การคุมกำเนิดในกลุ่มหญิงวัยเจริญพันธุ์ที่แต่งงานแล้วในเมืองมัณฑะเลย์ ประเทศพม่า

นางสาวขิ่น ทู ซา

วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาสาธารณสุขศาสตรมหาบัณฑิต
สาขาวิชาสาธารณสุขศาสตร์
วิทยาลัยวิทยาศาสตร์สาธารณสุข จุฬาลงกรณ์มหาวิทยาลัย
ปีการศึกษา 2553

CONTRACEPTION USAGE AMONG MARRIED WOMEN OF REPRODUCTIVE AGE IN MANDALAY, MYANMAR

Miss Khin Thu Zar

A Thesis Submitted in Partial Fulfillment of the Requirements

for the Degree of Master of Public Health Program in Public Health

College of Public Health Sciences

Chulalongkorn University

Academic Year 2010

Thesis Title	CONTRACEPTION USAGE AMONG MARRIED WOMEN OF REPRODUCTIVE AGE IN MANDALAY, MYANMAR
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Field of Study	Public Health
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ขิ่น ทู ซา: การคุมกำเนิดในกลุ่มหญิงวัยเจริญพันธุ์ที่แต่งงานแล้วในเมืองมัณฑะเลย์ ประเทศพม่า (CONTRACEPTION USAGE AMONG MARRIED WOMEN OF REPRODUCTIVE AGE IN MANDALAY, MYANMAR) อาจารย์ที่ปรึกษาวิทยานิพนธ์หลัก: อาจารย์ ดร.อุษณีย์ พึ่งปาน, 80 หน้า

วัตถุประสงค์ของการศึกษาครั้งนี้ เพื่อศึกษาการใช้การคุมกำเนิดและความสัมพันธ์ของการคุมกำเนิดกับปัจจัยทางสังคม ประชากร ความรู้เกี่ยวกับการคุมกำเนิด เจตคติในกลุ่มหญิงวัยเจริญพันธุ์ที่แต่งงานแล้วจำนวน 358 คนผู้ที่อาศัยในมัณฑะเลย์ ประเทศพม่า ข้อมูลได้มาจากการสัมภาษณ์ นำมาวิเคราะห์ด้วยไคร์สแควร์เพื่อความสัมพันธ์ระหว่างปัจจัยดังกล่าวกับการใช้การคุมกำเนิด

การศึกษานี้พบว่า หญิงที่แต่งงานแล้วในมัณฑะเลย์ ร้อยละ 43 มีอายุระหว่าง 25-34 ปี ร้อยละ 44.7 แต่งงานมานานกว่าสิบปี มากกว่าครึ่งหนึ่งมีบุตร 1-2 คน และเป็นแม่บ้าน กลุ่มตัวอย่างเกือบทั้งหมดนับถือศาสนาพุทธ ประมาณครึ่งหนึ่งมีรายได้ระหว่าง 50,001-100,000 จ๊ัตต่อเดือน

ความชุกของการคุมกำเนิดคิดเป็นร้อยละ 53.4 วิธีการคุมกำเนิดที่นิยมใช้คือยาคุมกำเนิดและยาฉีด สาเหตุที่ปัจจุบันไม่ได้ใช้การคุมกำเนิดเพราะความกลัวที่จะเกิดผลข้างเคียง ความต้องการมีบุตร เหตุผลทางสุขภาพ และสามีไม่ต้องการให้ใช้ กลุ่มตัวอย่างส่วนใหญ่รู้จักวิธีคุมกำเนิด และครึ่งหนึ่งมีคะแนนความรู้ โดยตอบได้อย่างถูกต้องถึงร้อยละ 50-70 นอกจากนี้มีเพียงร้อยละ 13-19 เท่านั้นที่มีทัศนคติที่ดีต่อการคุมกำเนิด

จากการศึกษาค่าไคร์สแควร์ เพื่อหาความสัมพันธ์ระหว่างการใช้การคุมกำเนิดกับตัวแปรอิสระดังกล่าวพบว่า หญิงที่มีอายุระหว่าง 20-29 ปีและมีบุตรแล้ว 1-2 คน ผู้ที่แต่งงานมาแล้วเป็นระยะเวลา 6-10 ปี ผู้ที่มีความรู้เรื่องการคุมกำเนิดดีและมีทัศนคติปานกลาง จะยอมรับการคุมกำเนิดได้อย่างมีนัยสำคัญ ข้อมูลที่พบครั้งนี้จึงมีความสำคัญที่จะนำไปสู่การให้ความรู้กับผู้หญิงกลุ่มนี้เกี่ยวกับการคุมกำเนิด

สาขาวิชา: สาธารณสุขศาสตร์ ลายมือชื่อนิสิต: .....

ปีการศึกษา 2553 ลายมือชื่ออาจารย์ที่ปรึกษาวิทยานิพนธ์หลัก: ...Khaneya Pernpan

5379114753 : MAJOR PUBLIC HEALTH
KEYWORDS : USAGE OF CONTRACEPTION / MARRIED WOMEN REPRODUCTIVE AGE / MANDALAY

KHIN THU ZAR: CONTRACEPTION USAGE AMONG MARRIED WOMEN OF REPRODUCTIVE AGE IN MANDALAY, MYANMAR
ADVISOR: USANEYA PERNGPARN, Ph.D., 80 pp.

The objective of this study was to determine contraceptive usage and its association with socio-demographic factors, knowledge about contraception, attitudes towards contraception among 358 married women of reproductive age residing 2 townships in Mandalay, Myanmar. The data of this face to face interview study was analyzed by chi-square test to understand the association between independent factors and current contraception usage.

The study revealed that 43% of the women in the two townships in Mandalay were 25 to 34 years of age. 44.7% reported being married for more than ten years; more than half had 1 to 2 children and were housewives. Nearly all were Buddhist. Nearly half of the women had an income 50,001-100,000 Kyat per month.

The prevalence of contraceptive use among married women was 53.4%. The most commonly used methods were oral pill and injectables. The common reasons for not currently using contraceptives were being afraid of side effects, wanting to get pregnant, health reasons and husband objecting. Most of the women heard of contraceptive methods and half correctly answered 50-70% of the knowledge questions. Only 13 to 19% of women had a favorable attitudes towards contraception use.

The relationship between independent variables and current usage of contraception was analyzed by chi-square test. The result showed that 21 to 30 years old, those with 1 to 2 children, women married for 6 to 10 years, women with more knowledge and women with a moderate level of attitude towards contraception are significantly more likely to be contraceptive users. This information is needed to help educate women about contraception.

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

Academic Year: 2010 Advisor's Signature: .....Usaneya Perngparn

ACKNOWLEDGEMENTS

I would like to express my great gratitude to my thesis adviser, Dr Usaneya Perngparn for her kind help and support throughout my thesis.

The supports and valuable advices from Dr Prathurng Hongsranagon and Dr Nanta Auamkul as the members of thesis committee are also gratefully acknowledged.

I would like to express my special thanks to Dr. Sid Naing, country director of Marie Stopes international Myanmar for all his kind supports during my data collection in Mandalay, Myanmar. Heartfelt thanks go to the staffs from Marie Stopes international (MSI) in Mandalay, Myanmar for warmly cooperation of data collection.

Final and special thanks go to my beloved parents who contribute moral and financial supports endlessly to me to accomplish this study.

CONTENTS

List of Tables

Page

LIST OF FIGURES

LIST OF ABBREVIATIONS

IUD	Intra Uterine Device
MMR	Maternal Mortality Ratio
MSI	Marie Stopes International
UN	United Nations
UNFPA	United Nations Population Fund
WHO	World Health Organization

CHAPTER I
INTRODUCTION

1.1 BACKGROUND AND RATIONALE

Contraception is an integral part of reproductive health. In addition, it is one of the most important determinants of maternal and child health. On the other hand, utilization of contraceptive methods can help in reduction of the number of maternal deaths. A wide range of contraceptive methods are made accessible and affordable to all couples for prevention of unwanted pregnancies and induced abortion.

Current contraception includes a variety of highly effective and safe methods of fertility regulation. However, they need proper compliance with their strict rule. Improper use or non compliance leads to unintended or unwanted pregnancy. Therefore, acquiring knowledge of contraceptive methods and their sources are the important requirements toward using suitable contraceptive method in a timely and effective manner. In fact that it is also important for the correct utilization of contraceptive method to prevent from the risk of unwanted or unintended pregnancy.

According to the Myanmar Fertility Survey (2001), the contraceptive prevalence rate (proportion of married women aged 15-49 who are currently using a contraceptive method) is 37 percent of all methods. Contraceptive prevalence rate for modern contraceptive methods is 32.8 percent and contraceptive prevalence rate for traditional methods is only 4.2 percent. Comparing with neighboring countries in Asia, the prevalence of modern contraceptives methods for Myanmar is relatively lower than the other countries. 23 percent of women with no children are currently using modern contraceptive methods for spacing the first child among the newly married couples. (FRHS, 2001)

The present study will assess the knowledge, attitude and practice of contraceptives usage among Myanmar married women and it can help to enhance the contraception practice in future and thereby promoting the health status of the women and thus reducing the maternal mortality and morbidity and having a better family life with increasing quality of life.

Contraception plays a major role in controlling the maternal mortality and morbidity. Maternal mortality ratio in Myanmar is 3.16/1000 live births in 2005 (Central Statistical Organization 2005). The chance that a woman can die from pregnancy related causes is 1 in 33 in Myanmar. (Health in Myanmar, 2007)

Lack of knowledge, wrong believes and incorrect practice of contraception can cause increase in number of unwanted pregnancies and it may also lead to increase in maternal mortality. Women often lacked accurate information about the efficacy, side-effects and the appropriate use of the various methods available to them. Many misconceptions and myths were encountered in the use of contraceptive methods. For example, many expressed concern over the use of contraceptive methods for more than three continuous years. Another common belief is that oral contraceptive pills can cause cancer.

Despite of the high proportion of people who know the different types of contraceptive methods, knowledge in using specific method is generally very superficial in Myanmar. There was a wide gap in knowledge and practice of contraception that apparently depends on availability, improper source of advice, phobia of non-traditional methods, misinterpretation of hormonal effects, and misconception about invasive procedures like IUD insertion. Inaccurate information contributes in inappropriate use of contraceptives, which is likely to be a factor in the frequent reports of contraception failure. It may lead to illegal abortion and affecting the momentum of birth spacing services in Myanmar.

Total population in Myanmar is 58.38 millions in 2008-2009. The population growth rate is 1.52 percent. More than 60 percent of the total population is women and 30 percent of the population is women of reproductive age. 89 percent of the population is Buddhist. (UNFPA, 2009)

Although Yangon is the largest city of Myanmar, there are so many studies concerning contraception usage among married women. Mandalay is the second-largest city of Myanmar. The city has a population of one million and it is the capital of Mandalay Division. It is composed of seven townships. There is only one study

which assessed the knowledge, attitude and practice of contraceptive usage among married women in Mandalay and it is not community-based study. This study is hospital-based study and it was done in 1992. Study population in this study was married women who attended the antenatal care and gynaecological clinic at the Mandalay General Hospital. There is no previous community-based study of the practice of contraceptive usage among married women in Mandalay. Therefore, this study can provide the base line information of contraceptive usage among Myanmar married women to health authorities for further promoting contraceptive usage and family planning knowledge to Myanmar married women.

1.2 Research questions

- What is the prevalence of contraceptive usage among married women of reproductive age in Mandalay, Myanmar?
- What are the knowledge of contraception and attitude towards contraception among married women of reproductive age in Mandalay, Myanmar?
- Are there any association between socio-demographic factors, knowledge, attitude and contraceptive usage among married women of reproductive age in Mandalay, Myanmar?

1.3 Research objectives

1.3.1 General Objective

1. To determine the prevalence of contraceptive usage and the association between socio-demographic factors, knowledge about contraception, attitude towards contraception and contraceptive usage among married women of reproductive age in Mandalay, Myanmar.

1.3.2 Specific objectives

1. To determine the prevalence of contraceptive usage among married women of reproductive age in Mandalay, Myanmar.
2. To describe the knowledge of contraception and attitude towards contraception among married women of reproductive age in Mandalay, Myanmar.
3. To determine the association between socio-demographic factors, knowledge about contraception, attitude towards contraception and contraceptive usage among married women of reproductive age in Mandalay, Myanmar.

1.4 Hypothesis of the study

- There is an association between socio-demographic factors, knowledge about contraception, attitude towards contraception and contraceptive usage.

1.5 Variables

(1) Independent Variables

-age
-education
-occupation
-family income
-marital duration
-number of living children
-information support from health workers
-availability of contraceptive
-knowledge on contraception
-attitude towards contraception

(2)Dependent Variable

-Usage of contraception

1.6 Operational Definitions

"Age" refers to the respondent's age in completed years.

"Religion" refers to the respondent's religion in terms of Buddhist, Muslim, Christian and others.

"Education" refers to the respondent's highest level of education at the time of interview. It is divided into 6 groups which are illiterate, literate, primary school level, middle school level, high school level and higher than high school level.

"Occupation" refers to the respondent's job at the time of interview. Occupation is divided into 5 groups which are government officer, hawker, own business, dependent and others.

