checkbox"/>] Implant		
5. [<input type="checkbox"/>] Emergency Contraceptive Pill		
6. [<input type="checkbox"/>] Female Condom		
7. [<input type="checkbox"/>] Male Condom		
8. [<input type="checkbox"/>] Female Sterilization		
9. [<input type="checkbox"/>] Male Sterilization		
10. [<input type="checkbox"/>] Withdrawal before Ejaculation		
11. [<input type="checkbox"/>] Safe Period		

11. Knowledge upon contraception (T=True, F=False, NS=Not sure)

		T	F	NS
1	Depo injection should be taken once in 3 months to prevent pregnancy.			
2	Women who take oral contraceptive pills should take a pill every day at the same time to avoid becoming pregnant.			
3	Oral contraceptive pill can prevent sexually transmitted diseases.			
4	Emergency contraceptive pill can substitute for regular contraception.			
5	2 nd dose of emergency contraceptive pill should be taken 12 hours after the 1 st dose.			
6	Implants can be used to prevent pregnancy for 3-5 years depending on type of implant.			
7	IUD interferes sexual intercourse.			
8	Male condoms may slip off during sexual intercourse if not used correctly.			
9	Male and female condoms can prevent both pregnancy and sexually transmitted diseases including HIV/AIDS.			
10	Female condom is placed inside the vagina.			
11	If the women do not want the children anymore, sterilization can be used.			
12	Male sterilization can reduce sexual desire and it can cause weakness to men.			
13	Withdrawal before ejaculation does not work well at preventing pregnancy.			
14	Safe period can be used as an effective contraceptive method.			
15	Incorrect and inconsistent use of contraception can cause unwanted pregnancy.			
16	All contraceptive methods can prevent both sexually transmitted infections and pregnancy if used properly.			

C. Attitude towards premarital sex and contraception

12. Attitudes (SA= Strongly Agree, A= Agree, UC= Uncertain, D=Disagree, SD= Strongly Disagree)

		SA	A	U C	D	S D
1	Premarital sexual relation is acceptable for those who promise to marry but can't marry yet.					
2	It is acceptable to have premarital sex for men but not for women.					
3	Providing information to youths about contraception can increase the rate of sexual activity.					
4	Contraceptive utilization should be taught in the school.					
5	Discussion on using contraception is not a shameful manner among couples.					
6	Buying or accessing contraception is a shameful manner for unmarried youths.					
7	You need negotiation skill to convince your partner to use condom.					
8	If you go for a shop for contraception and if your friends find you with condom, you will be looked down or stigmatized.					

D. Beliefs upon Premarital sex and contraception

13. Beliefs (T=True, F=False, NS=Not sure, DN= Don't Know)

		T	F	NS	DN
1	Do you believe that a woman cannot become pregnant when she has unprotected sex with a man for the first time?				
2	Do you believe that you have no risk of sexually transmitted diseases if you have unprotected sex with your lover or regular partner?				
3	Do you believe that you cannot get sexually transmitted diseases if you wash properly with soap after having sexual relationship?				
4	Do you believe that the boy does not need to use condom to prevent STI if his partner is using contraception (except female condom)?				
5	Do you believe that all sexually transmitted diseases including HIV/AIDS can be treated and cured?				
6	Do you believe that using condom can interfere with sexual activity?				

3. Private Vehicle
4. Ask someone to buy
5. Don't know
6. Others

22. How long would it take from your home to the nearest source of contraception?

1. Less than 30 minutes
2. 30 minutes to 1 hour
3. 1-2 hours
4. Over 2 hours
5. Don't know

23. Is the price of contraception affordable for you?

1. Yes
2. No
3. Don't know

24. If you go to NGO or public or private clinic to receive contraception, do you believe that the service provider will friendly welcome you to provide contraceptive service?

1. Yes
2. No
3. Don't know.

25. If you go to NGO or public or private clinic to receive contraception, do you believe that the service provider will judge you on your age or not being married?

1. Yes
2. No
3. Don't know

26. If you go to NGO or public or private clinic to receive contraception, do you believe that you can discuss with same gender service provider? (Note: female preference of female service provider and male preference of male service provider)

1. Yes
2. No
3. Don't know

27. If you go to NGO or public or private clinic to receive contraception, do you believe you can confidentially discuss with service provider?

1. Yes
2. No
3. Don't know

Self-Administered Questionnaire [] Interviewer-Administered
Questionnaire []

Code Number: -----

**Characteristics and Factors Affecting Contraceptive Utilization in Premarital
Sexual Relationship among Unmarried Youths in Rural Yangon, Myanmar**

Please fill in the following questions by yourself and then fold this questionnaire in half
and staple at the middle of wide opening edge of the fold.

Please tick [] on the number of the answers.