"Average family income per month of respondent" refers to the sum of average money per month received by family of the respondent. Economic status of the family of respondent was divided into 3 groups: low income (< 10,000 kyats per month), medium income (between 10001 to 20000 kyats per month) and high income (>20001 kyats per month).

"Number of living children" refers to the total number of living children in the family.

"Knowledge on contraception" refers to the respondents' level of knowledge on contraception. In knowledge part, the score for the correct answer is 1 and for incorrect answer is 0. There are 10 questions for knowledge of each contraceptive methods and the score will be 1 for correct answer and 0 for incorrect answer. The highest score is 10 and the lowest score is 0.

"Attitude on contraception" refers to the general tendency of the respondent to act in a certain way on contraception. Attitude was measured in 3 categories according to the Likert scale (McDowel Ian and Newell C). The attitude part is composed of 6 questions and the questions consist of both negative and positive aspects. For positive attitude questions, the score will be given 5 for strongly agree, 4 for agree, 3 for uncertain, 2 for disagree and 1 for strongly disagree. For negative attitude questions, the score will be given 5 for strongly disagree, 4 for disagree, 3 for uncertain, 2 for agree and 1 for strongly agree. The standard point for the attitude was mean ± standard deviation. The score ≤ mean – standard deviation (≤16.81) refers to poor attitude. The score ≥ mean + standard deviation (≥23.51) refers to good attitude and the score within mean + standard deviation and mean – standard deviation (16.81 – 23.51) refers to moderate attitude.

"Usage of contraception" refers to the use of contraception at least one method, traditional method such as abstinence, withdrawal, calendar method or modern method such as pills, injections, IUD, condom, female sterilization, male sterilization, implants, diaphragm, either used by the women or her husband.

“Contraceptive prevalence rate” means the percentage of women of reproductive age who are using (or whose partner is using) any form of contraception at the time of interview. (UNFPA).

“Women of reproductive age” refers to all women aged 15 to 49 years. (WHO)

In this study, **“Women of reproductive age”** refers to all women aged 18 to 49 years as the suggestion of ethic committee.

“Current user” refers to the respondent who are using of contraception at the time of interview.

“Ever use” refers to usage of contraceptive methods before and at the time of interview by the respondents.

“Non-use” refers to the not using of contraception by the respondent within last 3 month.

1.7 Conceptual framework

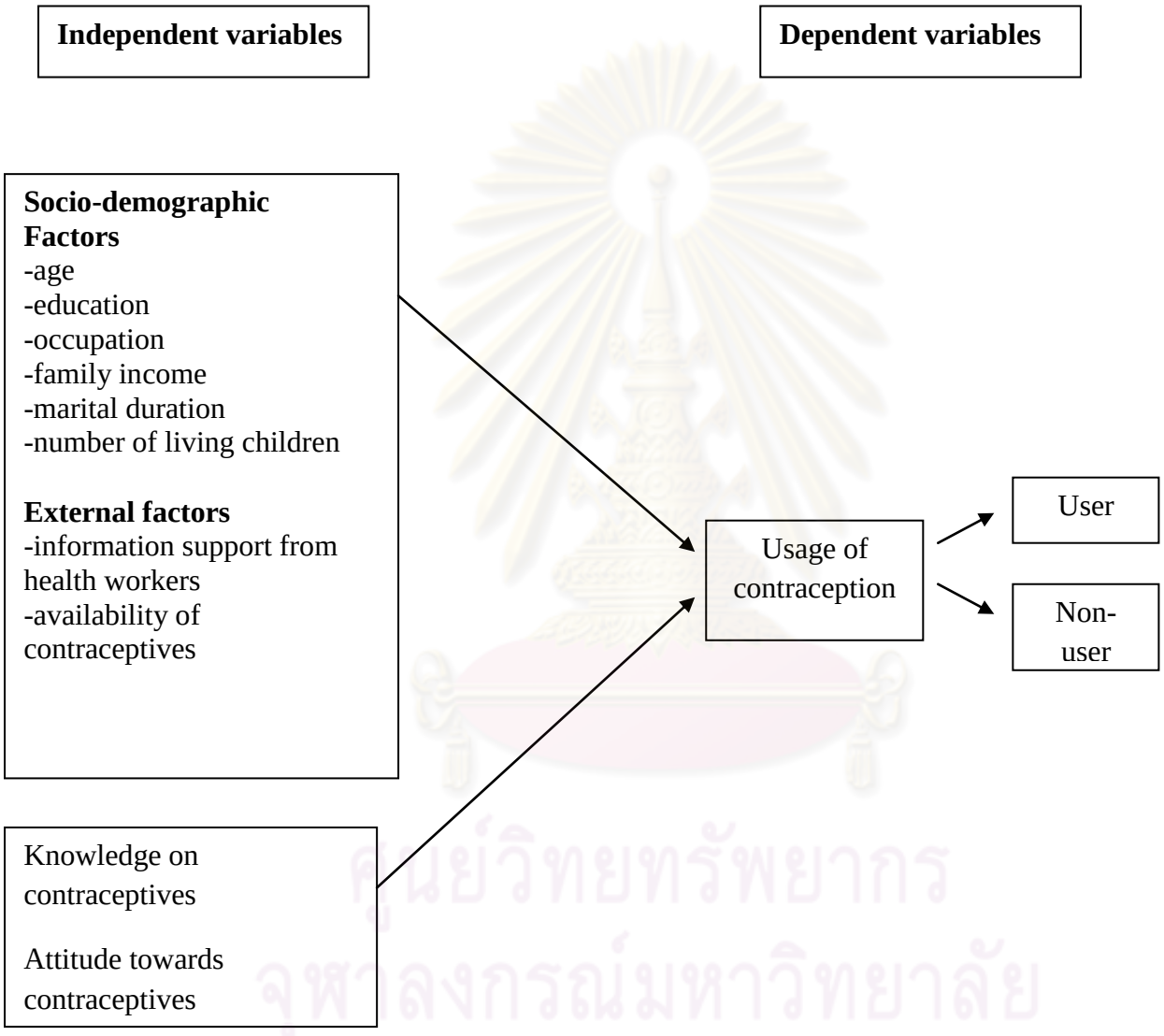

Figure 1.1 Conceptual Framework

CHAPTER II
LITERATURE REVIEW

2.1 Reproductive health

"Reproductive health has been defined as a state of complete physical, mental and social well-being and not merely an absence of disease or infirmity in all matters relating to the reproductive system and to its functions and processes." (WHO, 2006)

Contraception includes in the major components of the reproductive health. The various elements of reproductive health are strongly inter related and improvement of one lead to the deterioration of others. Contraception is central to all other aspects of reproductive health among these elements.

Contraceptive methods can be divided into modern and traditional contraceptive methods. Modern contraceptive methods are oral contraceptive pills, depo injection, emergency contraceptive pills, condom, diaphragm, intrauterine device (IUD), permanent tubal ligation and vasectomy. Traditional contraceptive methods consist of abstinence, withdrawal, fertility awareness method. (WHO, 1997)

2.2 Trends in contraceptive prevalence in worldwide

Contraceptive prevalence rate was 54 percent in 1990, 59 percent in 1995 and 63 percent in 2000 in worldwide. Thus, we can conclude that contraceptive prevalence rate was increased from 1990 to 2000. According to data from 120 countries, trend in contraceptive prevalence rate is more increase in the less developed regions than in the more developed regions. Contraceptive prevalence rate was 66 percent in 1990, 68 percent in 1995 and 70 percent in 2000 in the more developed regions. Therefore, it is increased by 0.4 percent per year from 1990 to 2000. On the other hand, contraceptive prevalence rose from 52 percent in 1990 to 57 percent in 1995 and to 61 percent in 2000 in the less developed regions. Thus, contraceptive prevalence rate is increased 0.9 percent per year in the less developed regions (UN, 2002). In 2007, contraceptive prevalence rate in Asia (excluding China) was 66%,

it was 72 percent in Latin America and the Caribbean. In Sub-Saharan Africa, contraceptive prevalence rate was 23 percent in 2007. Modern contraceptive use has risen steadily in developing countries. Female sterilization is used by one-fifth of married women in worldwide. It becomes the most common contraceptive method. On the other hand, male sterilization is far less common in most countries. Among developing regions, contraceptive use is highest in Latin America and the Caribbean, followed by Asia. (Family planning worldwide, 2008 data sheet)

2.3 Trends in Contraceptive Use in Myanmar

Within a ten-year period, contraceptive prevalence rate has more than doubled in Myanmar. It was 17 percent in 1991 and 37 percent in 2001. During 1991 and 2001, prevalence of any contraceptive method increased by 20 percentage points. It was mainly due to increase of 12 percentage points of depo injection prevalence from 3 to 15 percent. The most popular method in 1991 is the oral contraceptive pills and it has become the second most popular method in 1997 and 2001. Depo injection was the third most used contraception method in 1991. It has become the most used method in both 1997 and 2001. Oral contraceptive pills usage increased from four to nine percent between 1991 and 2001. The percentage of female and male sterilization usage has declined together.

For traditional methods, the prevalence rate has increased from three percent to four percent among the currently married women. There is a slight increase for usage of withdrawal method. The usage of other traditional methods has decreased during 1997-2001.

Private sector sources are more popular than government sources among the current users of modern contraceptive methods. More than 56 percent of married women and 52 percent of husbands approve contraception usage. Among current non-users, 26 percent have intention to use contraception in the future. However, 70 percent of current non-users do not intent to use contraception in the future. (FRHS, 2001)

2.4 Related Research Studies

2.4.1 International research studies

The retrospective hospital based study of the changes in contraceptive choices and effect of education on the use of contraception at the family planning clinic of Sisli Etfal Training and Research Hospital in Istanbul, Turkey was done in 2003. The number of births, elective abortions, gravidity and number of living children were decreased significantly during six years period of study. When coitus interruptus and IUD usage were decreased, oral contraceptive pills and condom use were increased. The more rise in women's education level, the more IUD usage declined. However, oral contraceptive pills and condom use increased significantly. This study highlighted the socio-cultural and educational were the important factors which affected their contraceptive choices. (Baksu, et al., 2005)

In the study of 5 European countries (Denmark, Germany, Poland, Italy and Spain), the residents of northern European countries tended to use more effective methods of contraception than the residents of southern European countries. Contraception usage was generally more common among single women, the more highly educated, those with children and those with a previous induced abortion. These characteristics were the main factors to determine the use of more effective methods. On the other hand, periodic abstinence and withdrawal were common methods among older women. (Spinelli, Talamanca, Lauria, 2000)

Knowledge, attitude and practice of contraception among Singapore women have changed over the past two decades. They got education and information about family planning and choice of appropriate contraception method from various media. Factors affecting on the choice of contraceptive methods are cost, reliability, ease of usage, accessibility to supply and the method is permanent or temporary. They were more interested to use reversible methods like condom than permanent method like sterilization because they like birth spacing rather than birth termination. Condom usage remains at high level because it can prevent HIV/AIDS and sexually transmitted diseases (STDs). (Chuan, 1999)

A quantitative cross-sectional descriptive study on knowledge, attitude and practice of contraceptives among Myanmar migrant married women in reproductive age (15-49 years) was carried out in Takuapa District and Kuraburi District in Phang Nga Province in 2008. According to this study's findings, the prevalence of contraceptive use among Myanmar migrant married women in Takuapa District and Kuraburi District in Phag Nga Province was 73.3 percent. The most common contraceptive methods were depo injection and oral contraceptive pills and the most common reasons why they preferred current methods were easily available, side effects of other methods and convenience to use. Majority of the respondents discussed about family planning with their husbands and more than half of them made the decision with their husbands for using contraception. In this study, most of the respondents heard of contraceptive methods and half of them had moderate level of knowledge. However, nearly half of women had low level of knowledge about contraceptive methods and use. Although depo injection and oral contraceptive pills were the most commonly used contraception methods, the knowledge of these two methods were still low. More than two third of the women had moderate level of attitude towards contraceptive methods and use. (Soe, 2008)

A community-based, cross-sectional study was done in Woreta town, South Gondar zone, Ethiopia to assess determinants of preferences, knowledge, attitudes, and practices of modern contraception among women of reproductive age in Woreta town. Eighty-nine percent of women were aware of modern contraceptive methods. 88% of the respondents knew at least 2 contraceptive methods and 12% of them knew only 1 method. The majority of respondents (90%) had positive attitudes toward modern contraceptive use. In this study, the major reasons for nonuse of modern contraceptive methods (MCMs) were being single and a desire to have more children. Depo injection were the most commonly preferred contraceptive method (63.2%) followed by oral contraceptive pills (21.2%). Only few of them preferred to use condoms (9.5%) and implants (6.1%). (Weldegerima, 2007)

The study conducted in Bhutan assessed the determinants influencing modern contraceptive use among married women among married women of reproductive age (15-49). This study's objective is to determine the effects of five variables based on

socio-economic and demographic determinants on the practices of modern contraceptive use. The selected variables in this study were place of residence, level of education, occupation, age and marital status of the women. The result revealed that the use of modern contraception increases with increase in age of the women in both urban and rural areas ($p<0.001$). Regarding to marital status and contraceptive use, women who are married tend to use more contraception than women who were never married, separated, divorced or widowed in both urban and rural areas ($p<0.001$). According to socio-economic determinants, level of education had a significant effect upon the use of modern contraception among married women both in urban and rural areas ($p<0.001$). Moreover, the use of modern contraception was greater among married women who have done some type of training like professional, religious or vocational in both urban and rural areas ($p<0.001$). There was no significant association between occupation and contraception usage among married women in urban areas. However, the relationship between these factors in rural areas was found to be statistically significant with p value <0.001. (Phuntsho, 2006)

A cross sectional community based study was done in Dembia District, northwest Ethiopia in 2004 and its objective is to assess family planning coverage and the main factors that are associated with the usage of contraceptives among women in the 15-49 years age group. The current contraceptive prevalence rate in Dembia district in Ethiopia was found to be 12.3 % and most of the women (64.2%) used injectables. In this study, 392 (71.3%) respondents from the urban kebele and 354 (44.8%) in the rural kebeles of Dembia district had information about family planning. Three hundred and nine women (23.1%) had ever used modern contraceptive methods while 144 women (46.6%) who had ever used contraceptives have discontinued taking contraceptives. Seven hundred and twenty eight women who had never used contraceptives said that they did not want to take contraceptives in the future. In this study, age of the women, education of the woman, occupation, religion, residence, distance from health institutions were found to be significantly associated with the usage of contraceptives. (Kebede, 2004)

The study done in Lao PDR stated that there was no significant association between distance to the service center, mode of traveling and contraception usage. In

addition, the cost of contraceptive services was not significantly associated with contraceptive use according to those who paid for service. But it was noted that the convenience to come to the center and waiting time were highly significant associated with contraception use. The level of knowledge of contraception is the one of the important determinant of usage of contraceptives. The women with higher knowledge of contraception were more likely to use compared with the women with lower level of knowledge. The results from this study showed that knowledge level of married women was significantly associated with the contraception usage. The prevalence of contraceptive usage was highest in women who had good knowledge and the lowest in women who had poor knowledge. (Vanhnolrath, 2003)

The study conducted among currently married women in Indonesia showed that the probability of modern contraceptive use declines significantly with increasing of age. Women at the oldest age 45-49 were less likely to use modern contraceptives than those aged 15-19 years. In this study, there was also significant association between the number of living children and contraceptive use. In addition, the more contraception methods that women know, the more they use contraceptives. The result from this study done stated that the women who knew 5-8 contraceptive methods were more likely to use modern contraceptive methods than the women who knew 9 or more contraceptive methods. (Helweldery, 2004)

The study done in Nepal showed that the married adolescent women who had high knowledge of contraception were less likely to be contraceptive non-users compared to those who had medium or low knowledge (Tamang, 2001). The awareness of contraceptive methods can effect on contraception usage. The another study done in Lao PDR stated that women who had heard at least one contraceptive method were used contraceptives more than five times higher than who hear none contraceptive methods. (Khouangvichit, 2002)

The study done in Nepal revealed that there was a strong relationship between the current usage of contraception and level of knowledge of married women. In this study, the prevalence of contraceptive use was highest in age group of 35-49 years and it was lowest in 15-24 years women because younger women had desire to

complete family size. There was significant linear association between age and practice of contraception. There were significant relationship between occupation, marital duration and modern contraceptive usage. The contraceptive usage was increased with increasing duration. Similarly, the significant positive association between the number of living children and contraceptive use was also found in this study. (Dhananjay Narsingh, 1997)

In the related studies done in Bangladesh showed that there was significant association between occupation and contraceptives use although the women engaged in non-agricultural sector are more likely to use than women who were not working and working in the agricultural workers. Usage of contraception increases with the increases of the number of living children and the contraceptive use rate is the lowest among the married female adolescent with no living children. The desire for more children strongly affects the use of contraceptives. The effect of knowledge of contraception on usage of contraception was significant and 35 percent of female married adolescent who had high level of knowledge used contraceptives whereas only 12 percent of them who had low level of knowledge of contraception. (Parveen, 2000)

The usage of contraception was higher among the currently married women who have high knowledge level of contraceptive methods compared to those who have low level of knowledge was found in the study conducted in India. There was significant difference between age and contraceptive use with p-value=0.000. The similar significant association between education and contraception practice was also found in this study. (Yethenpa, 1999)

The study conducted among Myanmar migrant women in Samut Sakorn Province, Thailand revealed that the prevalence of contraceptive use was 66.9% among sea food processing workers and 68.4% among other job. Contraception usage was decreased with increasing age. The contraceptive use was highest in age group 15-19 years (85.7%) and it was decreased to 33.3% in age group 40-49 years. In this study, 67% of women currently using contraceptives were Buddhists. Women with primary and secondary education are less likely to use contraception than the women

with high school or higher education, 64.3% and 81.2% respectively. There was significant difference between total family income and current contraceptive use. The result of this study showed that contraception is more likely to be used by women with less than two or equal to two children and the prevalence is decreased to among the women who had more than two children. The attitude towards contraception is the important factor that can influence the usage of contraception. The study done in Myanmar migrant women in Thailand revealed that 48.6% of the women had a moderate level of attitude towards contraceptive use. The number of respondents who had negative attitude and positive attitude were nearly equal, 25.3% and 26% respectively. There was no significant association between current usage of contraception and level of attitude. (Khaing, 2002)

The study conducted among women seeking pregnancy tests in Missouri showed that negative attitudes towards contraception have been found to influence contraceptive use and infrequent contraceptive users are more likely to have negative attitudes toward contraception because they had to worry about side effects and noted that condom use may be problematic because it needs cooperation of the male partner. (Sable et al., 1997)

In summary, according to the international related studies, while coitus interruptus and IUD usage were decreased, oral contraceptive pills and condom use were increased. The more rise in women's education level, the more IUD usage declined. However, oral contraceptive pills and condom use increased significantly. The socio-cultural and educational were the important factors which affected their contraceptive choices in Istanbul, Turkey (Baksu, et al., 2005). Among Singapore women, factors affecting on the choice of contraceptive methods are cost, reliability, ease of usage, accessibility to supply and the method is permanent or temporary. They were more interested to use reversible methods like condom than permanent method like sterilization because they like birth spacing rather than birth termination. Condom usage remains at high level because it can prevent HIV/AIDS and sexually transmitted diseases (STDs) (Chuan, 1999). Contraception usage was generally more common among single women, the more highly educated, those with children and those with a previous induced abortion. Periodic abstinence and withdrawal were

common methods among older women in European countries (Spinelli, Talamanca, Lauria, 2000). Among Myanmar migrant married women in reproductive age (15-49 years) in Phang Nga Province in Thailand, the prevalence of contraceptive use was 73.3 percent. The most common contraceptive methods were depo injection and oral contraceptive pills and the most common reasons why they preferred current methods were easily available, side effects of other methods and convenience to use. Majority of the women discussed about family planning with their husbands and more than half of them made the decision with their husbands for using contraception. Most of the women heard of contraceptive methods and half of them had moderate level of knowledge. However, nearly half of women had low level of knowledge about contraceptive methods and use. Although depo injection and oral contraceptive pills were the most commonly used contraception methods, the knowledge of these two methods were still low. More than two third of the women had moderate level of attitude towards contraceptive methods and use (Soe, 2008). The major reasons for nonuse of modern contraceptive methods (MCMs) among women of reproductive age (15-49 years) in Woreta town in Ethiopia were being single and a desire to have more children. Depo injection were the most commonly preferred contraceptive method (63.2%) followed by oral contraceptive pills (21.2%). Only few of them preferred to use condoms (9.5%) and implants (6.1%) (Weldegerima, 2007). The result in the study conducted in Bhutan among married women among married women of reproductive age (15-49 years) revealed that the use of modern contraception increases with increase in age of the women in both urban and rural areas ($p<0.001$). Regarding to marital status and contraceptive use, women who are married tend to use more contraception than women who were never married, separated, divorced or widowed in both urban and rural areas ($p<0.001$). According to socio-economic determinants, level of education had a significant effect upon the use of modern contraception among married women both in urban and rural areas ($p<0.001$). Moreover, the use of modern contraception was greater among married women who have done some type of training like professional, religious or vocational in both urban and rural areas ($p<0.001$). There was no significant association between occupation and contraception usage among married women in urban areas. However,

the relationship between these factors in rural areas was found to be statistically significant with p value <0.001 (Phuntsho, 2006).

2.4.2 Research studies in Myanmar

A quantitative community based descriptive study on the contraceptive use of the married couples was carried out with the objective of exploring the contraceptive utilization pattern of married couples in Yangon, Myanmar in 2008. It was found that all of the couples had knowledge about contraceptive methods. Most of the couples knew about oral contraceptive pills (99.3% for both husbands and wives), injection Depo (96% and 98.7% for husbands and wives respectively) and condom (94.7% and 86.7%). There were a few husbands (3.3%) and wives (8.7%) who said that traditional medicines such as (Kay Thi Pan) can be used as a contraceptive method. In this study, it was also found that the contraceptive prevalence rate was 60.3%. Moreover, among the couples who were currently using the contraceptive, 50 couples (33.3%) were used oral contraceptive method, (18.7%) were using the injection Depo and only (0.7%) was using the intrauterine contraceptive device (IUD). Most of the current users (92.6%) were used the method regularly. Most of the current users (60%) got the contraceptive from the drug sellers and majority of them (34.7%) were advised by doctors to use contraceptive method. There was an association between the age of the wives and current contraceptive use ($p < 0.001$). In addition, out of the (55) couples who did not use, 41 couples were used in the past and only 14 couples in this study were never used. In this study, the reason for never used was that they wanted to have the baby. (Thuya, 2008)

There is a quantitative cross sectional descriptive study which was conducted to define the pattern of contraceptive utilization and fertility behavior among married women residing in Inndine, Yangon in 2001. The findings showed that current contraceptive prevalence among married women was 53.3%. The most commonly used methods were oral contraceptive pill (40.88%) and 3 monthly depo injection (93%). Main sources of contraceptives supply were the drug shops (82.8%) in current users and 59% in ever users. About 80% of women used contraceptives properly and

the most preferred method among the current users was oral contraceptive pills (44.2%) and that of ever user was sterilization. 57 percent of never users did not have specific preference methods. About 63 percent of never users was not using contraceptive because of fear of drugs side effects, ignorance about family planning and wrong belief. The common reasons for choosing the preferred method of contraception are advantages of those particular drugs or methods, didn't want no more children, and no specific reasons. There was also misconception of the ever users regarding the methods of contraception. There was a strong association between the abortion and the improper use of contraceptives. (Han, 2001)

A prospective comparative study was done to explore the compliance and use behavior of injectable contraceptive users and oral contraceptive pill users in family planning clinic of Central Women's Hospital was done in 2002. 90 injectable contraceptive users and 90 oral contraceptive pill users were interviewed by using semi-structured interview questionnaires at first time of visit. Majority of the women attending to the family clinic were parity one and two postpartum and post abortal women. The age ranges were 18-43 years in injectable users and 18-42 years in oral contraceptive pill users. Most of the women (75 percent of injectable contraceptive users and 82 percent of oral contraceptive pill users) had reached middle school level in education. The difference between age distribution, parity, education level and family income of two groups were not statically significant. Switching of contraceptive method was found more in oral contraceptive pill users than in injectable users. There are same reasons for discontinuation of contraception in both groups: weight gain, the desire to change to other contraceptive methods and the desire to conceive. 1.1 percent of injectable contraceptive users were concerned with unexplained abnormal bleeding. (Tin, 2002)

A quantitative cross-sectional comparative study on knowledge, attitudes and practice of birth spacing among pre and post family planning clinic attendees was carried out in Central Women Hospital in 1997. It was found that the commonest type of failure was oral pills (50.9%). Reasons for not using birth spacing methods were lack of knowledge, fears of side effects and pregnancy before knowing anything about contraception. All of the family planning clinic attendees have intention of using contraception in the future. (Than, 1997)

A study of knowledge, attitude and practice on contraceptive in Myanmar females was done in Mandalay in 1992. 2500 married women (age 15-49 year) who attended the antenatal care and gynaecological clinic at the Mandalay General Hospital were interviewed. In this study, 97.8 percent of women possessed knowledge regarding contraceptives. Oral contraceptive pills (OCPs) was the most knowledgeable recognized method. Depo injection was second, sterilization and vasectomy were third and fourth knowledgeable recognized methods. The total ever users were 48.92 percent. Current users were 20.88 percent.