Part III. Need Factors

G. Sexual Activity Status

(Sexual intercourse means penetration sexual intercourse: penile-vaginal
intercourse)

28. Have you experienced sexual intercourse (penile-vaginal intercourse)?

1. [] Yes 2. [] No (If no, go to Q.45)

H. Sexual History

29. If yes, how old were you when you had your first intercourse?

----- Years

30. With whom was this with?

1. [] Boyfriend/ Girlfriend
2. [] Commercial Sex Partner
3. [] Casual Encounter (A person, neither boyfriend/girlfriend nor commercial
sex partner, who sex for one night stand or casual sex.)
4. [] Others -----

31. Did you use any type of contraceptive for that occasion?

1. [] Yes 2. [] No (If no, go to Q.33)

32. If yes, which of the following contraceptive method(s) did you adopt? (either you
or your partner)

1. [] Oral Contraceptive Pill
2. [] Injection
3. [] IUD
4. [] Implant
5. [] Emergency Contraceptive Pill
6. [] Female Condom
7. [] Male Condom
8. [] Withdrawal
9. [] Safe Period

33. Have you experienced premarital sexual intercourse (penile-vaginal intercourse)
under pressure by your peers?

1. Yes 2. No (If no, go to Q. 37)

34. Have you been pressured to use contraception by peers for that occasion?

1. Yes 2. No

35. Did you use any type of contraceptive for that occasion?

1. Yes 2. No (If no, go to Q. 37)

36. If yes, which of the following contraceptive method(s) did you use? (either you or your partner)

1. Oral Contraceptive Pill
2. Injection
3. IUD
4. Implant
5. Emergency Contraceptive Pill
6. Female Condom
7. Male Condom
8. Withdrawal
9. Safe Period

37. Have you had sexual intercourse with commercial sex-partner but not for your 1st sexual intercourse?

1. Yes 2. No (If no, go to Q. 40)

38. Did you use any type of contraceptive for that occasion?

1. Yes 2. No (If no, go to Q. 40)

39. If yes, which of the following contraceptive method(s) did you use? (either you or your partner)

1. Oral Contraceptive Pill
2. Injection
3. IUD
4. Implant
5. Emergency Contraceptive Pill
6. Female Condom
7. Male Condom
8. Withdrawal
9. Safe Period

40. How many sexual partners did you have in your life time?

1. 2 or fewer
2. 3-5
3. 6-10
4. More than 10

Part IV. Modern and Traditional Contraceptive Utilization in Unmarried Youths

41. Did you use any contraceptive method in your latest sexual intercourse (penile-vaginal intercourse)? (Either you or your partner)

1. Yes 2. No (Go to Q.43)

42. If yes, which of the following contraceptive method(s) did you use? (either you or your partner)

1. Oral Contraceptive Pill
2. Injection
3. IUD
4. Implant
5. Emergency Contraceptive Pill
6. Female Condom
7. Male Condom
8. Withdrawal
9. Safe Period

43. If you or your partner did not use any contraceptive method in the latest sexual intercourse, why did you or your partner not use contraception? (Only for respondent who answer "No" in Q. 41)

1. Expensive
2. Fear of Side effect
3. Service Unavailable
4. Culture and Religion
5. Health Reason
6. My partner did not want to use.
7. Others

44. How often did you use following contraceptive methods in your sexual intercourses (penile-vaginal intercourse)? (Either the respondent or his or her partner)

Always means at all times in any event.

Almost Always means most of the times or events (more than half of the times or events)

Sometimes means a few times or events (half and less than half of the times or events)

Never means not at any time or event.

		Always	Almost Always	Sometimes	Never
1	Oral contraceptive pills				
2	Injections				
3	IUD				
4	Implant				
5	Emergency Contraceptive pill				
6	Female Condom				
7	Male Condom				
8	Withdrawal				
9	Safe Period				

45. Do you intend to use contraception in the future?

1. Yes 2. No (questionnaire ends here)

46. Which contraceptive method do you intend to use in the future? (Multiple choice)

1. Oral Contraceptive Pill
 2. Injection
 3. IUD
 4. Implant
 5. Emergency Contraceptive Pill
 6. Female Condom
 7. Male Condom
 8. Withdrawal
 9. Safe Period

Thank you very much for your time given and participation.

Appendix F

Budget

	Description	Unit	Estimated Budget (Baht)
1. Procurement			
1.1	Printing Questionnaires and Consents		3,000
1.2	Purchasing Stationary		500
2. Survey Management Cost			
2.1	Two times to go back to Yangon, Myanmar	6500*2	13,000
2.2	Advocacy with authorities		2,000
2.3	Transportation to study sites by car and bike		15,000
2.4	Honorarium for three research assistants		21,000
2.5	Meal for authorities and research assistants		5,000
2.6	Miscellaneous		1,000
3. Preparation and Completion of Thesis Paper			
3.1	Printing		2500
Total			63,000

VITA

Name: Miss Hnin Ei Lwin

Date of Birth: June 28, 1994

Place of Birth: Yangon, Myanmar

Nationality: Myanmar

Religion: Buddhist

Email: hnineilwin.286@gmail.com

Education Background: B. Pharm (Yangon)

Graduated from University of Pharmacy (Yangon), Myanmar in 2015

Working Experiences:

1. Research Assistant for “Young People Matter” Project at Burnet Institute Myanmar (July 2016 - November 2016)
2. Research Assistant for “Community Checklists for Immunization Study” Project at Burnet Institute Myanmar (March 2016 - June 2016)
3. Data and Logistic Assistant for Quality Diagnosis and Standard Treatment of Malaria (QDSTM) Project at Myanmar Medical Association (8th January 2015 - 28th February 2015)