Fear of side effects, desiring to have more children, ignorance regarding contraception, not wanting to interfere with nature, financial problems and religious beliefs were the reasons for not using contraceptive methods. Among the respondents 80 percent agreed to space their families, 12 percent did not agree. The mean parity was 2.8. Although 97.4 percent of the women possessed knowledge on using contraception, percentage of current usage was only 20.88 percent. Therefore, there was a wide range of gap between knowledge and practice of contraception. For the preferred type of contraception to be used in future, sterilization was found to the most preferable method chosen by 24 percent of respondents, secondly oral contraceptive pills 19 percent of respondents and thirdly injections 18 percent of respondents. (Khaing, Mya, Win, 1992)

A hundred currently married women of 20-49 years were interviewed to assess the knowledge, attitude and practice of male condoms among family planning clinic attendees of Waybagi in North Okkalapa Township. Majority of the women were in age group (30-40 years) and educated up to primary school level. Most of the women were housewives. Although 75 of respondents have heard of condoms, only 36 percent had actually seen one. Most of them knew that condoms were meant for contraception. 68 percent knew condoms can prevent transmission of sexually transmitted infections (STI) and HIV. 8 percent thought condoms were meant for extra-marital sex. 77.3 percent of respondents knew that condoms were meant for single use only. Over half of them thought condom is important for family planning and prevention of STI. More than half of attendees disagreed with statement that condoms could disturb sexual relationship and that it could not be used for monogamous marriage. Overall, the respondents seemed to regard condoms positively

rather than negatively. None of respondents were currently using condoms. It is indicated that proper counseling and appropriate training is essential for promotion of condom acceptability. (Tin, 1997)

A cross-sectional comparative community based study carried out to determine contraceptive morbidity and its consequences among currently married women in urban Dawei in 1998. It was found that current injectable contraceptive users were significantly more prone to have self reported morbidities (menorrhagia, amenorrhora, dizziness, and weight gain) compared to non-users. Because of fear of side effects, 24.1 percent of pill users, 21.9 percent of injectable users and 25 percent of IUD users decided to discontinue or switch the current used contraceptive methods in the future. (Aye, 1998)

A quantitative cross-sectional community based exploratory study on decision-making role of husbands and wives regarding fertility regulation were done in Kyauk Tan Township, Yangon in 1998. In this study, mean age of contraceptive user in urban were 35.29 years for husbands and 34.13 years for wives while in rural were 32.28 for husbands and 31.20 for wives. More than 50 percent of samples used depo injection followed by oral contraceptive pills, sterilization and IUD. The IUD usage rate were higher in urban. Most of urban couples used contraception because they had a problem related to pregnancy, childbirth and puerperium. In rural area, ill health of spouse was mostly mentioned reason for contraceptive users. The knowledge of male dependent methods was higher in urban and the attitude and perception of wives was higher their husbands in both setting. (Thu, 1998)

In conclusion, according to research studies in Myanmar, contraceptive prevalence among married women residing in Inndine, Yangon was 53.29 percent and most commonly used methods were oral contraceptive pill and 3 monthly depo injection in 2001. Main sources of the contraceptive drug supply were the drug shops. About 80% of women used contraceptives properly and the most preferred method among the current users was oral contraceptive pills. About 63 percent of never users was not using contraceptive because of fear of drugs side effects and ignorance about family planning and wrong belief. The common reasons for choosing the preferred method of contraception were advantages of those particular methods, didn't want no more children and no specific reasons. There was a strong association between the

abortion and the improper use of contraceptives (Han, 2001). Among women attending to family clinic of Central Women Hospital in Yangon in 2002, most of the women had reached middle school level in education. There are same reasons for discontinuation of contraception in both groups: weight gain, the desire to change to other methods and the desire to conceive. 32 percent of current users most commonly used method was injectable contraception followed by IUD. Reasons for not using birth spacing methods were lack of knowledge, fears of side effects and pregnancy before knowing anything about contraception (Tin, 2002). Among pre and post family planning clinic attendees in Central Women Hospital in Yangon in 1997, all of the family planning clinic attendees have intention of using contraception in the future. It was found that odds of having high score on contraceptive knowledge among was significantly high than the comparison groups. Positive attitudes toward contraception were much higher in old family planning clinic attendees compared to the comparison groups (Than, 1997). Among married women (age 15-49 year) who attended the antenatal care and gynaecological clinic at the Mandalay General Hospital in 1992, 97.8 percent of these women possessed knowledge regarding contraceptives. Oral contraceptive pill was the most knowledgeable recognized contraceptive method. Depo injection was second, sterilization and vasectomy were third and fourth knowledgeable recognized methods (Khaing, Mya, Win, 1992). In the study conducted in Kyauk Tan Township in Yangon, More than 50 percent of samples used depo injection followed by oral contraceptive pills, sterilization and IUD. The IUD usage rate were higher in urban. Most of urban couples used contraception because they had a problem related to pregnancy, childbirth and puerperium (Thu, 1998). The results from the study done among married couples in Hmawbe, Yangon in 2008 revealed that all of the couples had knowledge about contraceptive methods. Most of the couples knew about oral contraceptive pills (99.3% for both husbands and wives), injection Depo (96% and 98.7% for husbands and wives respectively) and condom (94.7% and 86.7%). There was a few husbands (3.33%) and wives (8.7%) who said that traditional medicines such as (Kay Thi Pan) can be used as a contraceptive method. In this study, the contraceptive prevalence rate was 60.3 percent. In this study, the most commonly used contraceptive method was oral contraceptive pills (52.6%), followed by depo injection (29.5%) and female sterilization (15.8%). Only a

few (0.7%) were using IUD and calendar method. There was no couple who used condom or male sterilization as a contraceptive method. Most of the current users (60%) got the contraceptive from the drug sellers and majority of them (34.7%) were advised by doctors to use contraceptive method. There was an association between the age of the wives and current contraceptive use ($p < 0.001$). In this study, the reason for never used was that they wanted to have the baby. (Thuya, 2008)

CHAPTER III

Research Methodology

3.1 Study design

The study design of this study is a community-based cross sectional descriptive study.

3.2 Study Population

The population in this study was married women of reproductive age group between 18 to 49 years residing in Mandalay, Myanmar.

3.3 Study area

The study was done in Mandalay, Myanmar. Mandalay is the second-largest city of Myanmar. It is located on the east bank of the Irrawaddy River. It has a population of one million. There are seven townships in Mandalay. All of the townships in Mandalay city are urban area.

3.4 Sample size

The sample size was calculated by the formula below:

$$N = \frac{Z^2\alpha/2\ p \times q}{d^2}$$ (Daniel W W, 8th edition)

$$= \frac{(1.96)^2 \times (0.37) \times (0.63)}{(0.05)^2}$$

$$= 358.19$$

Total minimum sample size = 358

n = minimum sample size

α = level of significance = 0.05

$Z^2\alpha/2$ = critical value for 95% confidence level = 1.96

d = error allowance = 0.05

p = proportion of targeted population estimated to have practice of contraception = 37% = 0.37 (Prevalence of contraceptive usage in Myanmar)

q = 1 – p = 1 – 0.37 = 0.63

3.5 Sampling Technique

Mandalay is the second largest city of Myanmar. There are 7 townships in Mandalay. Among seven townships, two townships (Chan Aye Thar Zan and Pyi Gyi Da Gun Townships) were selected randomly. Only married women were listed from the lists of women of reproductive age with the help of midwives for each township. And from each township, 179 married women age between 18-49 years was selected by using simple random sampling method from the sampling frame of the above list. If the selected woman was not available at the time of visit or if she was be included in exclusion criteria, the number adjacent to it was asked. A total of 358 married women of reproductive age were included in this study.

3.5.1 Inclusion criteria

- Married women who are in reproductive age of 18-49 years.
- Married women, who are mentally sound and willing to participate.

3.5.2 Exclusion criteria

- Married women who have pregnancy at the time of interview
- Women who are widows, divorced, separated and never married.
- Married women who are not mentally sound and not willing to participate.
- Married women who had hysterectomy and menopause although they are in reproductive age of 18-49 years

3.6 Measurement Tools

The data was collected by using interviewer-administered questionnaires and the questionnaires were adapted from previous studies of contraception usage among married women and were in Myanmar language.

In the questionnaires,

- Socio-demographic factors such as age, education, occupation, family income, marital duration, number of living children

- External factors such as information support from health workers, convenience to get contraceptives and availability of contraceptives
- Knowledge about contraceptive methods and use
- Attitude towards contraceptive use
- Current usage of contraceptive methods was asked.

3.7 Data Collection

Data was collected by face to face interviews of the studied population. The questionnaires were in Myanmar language. 6 female staffs from Marie Stopes International (MSI) organization in Mandalay were trained for one day before the data collection on study question, objectives, methodology, and questionnaires to reduce interviewer bias. All the respondents were asked the same questionnaire. After completion of interview, the interviewer checked the error or the omission of interviewer and the questionnaire was checked by the researcher immediately after interview.

3.8 Data Analysis

Questionnaire was coded before entering the data to computer by the researcher. The sample database was checked by double entry. For data analysis, SPSS software was used. Descriptive statistic such as frequency, percentage, mean and standard deviation was used. In order to determine the relationship between the independent and dependent variables, Chi-square test was used.

3.9 Data validity and reliability

The questionnaire was adapted from existing questionnaires which had already been validated by experts in previous studies (Soe, 2007, Han, 2001 and Aye, 1998).The reliability was pre-tested with a group of 30 married women of reproductive age in Mandalay, Myanmar. Cronbach's alpha coefficient was used to measure reliability of the data collection tool.

3.10 Ethical consideration

All participants' right to self-determination and autonomy was respected. The participation was strictly voluntary. The researcher translated participant information sheet and informed consent form into Myanmar language. The interviewer explained the objectives of this study before starting the interview. The respondents were feel free to participate or withdrawal any time throughout the interview. The name of respondent was not recorded and data was coded. All the data was kept confidentially except for the further health education or implementation for married women and none of the questionnaires could be traced back to the respondents.

3.11 Limitation of the Study

This study was done among married women of reproductive age residing two townships in Mandalay so that the findings could not be generalized to the whole Myanmar married women population.

3.12 Benefit of the Study

This study provided base line information of contraceptive usage among Myanmar married women to health authorities for further promoting contraceptive usage and family planning knowledge to Myanmar married women.

CHAPTER IV
RESULTS

This chapter contained the descriptive portion of the variables and the results showing the association between the variables. It is composed of 6 parts. The first part includes the socio-demographic characteristics of married women residing in Mandalay, Myanmar. Second part determines the practice of contraception, the third part provides the descriptive findings of knowledge towards contraception, the fourth part provides the descriptive findings of respondents' attitude towards contraception, and the fifth part describes the external factors of contraceptives use among married women. Finally, the relationship between socio-demographic characteristics, knowledge about contraception, attitude towards contraception, external factors and utilization of contraception is determined.

The study was conducted in March 2011 among married women in Mandalay, Myanmar. Total number of subjects in this study was 358.

4.1 Socio-demographic characteristics of Myanmar married women

This part shows frequency distribution of selected variables describing background characteristics of the respondents. Table 1 reveals that socio-demographic characteristics such as age, religion, education, occupation, total family income per month, number of living children.

Age

All respondents were in reproductive age ranged from 18 to 49 years due to the permission of ethic committee. The mean age was 32.7 and SD was 7.634. The majority of respondents (89.9%) were in the age group from 20 to 44 years. Only few of them were in the age group 18-19 years and 45-49 years with 2.8% and 7.3% respectively.

Religion

Almost all of the respondents (95.3%) were Buddhist. Only few of them, 2.2% was Islam, 0.6% was Hindu and 2% was Christian.

Education

For educational attainment, 33% of the respondents completed middle school level, 21.2% completed primary school level respectively while 2% of them were illiterate. Fifteen percent and seventeen percent of the respondents completed good school level and higher education while 10.3% of them were just read and write.

Occupation

Half of the married women (55.6%) were housewives. Eight percent of them were working in government service, 15.4% had their own business, 11.5% of the women were hawker and the remaining 9.2% were doing other business.

Monthly family income

The level of economic status of the respondents had been assessed on the basic of monthly family income. Total monthly family income ranged from 30,000 to 600,000 Kyat. As they were working in various sectors, 40.2% of the women had monthly family income of 50,001-100,000 Kyat. Sixteen percent of them had monthly family income >200,000 and 14.8% had monthly family income 150,001-200,000 while another 14.8% had monthly family income <50,000. Fourteen percent of women had family income 100,001-150,000 Kyat per month.

Marital duration

Duration of marriage ranged from 2 months to 33 years. The mean marital duration was 10.75 and SD was 7.657. Thirty one percent of them have been married for ≤5 years. Nearly half of the respondents have been married for >10 years and the remaining 24.3% were between 6 to 10 years of marital duration.

Number of living children

The number of living children varied from 0 to 7 children among the respondents. Mean number is 1.99 and 11.5% of them had no children. Half of the married women (57%) had 1-2 children. Nearly one third of the respondents (26.3%) had 3-4 children and only few of them (5.3%) had 5-7 children.

Table 1: Socio-demographic characteristics of the respondents

Variables	N	%
Age (n = 358)		
18 -19	10	2.8
20 – 24	47	13.1
25 – 29	75	20.9
30 – 34	79	22.1
35 – 39	69	19.3
40 – 44	52	14.5
45 – 49	26	7.3
Total	358	100.0
Mean = 32.7, Median = 32, SD = 7.634		
Range = 18-49		
Religion (n = 358)		
Buddhist	341	95.2
Islam	8	2.2
Christian	7	2.0
Hindu	2	0.6
Total	358	100.0

Table 1: (Continued) Socio-demographic characteristics of the respondents

Variables	N	%
Education (n = 358)		
illiterate	7	2.0
read and write	37	10.3
primary school level	76	21.2
middle school level	118	33.0
high school level	57	15.9
higher than good school level	63	17.6
Total	358	100.0
Occupation (n = 358)		
government officer	30	8.4
hawker	41	11.4
Business owner	55	15.4
housewives	199	55.6
others	33	9.2
Total	358	100.0
Monthly family income (Kyat) (n = 358)		
≤50,000	53	14.8
50,001-100,000	144	40.2
100,001-150,000	50	14.0
150,001-200,000	53	14.8
>200,000	58	16.2
Total	358	100.0
Range = 30,000 – 600,000		
Mean = 150,047.49, SD = 115947		

Table 1: (Continued) Socio-demographic characteristics of the respondents

Variables	N	%
Number of living children (n=358)		
0	41	11.4
1-2	204	57.0
3-4	94	26.3
5-7	19	5.3
Total	358	100.0
Mean = 1.99, Median = 2, SD = 1.48		
Range = 0 - 7		
Marital duration (n=358)		
≤5 years	111	31.0
6 - 10 years	87	24.3
> 10 years	160	44.7
Total	358	100.0
Range = 2 months – 33 years		
Mean = 10.75, SD = 7.657		

Respondents' fertility background

Respondents' fertility background was determined in table 2. Eight percent of married women had never been pregnant. Twenty eight percent of them had pregnant only once and the remaining 62.6% had pregnant at least two times. Majority of them (78.5%) had no experience of abortion and 17.6% had experienced abortion one time. The remaining 3.9 had experienced at least two times abortion. Moreover, 87.2% had never experienced of child death and 12.9% had experienced child death at least one time.

Table 2: Respondents' fertility background (n=358)

	N	%
Number of pregnancy		
0	31	8.6
1	103	28.8
2	88	24.6
3	55	15.4
≥4	81	22.6
Total	358	100.0
Number of abortion		
0	281	78.5
1	63	17.6
≥ 2	14	3.9
Total	358	100.0
Number of child death		
0	312	87.1
1	34	9.5
≥ 2	12	3.4
Total	358	100.0

4.2 Practice of contraception

Contraceptive prevalence rate in this study was measured by the percentage of married women in reproductive age using contraceptive methods either by herself or her husband. The practice of contraception among married women in Mandalay was shown in table 3. The contraceptive prevalence rate among married women in Mandalay surveyed was 53.4% and the rest was not using any form of contraception at the time of survey. Twenty seven percent of the respondents have ever used of

contraceptive methods and 19.6% have never used of contraception throughout their lifetime.

Table 3: Contraceptive practice among respondents (n=358)

Contraceptive practice	N	%
Current use	191	53.4
Ever used	97	27.0
Never used	70	19.6
Total	358	100.0

Table 4 reveals the contraceptive methods used currently among current users. Among the 191 married women who were using contraception currently, injectables and oral pill account for large proportion, 35.1% and 35.6% respectively. Nearly ten percent of the respondents used female sterilization and IUD was also used by 13.6%. Other methods such as Norplant implants, male sterilization and male condoms were used to some extent with 1.0%, 3.1% and 2.1% respectively.

Table 4: Contraceptive method used currently (n=191)

Methods	N	%
Injectables	67	35.1
Oral pill	68	35.6
Female sterilization	18	9.4
IUD	26	13.6
Male condoms	4	2.1
Norplant implants	2	1.0
Male sterilization	6	3.1
Total	191	100.0

Table 5 reveals the reasons for using contraceptives among current users in which half of them used of contraception for just spacing and 47.6% had used as they did not want to have a child anymore.

Table 5: Reasons for using contraceptives among current users (n=191)

Reasons	Frequency	Percentage
Just spacing	100	52.4
Don't want to have a child anymore	91	47.6
Total	191	100.0

Among the respondents who are not using contraceptives currently, 39.5% don't use contraception as they want to get pregnant. Thirty nine percent of women reply that they afraid of side effects. Only six percent of the respondents do not use currently as their husband objects. The remaining 16.8% of the respondents reply the other reasons such as being old and their perception of could not get pregnant. (Table 6)

Table 6: Reasons for not using contraceptives currently among the respondents (n = 167)

Reasons	Frequency	Percentage
Afraid of side effects	63	37.7
Want to get pregnant	66	39.5
Partner did not like to use	10	6.0
Others	28	16.8
Total	167	100.0

With regard to the giving advice for using contraception, 23% of the respondents who were current users got advice from doctors. Among them, 26.7% advised themselves and 16.2% got advice from other people such as friends and neighbors. Moreover, ten percent of women got advice from their mothers, sisters and relatives. A small proportion of 4.7% got advice from their husbands. (Table 7)

Table 7: Giving advice upon currently using contraceptive method among current users (n=191)

Decision maker	N	%
Mother / Sister / Relatives	20	10.5
Herself	51	26.7
Husband	9	4.7
Neighbors / Peers	31	16.2
Doctors	44	23.0
Basic Health staff	36	18.8
Total	191	100.0

4.3 Knowledge about contraception methods and use

A series of questions was asked to explore the respondents' knowledge about contraceptive methods. Firstly, all of the respondents were asked whether or not they had heard of contraceptive methods. In second part, the respondents were asked about effectiveness and side effects of contraceptive methods. Lastly, all of the respondents were asked about the source of information.

Table 8 shows that number and percentage of Myanmar married women who have heard of contraception methods to prevent or delay pregnancy. All of the respondents (100%) have heard of contraception.

Table 8: Number and percentage of married women who had heard of contraception (n = 358)

Heard of contraception	Current user N (%)	Non-user N (%)
Yes	191 (100.0)	167 (100.0)

The number and percentage of respondents who had heard of each contraceptive method was shown in table 9. Among the contraception methods, oral contraceptive pill was known by all of the current user and non-user. Injection was

known by majority of the current user and non-user with 97.2% and 96.4% respectively. Most of the respondents (93.2% of current user and 87.4% of non-user) knew IUD. Although female sterilization is given with permission and male sterilization is not legal in Myanmar, 92.7% of the current user and 86.9% of non-user have heard of female sterilization and 85.3% of the current user and 79.6% of non-user have heard of male sterilization. Moreover, 93.7% of the current user and 87.2% of non-user have heard of male condom while 48.7% of the current user and 43.1% of non-user have heard of implants.

Table 9: Number and percentage of married women who had heard of contraceptive method (n = 358)

Method ever heard	Current user N (%)	Non-user N (%)
Oral pill	191 (100.0)	167 (100.0)
Injectables	187 (97.9)	161 (96.4)
Female sterilization	177 (92.6)	145 (86.8)
Male condom	179 (93.7)	146 (87.4)
Male sterilization	163 (85.3)	133 (79.6)
Norplant implants	93 (48.7)	72 (43.1)
Traditional methods	74 (38.7)	58 (34.7)
IUD	178 (93.2)	146 (87.4)
Female condom	66 (34.6)	67 (40.1)

Multiple responses allowed

The knowledge about contraceptive methods consisted of 10 questions and the score was 1 for correct answer and 0 for incorrect or not sure answer. Total Knowledge score was classified into 3 groups such as less than 50%, 50-70% and more than 70% of total score.

Table 10 reveals that the number and percentage of current user and non-user who answered correctly to each question concerning effectiveness and side effects of contraceptive methods. Among the respondents, the incorrect statement that women can get pregnancy when they have sexual intercourse 7 days before and 7 days after

their menstrual period was answered correctly by 17% of current user and 11% of non-user. Forty percent of current user and 37% of non-user could answer correctly the incorrect statement that using oral contraceptive pills, depo injection & IUD can protect against sexually transmitted infections including HIV/AIDS. Forty five percent of current user and forty percent of non-user could answer correctly the side effect of IUD; IUD can cause bleeding, expulsion and perforation of uterus. Sixty five percent of current user and fifty two percent of non-user could answer correctly that depo injection and oral contraceptive pills cannot return of fertility by stopping its use. The statement towards side effect of oral pill (oral contraceptive pills can cause dizziness and nausea) was answered correctly by 68.6% of current user and 66.5% of non-user. Seventy percent of current user and sixty eight percent of non-user answered correctly that contraceptives can reduce unwanted pregnancy and unintended pregnancy. Seventy four percent of current user and sixty nine percent of non-user could answer correctly that if the women do not want the children anymore, sterilization should be done. Seventy three percent of current user and seventy one percent of non-user stated correctly that using condom can prevent sexually transmitted infections including HIV/ AIDS. Seventy eight percent of current user and seventy one percent of non-user could answer correctly the statement that women can have a loop or coil (IUD) placed inside them to prevent pregnancy by doctor or nurse. Eighty three percent of current user and seventy seven percent of non-user could answer correctly the statement that depo injection can cause weight gain.

Table 10: Number and percentage of married women who answered correctly to each question (n = 358)

No	Statement	Current user N (%)	Non-user N (%)
1	Oral contraceptive pills can cause dizziness and nausea.	131 (68.6)	111 (66.5)
2	Depo injection can cause weight gain.	159 (83.2)	130 (77.8)
3*	Depo injection and oral contraceptive pills cannot return of fertility by stopping its use.	126 (65.9)	88 (52.6)
4	Contraceptives can reduce unwanted pregnancy and unintended pregnancy.	134 (70.2)	115 (68.8)
5*	Women can get pregnancy when they have sexual intercourse 7 days before and 7 days after their menstrual period.	33 (17.28)	20 (11.9)
6*	Using oral contraceptive pills, depo injection & IUD can protect against sexually transmitted infections including HIV/AIDS.	78 (40.84)	62 (37.1)
7	Using condom can prevent sexually transmitted infections including HIV/ AIDS.	141 (73.8)	119 (71.3)
8	Women can have a loop or coil (IUD) placed inside them to prevent pregnancy by doctor or nurse.	150 (78.5)	120 (71.8)
9	IUD can cause bleeding, expulsion and perforation of uterus.	87 (45.6)	68 (40.7)
10	If the women do not want the children anymore, sterilization should be done.	143 (74.9)	116 (69.4)

* Negative statement

In order to summarize the knowledge about contraception, total knowledge score about contraception among the respondents was shown in table 11. Half of the respondents, 56.5% of current user and 52.6% of non-user got 50-70% of total knowledge score. Sixteen percent of current user and twenty eight percent of non-user got less than 50% of total knowledge score. Twenty six percent of current user and eighteen percent of non-user got more than 70% of total knowledge score.

Table 11: Total knowledge score about contraception among the respondents (n = 358)

Knowledge level	Current user N (%)	Non-user N (%)
Less than 50%	32 (16.6)	48 (28.7)
50-70%	108 (56.5)	88 (52.6)
More than 70%	51 (26.7)	31 (18.5)
Total	191 (100.0)	167 (100.0)

Mean = 5.96, SD = 1.88, Range = 2-9

For the places to obtain information about contraceptive methods, respondents were allowed to answer more than one source for obtaining information towards contraception. Among them, eighty two percent of current user and sixty one percent of non-user stated that health center was the best places to obtain information. Fifty three percent of current user and fifty seven percent of non-user said that friends were the best to get knowledge about contraception. Thirty three percent of current user and thirty eight percent of non-user chose home and family members as the best place. Drug store was chosen as the best place by 20.4% of current user and 16.7% of non-user. Moreover, TV, news was chosen by 13.6% of current user and 20.4% of non-user.

Table 12: Places to obtain information about contraceptive methods by respondents (n = 358)

Places	Current user N (%)	Non-user N (%)
Health center	158 (82.7)	103 (61.6)
Friends	102 (53.4)	96 (57.5)
Home, family member	64 (33.5)	65 (38.9)
TV, news	26 (13.6)	34 (20.4)
Drug store	39 (20.4)	28 (16.8)
Others	15 (7.9)	17 (10.2)

Multiple responses allowed

4.4 Attitude towards contraceptive methods and use

The attitude towards contraception is one of the important determinants of practicing contraception. In order to know the attitude towards contraceptive methods and use among Myanmar married women, all of the respondents were asked about their opinion for agreeing or disagreeing the statements regarding contraception.

The attitude part consisted of 6 questions and the questions consist of both positive and negative aspects. For positive questions, the score was given 5 for strongly agree, 4 for agree, 3 for uncertain, 2 for disagree and 1 for strongly disagree. For negative questions, the score was given 5 for strongly disagree, 4 for disagree, 3 for uncertain, 2 for agree and 1 for strongly agree. The standard point for the attitude was mean ± standard deviation. The score ≤ mean – standard deviation (≤16.81) refers to poor attitude. The score ≥ mean + standard deviation (≥23.51) refers to good attitude and the score within mean + standard deviation and mean – standard deviation (16.81 – 23.51) refers to moderate attitude.

Level of attitude towards contraception among Myanmar married women of reproductive age was shown in table 13. The score of attitude of respondents ranged from 12 to 29. Mean score of the attitude was 20.16 and standard deviation was 3.35. Majority of the respondents, 72.2% of current user and 69.5% of non-user had moderate attitude towards contraception.

Table 13: Level of attitude towards contraception (n = 358)

Level of attitude	Current user N (%)	Non-user N (%)
Good attitude (≥23.51)	37 (19.4)	22 (13.2)
Moderate attitude (16.81 – 23.51)	138(72.2)	116 (69.4)
Poor attitude (≤16.81)	16 (8.4)	29 (17.4)
Total	191 (100)	167 (100)

Range = 12-29

Mean = 20.16, SD = 3.35

Table 14 shows that percentage of respondents' attitude towards each question regarding contraception and also mean and standard deviation for each question. Fifty nine percent of current user and forty seven percent of non-user agreed that husband and wife should decide number of children and mean score for current user and non-user was 3.84 and 3.75. Forty five percent of current user and fifty three percent of non-user agreed that contraception should be known among people widely and mean score for current user and non-user was 3.95 and 3.41. Twenty nine percent of current user and forty seven percent of non-user had good attitude for both men and women should have some knowledge about using contraception and mean score for current user and non-user was 3.72 and 3.67. Thirty seven percent of current user and forty percent of non-user disagreed that using contraceptives can improve maternal health and mean score for current user and non-user was 2.75 and 2.74. Thirty percent of current user and forty percent of non-user agreed that contraception is against nature and religion and mean score for current user and non-user was 3.26 and 2.88. Sixteen percent of current user and twenty seven percent of non-user were uncertain for contraception is against the culture or not and mean score for current user and non-user was 3.30 and 2.96.

Table 14: Percentage of respondents' attitude towards each question about contraception (n = 358)

	Statement		Percentage					Mean	SD
			Strongly agree	Agree	Uncertain	Disagree	Strongly disagree		
1*	Contraception is against nature and religion.	User	5.2	30.9	9.4	41.9	12.6	**3.26**	**1.17**
		Nonuser	7.2	40.1	16.2	30.5	6.0	**2.88**	**1.11**
2	Contraception should be known among people widely.	User	36.1	45.4	3.4	5.5	9.7	**3.95**	**0.87**
		Nonuser	28.9	53.4	3.9	5.6	8.2	**3.41**	**1.02**
3*	Contraception is against the culture.	User	6.3	24.1	16.2	39.8	13.6	**3.30**	**1.16**
		Nonuser	4.8	34.2	27.5	26.9	6.6	**2.96**	**1.03**
4	I believe that using contraceptives can improve maternal health.	User	6.3	18.8	27.7	37.7	9.4	**2.75**	**1.06**
		Nonuser	4.2	21.6	26.3	40.1	7.8	**2.74**	**1.01**

Table 14: (Continued) Percentage of respondents' attitude towards each question about contraception (n = 358)

	Statement		Percentage					Mean	SD
			Strongly agree	Agree	Uncertain	Disagree	Strongly disagree		
5	Husband and wife should decide number of children.	User	19.8	59.2	8.9	8.9	3.2	**3.84**	**0.95**
		Nonuser	23.4	47.8	13.2	11.4	4.2	**3.75**	**1.06**
6	I believe that both men and women should have some knowledge about using contraception.	User	14.7	29	14.7	30.7	10.9	**3.72**	**1.11**
		Nonuser	21.6	47.9	13.8	9.5	7.2	**3.67**	**1.13**

* Negative statement

4.5 External factors of contraception usage

External factors include the availability of contraceptives, accessibility to the service and convenience to get contraceptives. Table 15 reveals the external factors of contraception usage by married women of reproductive age who were residing in Mandalay, Myanmar.

Place to get contraception

Thirty six percent of current user and twenty eight percent of non-user stated that private clinic for receiving contraception. Twenty nine percent of current user and thirty three percent of non-user got contraceptives from drug store. Eighteen percent of current user and nineteen percent of non-user said that they got contraceptives from NGO. Fourteen percent of current user and sixteen percent of non-user got contraceptives from government clinic. Only some extent (1% of current user and 1.8% of non-user) stated that they got contraception from other sources.

Transportation

Half of the respondents (58% of current user and 56% of non-user) went to the source for getting contraception by walking. Public vehicle such as bus were used by 7.8% of current user and 11.4% of non-user. And also private vehicle such as motorbike and bicycle were used by 29.3% of current user and 17.9% of non-user respectively. Only some extent (4% of current user and 12% of non-user) asked someone to buy contraceptives. The remaining 0.5% of current user and 1.2% of non-user used the other transportation system.

Distance from home

Forty eight percent of current user and forty five percent of non-user stated that it was near to get to the source for getting contraception. Thirty nine percent of current user and forty six percent of non-user noted as not too far to the service. Only twelve percent of current user and seven percent of non-user said it was too far from their home.

Convenience to go

Majority of the respondents (95.3% of current user and 95.8% of non-user) noted that it was convenient to go to the source to get contraception while only some extent (4.7% of current user and 4.2% of non-user) said that it was not convenient to go.

Perception on cost

Most of the respondents (97.4% of current user and 93.4% of non-user) said that they could afford to use contraception as they do not want more children. Only 2.6% of current user and 6.6% of non-user said they could not afford to use contraception.

Table 15: External factors of contraceptive use among the respondents (n = 358)

Variables	Current user N (%)	Non-user N (%)
Place to get contraceptives		
Private clinic	70 (36.6)	48 (28.7)
Drug store	56 (29.3)	56 (33.5)
NGO	36 (18.8)	32 (19.2)
Government clinic	27 (14.1)	28 (16.8)
Others	2 (1.0)	3 (1.8)
Total	191 (100.0)	167 (100.0)
Transportation		
Walking	111 (58.1)	95 (56.8)
Public vehicle (bus)	15 (7.8)	19 (11.4)
Private vehicle	56 (29.3)	30 (17.9)
Ask someone to buy	8 (4.2)	21 (12.8)
Other	1 (0.5)	2 (1.2)
Total	191 (100.0)	167 (100.0)
Distance from home		
Near	92 (48.2)	76 (45.5)
Not too far	76 (39.8)	78 (46.7)
Too far	23 (12.0)	13 (7.7)
Total	191 (100.0)	167 (100.0)
Convenience to go		
Yes	182 (95.3)	160 (95.8)
No	9 (4.7)	7 (4.2)
Total	191 (100.0)	167 (100.0)

Table 15: (Continued) External factors of contraceptive use among the respondents (n = 358)

Variables	Current user N (%)	Non-user N (%)
Perception on cost		
Affordable	186 (97.4)	156 (93.4)
Not affordable	5 (2.6)	11 (6.6)
Total	191 (100.0)	167 (100.0)

In this study, all of the respondents were asked their need regarding contraception if there is a chance to get support from the government or NGO. Nearly thirty percent of current user and thirty one percent of non-user needed to get sterilization. Only some extent (12% of current user and 8% of non-user) needed information regarding family planning. And also fifteen percent of current user and twenty four percent of non-user stated that they needed family planning clinic. Ten percent of current user and six percent of non-user needed to get implants. Although condom was not frequently practiced among married women, 1% of current user and non-user needed condoms free of charge. (Table 16)

Table 16: Need among the respondents (n = 358)

Need	Current user N (%)	Non-user N (%)
Supply contraceptives free of charge	32 (16.7)	26 (15.6)
Family planning information	23 (12.0)	15 (8.9)
Family planning clinic	30 (15.7)	41 (24.5)
Supply condoms for free of charge	2 (1.1)	2 (1.2)
Provide sterilization	57 (29.8)	53 (31.7)
Provide Norplant implants	20 (10.5)	11 (6.6)
Others	27 (14.1)	19 (11.4)
Total	191 (100.0)	167 (100.0)

4.6 Relationship between socio-demographic factors, external factors, knowledge of contraception, attitude towards contraception and usage of contraception

The relationship between socio-demographic factors, external factors, knowledge of contraception, attitude towards contraception and usage of contraception was determined by Chi-square test. The level of significance for relationship between these variables was set at P-value = 0.05.

Table 17 shows that the relationship between socio-demographic characteristics of respondents and utilization of contraception.

Age

The respondents' age was compared with the use of contraception currently and not use of contraception currently. The result reveals that there was significant difference between age group and contraception use (p-value $\leq$ 0.05). Among the respondents who were between 18 to 49 years, current use of contraception was lowest in age group 18-20 years with 4.2%. The usage of contraception was highest in

age group 21- 30 years (43.5%). It was 39.8% in age group 31- 40 years and 12.6% in 41- 49 years.

Religion

The comparison of religion with use and not use of contraception shows that there was no significance difference between religion and use of contraception. Ninety six percent of Buddhist respondents use contraception while 3.7% of other religion such as Muslim, Hindu and Christian.

Education

Respondents' education and usage of contraception were compared in this study. It was shown that there was no significance difference between educational status of the respondent's and contraceptive use. Twelve percent of respondents who were illiterate and just read and write used contraceptives while thirty one percent of women with good school level educational attainment and higher education used contraceptives.

Occupation

For determining the relationship between occupation and use and not use of contraception currently, it was categorized into dependent and working women. There was no significance difference between dependent and working women and contraceptive use. Fifty six percent of dependents used contraception while forty three percent of working women used contraception.

Total family income per month

A comparison of respondents' income and use of contraception and not use of contraception is presented in this study. The income was categorized into ≤ 50,000 Kyat, 50,001-100,000 Kyat, 100,001-200,000 Kyat and >200,000 Kyat. There was no significance difference between income group and contraception use. Thirteen percent of women having total family income ≤ 50,000 Kyat used contraception while forty two percent of women having 50,001-100,000 Kyat per month used contraception.

Number of living children

The result reveals that there was significance difference between number of living children and use of contraception (p-value = 0.01). The proportion of use of contraception was poorest among the women who had ≥5 children (2.62%). Sixty two percent of women who had 1-2 children used contraception while eight percent of women having no child.

Marital duration

Marital duration is one of the important factors that can influence the contraception use. The result shows that there was significant difference between marital duration and contraceptive used among married women (p-value = 0.001). The usage was highest among women who had been married for >10 years (37.2%).

Table 17: Relationship between socio-demographic characteristics and current usage of contraception (n = 358)

Variables	Current User N (%)	Non user N (%)	X^2	p-value
Age (n = 358)				
18 - 20	8 (4.2)	7 (4.2)	10.637	0.014
21 - 30	83 (43.5)	52 (31.1)		
31 - 40	76 (39.8)	67 (40.1)		
41 - 49	24 (12.6)	41 (24.6)		
Total	191 (100.0)	167 (100.0)		
Religion (n = 358)				
Buddhist	184 (96.3)	157 (94.0)	1.063	0.303
Muslim + Christian + Hindu	7 (3.7)	10 (5.9)		
Total	191 (100.0)	167 (100.0)		
Education (n = 358)				
Illiterate + Read and write	24 (12.6)	20 (11.9)	0.821	0.844
Primary school level	42 (21.9)	34 (20.4)		
Middle school level	65 (34.0)	53 (31.7)		
High school level + higher education	60 (31.4)	60 (35.9)		
Total	191 (100.0)	167 (100.0)		
Occupation (n = 358)				
Dependent	108 (56.5)	91 (54.5)	0.152	0.696
Working women	83 (43.5)	76 (45.5)		
Total	191 (100.0)	167 (100.0)		

Significant association at $p \leq 0.05$

Table 17: (Continued) Relationship between socio-demographic characteristics and current usage of contraception (n = 358)

Variables	Current User N (%)	Non user N (%)	X^2	p-value
Monthly family income (Kyat) (n = 358)				
≤ 50,000	26 (13.6)	27 (16.2)	1.826	0.609
50,001-100,000	82 (42.9)	62 (37.1)		
100,001-200,000	51 (26.7)	52 (31.1)		
>200,000	32 (16.7)	26 (15.6)		
Total	191 (100.0)	167 (100.0)		
Number of living children (n= 358)				
0	16 (8.4)	25 (14.9)	11.417	0.01
1 – 2	120 (62.8)	84 (50.3)		
3 - 4	50 (26.2)	44 (26.4)		
≥5	5 (2.6)	14 (8.4)		
Total	191 (100.0)	167 (100.0)		
Marital duration (n=358)				
≤5 years	60 (31.4)	51 (30.5)	13.725	0.001
6 - 10 years	60 (31.4)	27 (16.2)		
> 10 years	71 (37.2)	89 (53.3)		
Total	191 (100.0)	167 (100.0)		

Significant association at $p \leq 0.05$

Table 18 shows the relationship between knowledge level and attitude level of the respondents and current usage of contraception.

Regarding knowledge of contraceptive methods and use, there was significance difference between total knowledge score of contraception and current usage of contraception (p-value = 0.014). The use of contraception was lowest among the women who got less than 50% of total score (16.7%). The proportion of use was 56.5% among women who got 50-70% of total score while 26.7% of women who got more than 70% of total score used contraception currently.

This study shows that there was significance difference between attitude towards contraception and current use of contraception (p-value = 0.019). Contraception use was highest among the respondents who had moderate level of attitude towards contraception and use (72.2%). It was lowest in women who had poor level of attitude towards contraception and use with 16.7%.

Table 18: Relationship between total knowledge score, attitude level of respondents and current usage of contraception (n = 358)

	Current User N (%)	Non user N (%)	X^2	p- value
Knowledge level				
Less than 50%	32 (16.8)	48 (28.7)	8.548	0.014
50-70%	108 (56.5)	88 (52.7)		
More than 70%	51 (26.7)	31 (18.6)		
Total	191 (100.0)	167 (100.0)		
Attitude level				
Poor attitude	16 (8.4)	29 (17.4)	7.901	0.019
Moderate attitude	138 (72.3)	116 (69.5)		
Good attitude	37 (19.4)	22 (13.2)		
Total	191 (100.0)	167 (100.0)		

Significant association at $p \leq 0.05$

The relationship between external factors of contraceptives use which include availability of contraceptives, accessibility to the service and convenience to get contraceptives and usage of contraception among the respondents was shown in the table 19.

Place to get contraception

The proportion of use of contraception was not different between groups of women with different sources of receiving contraception (p-value = 0.357). The percentage of use of contraception was 29.3% in women using drug store, 32.9% in women going to government clinic or NGO and 37.7% in women using private clinics for obtaining contraception.

Transportation

Although the respondents used different types of transportation, the proportion of use was not so difference among them. Majority of respondents (58%) went to the source by walking while seven percent of them used public vehicles to the source for getting contraception.

Convenience to go

There was no significance difference between convenience to go to the source for getting contraception and current usage of contraception. Majority of current user and non-user said that they were convenience to go to the source to get contraception.

Distance from home

The relationship between distance from home to the source and contraception use shows that there was no significance difference. The use of contraception was highest among the women who stayed near from the source (48.2%). The proportion of use was 39.8% among the women who lived not too far from the source and 12% among the women who resided too far from the source for getting contraception.

Perception on cost

There was no significance difference between the perception on cost and current use of contraception. Most of the women who perceived that they could afford to buy contraceptives used contraceptives currently while 2.6% of the women who perceived that they could not afford to buy contraceptives used it.

Table 19: Relationship between external factors and current usage of contraception (n = 358)

Variables	Current User N (%)	Non user N (%)	X^2	p-value
Place to get contraception				
Drug store	56 (29.3)	56 (33.5)	2.059	0.357
Government clinic + NGO	63 (32.9)	60 (35.9)		
Private clinic + Others	72 (37.7)	51 (30.5)		
Total	191 (100.0)	167 (100.0)		
Transportation				
Walking	111 (58.1)	95 (56.9)	1.331	0.514
Public vehicle (bus)	15 (7.9)	19 (11.2)		
Private vehicle + ask someone to buy + others	65 (34.0)	53 (31.7)		
Total	191 (100.0)	167 (100.0)		
Convenience to go				
Yes	182 (95.3)	160 (95.8)	0.057	0.812
No	9 (4.7)	7 (4.2)		
Total	191 (100.0)	167 (100.0)		

Significant association at $p \leq 0.05$

Table 19: (Continued) Relationship between external factors and current usage of contraception (n = 358)

Variables	Current User N (%)	Non user N (%)	X^2	p-value
Distance from home				
Too far	23 (12.0)	13 (7.8)	2.731	0.255
Not too far	76 (39.8)	78 (46.7)		
Near	92 (48.2)	76 (45.5)		
Total	191 (100.0)	167 (100.0)		
Perception on cost				
Affordable	186 (97.4)	156 (93.4)	3.287	0.07
Not affordable	5 (2.6)	11 (6.6)		
Total	191 (100.0)	167 (100.0)		

Significant association at $p \leq 0.05$

CHAPTER V
DISCUSSION AND CONCLUSION

5.1 Discussion

The main purpose of this study was to determine the prevalence of contraceptive usage and the association between socio-demographic factors, knowledge about contraception, attitude towards contraception and usage of contraception among married women of reproductive age who were residing Chan Aye Thar Zan and Pyi Gyi Da Gun Townships in Mandalay, Myanmar.

This study was done with the expectation of that the outcome can be used by heath authorities for further family planning program to fulfill the needs among Myanmar married women.

The contraceptive prevalence rate among married women of reproductive age residing Chan Aye Thar Zan and Pyi Gyi Da Gun Townships in Mandalay, Myanmar was 53.4 percent. It was noted that the practice of contraception was increased as compared with Myanmar fertility and reproductive health survey in 2001 in which contraceptive prevalence rate was 37% (FRHS, 2001). However, this is compatible with the study done among married couples in Yangon, Myanmar as the contraceptive prevalence for over all methods was 60.3% (Thuya, 2008).

In terms of contraceptive methods used, the most common contraceptive method was oral pill (35.6%) followed by injection (35.1%), IUD (13.6%), female sterilization (9.4%), male condoms (2.1%), Norplant implants (1%) and male sterilization (3.1%). This finding was compatible with the study done on the contraceptive use of the married couples in Yangon, Myanmar in 2008 in which the most common method was oral pill followed by injection and IUD (Thuya, 2008).

In this study, oral pill was the most common method followed by injection than any other method among married women in Mandalay, Myanmar. It may be due to the fact that oral contraceptive is cheaper and more available than other contraceptive methods. The low use of condom may be due to their husbands did not like condom because of interference during sexual intercourse. Therefore, condom promotion should be done for every married couple including the explanation of benefits of condom.

The reasons for not using contraceptives currently among the respondents were afraid of side effects, want to get pregnant, health reasons such as being old and their perception of could not get pregnant and husband objects.

Regarding the age, all the women were in age group between 18 to 49 years old. The average age was 32.7 and nearly half of the respondents were distributed in the age group from 25 to 34 years. Only few of them lied in the age group from 18-19 years (2.8%) and 45-49 years (7.3%).

There was a significant difference between age and contraception use with p-value = 0.014. This finding is consistent with the study done in Ethiopia (Kebede, 2004). The percentage of contraceptive use was lowest among 18-20 years and it was highest among 21-30 years.

Among the married women, 31% had duration of marriage ≤ 5 years, 24.3% had 6-10 years and 44.7% had > 10 years. It was found that there is significantly difference between duration of marriage and contraceptive use with p-value =0.001. This is consistent with the study conducted in Thailand (Soe, 2007).

Among the women, 95.3% were Buddhist and 4.7% were Muslim, Hindu and Christian. There was no significant difference between religion and contraception usage and it is consistent with the finding from the study done among married women in Myanmar (Han, 2001). This is because there were not many women with other religions.

More than half of the respondents in this study reached primary school level and 27.6% reached middle school level. Only a few percentage reached high school level and higher education. The educated women tend to use more contraception as they don’t desire to have many children compared with illiterate women.

The result of this study reported that there was no significant difference between educational status of the respondents and contraception usage with p-value =0.84. This finding is controversy with the study conducted in Lao PDR (Khouangvichit, 2002). However, it is compatible with the study done in Myanmar (Tin, 2002). The use of contraception was the lowest among illiterate and just read and write group (12.57%) and it was highest in secondary education group (34.03%). This is because the low educated women were lack of awareness.

Almost half of the women (45.4%) in this study were housewives and the others (54.6%) were working as government officer, hawker, business women etc. Occupation often influences the decision making for using contraception among women. However, the result in this study revealed that there was no significant difference between occupation and contraception use (p-value=0.696) but housewives were more likely to use contraception (56.5%) than working women (43.5%). It may be because the Myanmar married women who had no job, they might not have enough money for having and raising children compared to the working women who can supply the family income.

Average family income was 150047 Kyat and nearly half of them got monthly income between 50,001 Kyat to 100,000 Kyat. The result from this study showed that there was no significant difference between family income and contraceptive use. This finding is consistent with the study conducted in Ethiopia (Beekle & Mccabe, 2006). The percentage of current use was 42.9% in the women who had family income between 50,001 Kyat to 100,000 Kyat while 16.7% of women with family income > 200,000 Kyat. It may be due to the price of the contraception was cheap and sometimes free of charge, so most of the married women can use contraceptives with ignorance of income.

Among the women, half of them had 1 to 2 children while 11.5% had no children. 26.3% had 3 to 4 children and only 5.3% had ≥5 children. The number of living children is important factor which can influence contraception usage. This study found that there was significant difference between number of living children and contraceptive use (p-value=0.01). This is compatible with the study done among married women in Myanmar in which p-value is 0.001 (Han TM, 2001). The percentage of use was 64.1% in women who had no children, 85.9% in women who had 1-2 children (85.9%) and 75% in women having≥ 3 children.

Regarding the knowledge about contraceptive methods and use, majority of the women heard of oral pill, injection, female sterilization, IUD, male condom and male sterilization although male sterilization is illegal in Myanmar. They also heard of other methods such as Norplant implants, traditional methods, female condom to some extent. This is consistent with the study done among married women in Myanmar in which oral contraceptive pills (OCPs) was the most recognized method,

depo injection was second, sterilization and vasectomy were third and fourth recognized methods (Khaing, Mya, Win, 1992).

There was significant difference between total knowledge score of contraception and current contraception usage (p-value = 0.014). This is compatible with the study done in Nepal (Dhananjay Narsingh, 1997) and also the study conducted in Bangladesh (Parveen, 2000). Regarding the knowledge level of the respondents using contraception, it indicated noticeably that women who got 50-70% of total score and more than 70% of total score participated in more practicing contraception (56.5% and 26.7% respectively) than those who got less than 50% of total score (16.7%).

The attitude towards the contraception is one of the most important determinants of practicing contraception. There was significant difference between the attitude towards the contraception and use of contraception (p-value = 0.019). However, this finding is controversy with the study done among Myanmar migrant women in Thailand in which there was no significant association between current usage of contraception and level of attitude (Khaing, 2002).

In terms of place to get contraception, more than half of the current users rely on private clinic and drug store. The rest of them used government clinic, NGO and other sources. There is no significant difference between place to get contraception and use of contraception (p-value = 0.357).

Regarding transportation, nearly half of the current users went to the source by walking. The use of contraception was not too difference between other means of transportation such as by public vehicle, private vehicle although nearly half of the current users went to the source by walking. Transportation was not associated with contraception usage. Nearly half of the current users resided near the source and one third of them resided not too far from the source. However, the use of contraception was not difference between them.

In terms of perception of on cost, almost all of the current users (97%) could afford the contraception while only 3% could not afford the contraception. There was no significant difference between the respondents who could afford and could not afford and use of contraception with p-value = 0.07. It has positive effect on use of contraception as if they could afford, they use more contraception.

The previous study done in Lao PDR (Vanhnolrath, 2003) found that the place to get contraception, convenience to go to the service center were not significantly associated with contraception usage. This is consistent with this study in which there was no significant difference between place to get contraception, mean of transportation, convenience to go to the service, distance from home, satisfaction to the service and current use of contraception.

5.2 Conclusion

Although Mandalay is the second-largest city of Myanmar, there is no previous community-based study of contraceptive usage among married women in Mandalay. Therefore, this study provided the base line information of contraceptive usage among Myanmar married women to health authorities for further promoting contraceptive usage and family planning knowledge to Myanmar married women.

The data from this study was collected in Chan Aye Thar Zan and Pyi Gyi Da Gon Townships in Mandalay. The sample size for this study was 358 Myanmar married women of reproductive age who were neither pregnant nor menopause during the time of interview.

The main purpose of this study was to determine the prevalence of contraceptive usage and the association between socio-demographic factors, knowledge about contraception, attitude towards contraception and usage of contraception among married women of reproductive age who were residing in Mandalay, Myanmar.

The statistical package for social science (SPSS) were using for analysis of the data of this study. Chi-square test was used for relationship between independent variables and current usage of contraception.

The study reported that the prevalence of contraceptive use among married women in Mandalay was 53.4%. The most common contraceptive methods were oral pill and injectables. The common reasons for not using contraceptives currently among the respondents were afraid of side effects, want to get pregnant, health reasons such as being old and their perception of could not get pregnant and husband objects.

Regarding to the giving advice for using contraception, nearly half of the married women got advice from doctors and basic health staffs such as midwives, one third of them got advice from their mothers, sisters, relatives, friends and neighbors. Only a small proportion of them (4.7%) got advice from their husbands.

All the respondents in this study were in the age range from 18 to 49 years and nearly half of the respondents were distributed in the age group of 25 to 34 years. Among the respondents, 44.7% have been married for more than ten years, the duration of marriage was ranged from 2 months to 33 years and more than half of them had 1-2 children.

Almost all of them were Buddhist and more than half of the women in this study got primary educational attainment. More than half of the women were working in government service, business field etc while nearly half of them were housewives. In this study, total monthly family income ranged from 30,000 Kyat to 600,000 Kyat although nearly half of them had income 50,001-100,000 Kyat per month.

Regarding total knowledge score about contraception, half of the respondents (56.5% of current user and 52.6% of non-user) got 50-70% of total knowledge score. Sixteen percent of current user and twenty eight percent of non-user got less than 50% of total knowledge score. Twenty six percent of current user and eighteen percent of non-user got more than 70% of total knowledge score.

The attitude towards contraception is one of the important determinants of practicing contraception. The score of attitude of respondents ranged from 12 to 29. Mean score of the attitude was 20.16 and standard deviation was 3.35. Majority of the respondents, 72.2% of current user and 69.5% of non-user had moderate attitude towards contraception.

For the places to obtain information about contraceptive methods, more than half of current user and non-user stated that health center was the best places to obtain information. In terms of external factors of contraception usage, more than half of the current users rely on the private clinic and drug stores. Majority of the current users went to the source to get the contraception by walking or private vehicles. Nearly half of them stated that they resided near the source for getting contraception and most of them (95.2%) said that it was convenience to go there. Majority of them perceived that they could afford the cost of contraceptive method that they used.

The relationship between independent variables and current usage of contraception is analyzed by chi-square test. The result of this study found that there is significant difference between age, marital duration, number of living children, knowledge about contraceptive methods, attitude towards contraceptive methods and current contraception usage.

Concerning the need of the respondents towards family planning and contraception, the respondents reported that they need for provision of sterilization, contraceptives free of charge, more information on family planning and family planning clinics.

5.3 Recommendation

Contraceptive prevalence rate found in this study (53.4%) is not satisfactory. Comparing with neighboring countries in Asia, the prevalence of modern contraceptives methods for Myanmar is still lower than the other countries. Therefore, the remaining 46.6% should be encouraged by providing proper information about contraceptive methods and use.

According to the result from this study, only 18.8% of current users get contraception with low cost from NGO and more than half of current users rely on private clinic and drug stores were found out. It can be cost and make them to stop usage. Government services and NGOs should focus on encouraging and promoting use by giving contraception free frequently.

In terms of contraceptive methods used, the most common contraceptive method was oral pill followed by injection, IUD, female sterilization, male condoms, implants and male sterilization. Among all contraceptive methods, the usage of male condoms and implants were significantly low as compared to other contraceptive methods. Provision and giving health education about usage, effect and benefit of the implants should be given to increase the use of implants. The low use of condom may be due to their husbands did not like condom because of interference during sexual intercourse. Therefore, condom promotion should be done for every married couple including the explanation of benefits of condom.

Since this study had limited by time constraint, the quantitative variables that were thought to affect the non use of contraception among Myanmar married women were chosen. However, in order to know more in-depth about the cultural beliefs and social norms whether it is related to the use of contraception or not, qualitative research should be carried out.

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APPENDICES

APPENDIX A

Participant Information Sheet

Title of research project…"Contraception usage among married women of reproductive age in Mandalay, Myanmar"

Principle researcher's name.. Ms. KHIN THU ZAR

Position… Master of Public Health (Student)

Home address No.4, 86 Street, between 31 x 32 street, Chan Aye Thar Zan Township, Mandalay, Myanmar

Cell phone: 095137696 **E-mail:** moesat.abcd@gmail.com

1. You are being invited to take part in a research project. Before you decide to participate it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and do not hesitate to ask if anything is unclear or if you would like more information.
2. This research project involves interview participants about contraception usage among Myanmar married women of reproductive age who are mentally sound and willing to participate. This study required 358 participants residing in Mandalay, Myanmar.
3. Objective (s) of the project: To determine the prevalence of contraceptive usage and the association between socio-demographic factors, knowledge about contraception, attitude towards contraception and usage of contraception among married women of reproductive age in Mandalay, Myanmar.
4. Participants selected for the study will be married women who are in reproductive age, are mentally sound and willing to participate. Women who cannot participate in this study will be those who have pregnancy at the time of interview, who are widows, divorced, separated and never married, who are not mentally sound, not willing to participate and who had hysterectomy and menopause although they are in reproductive age. This study will need at least 358 participants residing in Mandalay, Myanmar. You have been invited to be a part of this study because you have been selected randomly and have the necessary criteria that the study requires.

5. The researcher or research assistants will explain you the purpose of the study, its objectives, contents and benefits and will interview you the questions from the study and it will take about 30 minutes. This interview will be at your convenient time and place.
6. All information about the questionnaire (socio-demographic characteristics, external factors, knowledge about contraceptive methods, attitude towards contraception and usage of contraceptives) will be given before the interview begins so you can decide if you would like to participate. The interview will take about 30 minutes to finish.

   6.1 The researcher or the assistants will explain you with all the necessary information verbally.

   6.2 Furthermore, all the information is confidential and anonymous and will not be shared. It will not be used against you in any way and will only be used for the purposes of this study and no identifying information will be collected. By giving the verbal consent, it means that you are willing to participate in the study. You are free to withdraw from the study at any time or refuse to answer certain questions if you feel inconvenient.
7. If it is shown that you do not meet the inclusion criteria after the screening process, then unfortunately, your responses cannot be included in this study as it may alter the results of the study. If you need an advice, please do not hesitate to contact that researcher who will answer any questions or concerns you have.
8. Participation in this study is voluntary and you have the right to deny and/or withdraw from the study at any time they want and without giving any reason. This will not have bad impact on you and you will still receive the same services as normal.
9. No procedure will be performed on you so you should not have any kind of side effects as a result. The benefit of the project is that this study will give the baseline information about contraceptive usage among Myanmar married women for health authorities for further promoting contraception usage and family planning knowledge to Myanmar married women.

10. Any information that is directly related to you will be kept confidential and will not be told to anyone. Information in the results will be reported as a total picture and no participant will be used as an example nor will any indentifying information about you be used.
11. Participation in this study is completely voluntary and there is no compensation for completing the questionnaire. All cooperation is highly appreciated. After the interview, the respondents may be provided with appropriate pamphlet.
12. If researcher does not follow or treat the participants according to all these items, the participants can report the incident to the Ethical Review Committee for Research Involving Human Research Subjects, Health Sciences Group, Chulalongkorn University (ECCU). Institute Building 2, 4th Floor, Soi Chulalongkorn 62, Phyathai Rd., Bangkok 10330, Thailand, Tel: 0-2218-8147 Fax: 0-2218-8147 E-mail: eccu@chula.ac.th.

APPENDIX B

Informed Consent Form

Code number of participant ……

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

Title "Contraception usage among married women of reproductive age in Mandalay, Myanmar"

Principle researcher's name …… Ms. Khin Thu Zar

Contact address No.4, 86 Street, between 31 x 32 street, Chan Aye Thar Zan Township, Mandalay, Myanmar

Telephone ……095137696

I have been informed about rationale and objectives of the project, what I will be engaged with in details and benefit of this project. The researcher has explained to me and I clearly understand with satisfaction.

I willingly agree to participate in this research and response to questionnaires asked focusing on socio-demographic characteristics, external factors, knowledge about contraceptive methods, attitude towards contraception and usage of contraceptives, which will take about 30 minutes to complete.

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.

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

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

APPENDIX C

Questionnaire on "Contraception usage among married women of reproductive age in Mandalay, Myanmar

ID No. …….
Date ……. / …… / …….

Instruction: Please tick in the [ ] . Please also write down in the blank space where provided.

Part I: Socio-demographic characteristics

1. Age (completed years) ……

2. Religion……

(1) [ ] Buddhist (2) [ ] Christian (3) [ ] Islam
(4) [ ] Hindu (5) [ ] Others (specify)

3. Education level of respondent

(1) [ ] Illiterate (2) [ ] Read and write (3) [ ] Primary school level
(4) [ ] Middle school level (5) [ ] High school level (6) [ ] Higher education

4. Occupation of respondent

(1) [ ] Government service (2) [ ] Hawker (3) [ ] Own business
(4) [ ] Dependent (5) [ ] Others (specify)

5. Average income per month of respondent…….(kyats)

6. Age at first marriage……(in years)

7. Do you live with your husband?

(1) [ ] Yes (2) [ ] No

8. Have you ever been pregnant?

(1) [ ] Yes, ---------- times (2) [ ] No

9. Have you ever had an abortion?

(1) [ ] Yes, ---------- times (2) [ ] No

10. Have you ever had your children died?

(1) [ ] Yes, ---------- children (2) [ ] No

11. How many of your children are still alive now?

---------- children.

Part II: Knowledge of contraceptive methods

12. Have you ever heard of any contraceptive methods?
(1) [ ] Yes (2) [ ] No

13. Which kind of contraceptive methods have you ever heard? It can be answer more than one.
(Please check in the following boxes by interviewer according to the answers from the respondents)

Methods	Yes	No
Oral contraceptive pills		
Injection depo		
Diaphragm (female condom)		
Male Condom		
IUD		
Male sterilization		
Female sterilization		
Norplant implants		
Traditional methods such as withdrawal, abstinence, calendar method		
Others (specify)……		

14. Knowledge about each contraceptive method

No.	Statement	Yes	No	Not sure
1.	Oral contraceptive pills can cause nausea and dizziness.			
2.	Depo injection can cause weight gain.			
3.	Depo injection and oral contraceptive pills cannot return of fertility by stopping its use.			
4.	Contraceptives can reduce unwanted pregnancy and unintended pregnancy.			
5.	Women can get pregnancy when they have sexual intercourse 7 days before and 7 days after their menstrual period.			
6.	Using oral contraceptive pills, depo injection & IUD can protect against sexually transmitted infections including HIV/AIDS.			
7.	Using condom can prevent sexually transmitted infections including HIV/AIDS.			
8.	Women can have a loop or coil (IUD) placed inside them to prevent pregnancy by doctor or nurse.			
9.	IUD can cause bleeding, expulsion and perforation of uterus.			
10.	If the women do not want the children anymore, female sterilization should be done.			

15. Where are the best place/ places to obtain information about contraceptive methods?

(You can select more than one)

(1) **[ ]** home, family member (2) **[ ]** friends (3) **[ ]** health center

(4) **[ ]** drug store (5) **[ ]** TV, news (6) **[ ]** others (specify) -------

Part III: Attitude questions on contraception

16. How do you think about following?

SA = strongly agree
A = agree
UC = uncertain
D = disagree
SD = strongly disagree

No	Questionnaire	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
1.	Contraception is against nature and religion.					
2.	Contraception should be known among people widely.					
3.	Contraception is against the culture.					
4.	I believe that using contraceptives can improve maternal health.					
5.	Husband and wife should decide number of children.					
6.	I believe that both men and women should have some knowledge about using contraception.					

Part IV: Practice Questions on contraception

17. Have you or your partner ever used contraception in the past?
(1) [ ] Yes (2) [ ] No

18. Which method did you or your partner ever use?
(You can select more than one method)
(1) [ ] injectables
(2) [ ] oral pill
(3) [ ] male condoms
(4) [ ] female condom
(5) [ ] male sterilization
(6) [ ] female sterilization
(7) [ ] Norplant implants
(8) [ ] IUD
(9) [ ] traditional methods

19. Are you or your partner using contraception now?
(1) [ ] Yes (2) [ ] No

If Yes, go to Q.23

20. Why don't you use contraception now?

(1) [ ] Afraid of side effects (2) [ ] Want to get pregnant (3) [ ] Partner did not like to use

(4) [ ] Cannot afford to buy (6) [ ] Knew some methods but did not know where to get

(7) [ ] Others (specify)……

21. In the future, do you want to use contraception?

(1) [ ] Yes, why…… (2) [ ] No, why……

22. What methods are you using now?

……..

23. How long have you been using current contraceptive method?

……. (months)

24. Why do you use contraception?

(1) [ ] For spacing (2) [ ] Don't want to have a child more

(3) [ ] Others (specify)……

25. Who give advice upon this method to you?

(1) [ ] Self (2) [ ] Husband (3) [ ]Mother / Sister / Relatives

(4) [ ] Neighbours / Peers (5) [ ] Basic Health staff

(6) [ ] Doctors (7) [ ] Others (specify)……

26. Do you satisfy with using contraceptives?

(1) [ ] Yes (2) [ ] No

27. In the future, do you want to stop using contraceptives?

(1) [ ] Yes , why--------- (2) [ ] No, why--------

Part V: External factors of contraception usage

28. Where do you usually get contraceptives?

(1) [ ] from drug store (2) [ ] from government clinic (3) [ ] from NGO

(4) [ ] from private clinic (5) [ ] others (specify) ----------

29. How much can it cost of the contraceptives? Cost…… (per month/per dose)

30. How do you think about the cost of contraceptives?

(1) [ ] affordable (2) [ ] not affordable

31. How can you go to get contraceptives?

(1) [ ] walking (2) [ ] public vehicle (3) [ ] private vehicle

(4) [ ] ask someone to buy (5) [ ] others (specify) ----------

32. Is it convenience for you to get contraceptives?

(1) [ ] Yes (2) [ ] No

33. How far away from your home to get contraceptives?

(1) [ ] too far (2) [ ] not too far (3) [ ] near

34. Are you satisfied with your receiving information about contraceptives?

(1) [ ] Yes 2. [ ] No

35. Why do you satisfy?

(You can answer more than one)

(1) [ ]friendly caring informers (2) [ ] short waiting time (3) [ ] privacy

(4) [ ] low cost (5) [ ] effective information (6) [ ] good services

(7) [ ] can ask informers anytime (8) [ ]free of charge for contraceptives (9) [ ] others (specify) ------

36. Why don't you satisfy?

(You can answer more than one)

(1) [ ] informers are not friendly (2) [ ] long waiting time (3) [ ] costly

(4) [ ] ineffective information (5) [ ] others (specify) ----------

37. What is the most important one about family planning that you need from the government or NGO?

(1) [ ] family planning information (2) [ ]family planning clinic (3) [ ] provide sterilization

(4) [ ]supply contraceptives free of charge (5) [ ] supply condoms free of charge

(6) [ ] provide Norplant implants (7) [ ] others (please specify) ----------

Thank you very much for your kind co-operation.

VITAE

Name : Ms. Khin Thu Zar

Date of birth : 6th May, 1986

Education : M.B., B.S

Graduated from Institute of Medicine (Mandalay), Mandalay, Myanmar in the year 2009

Work Experience : June 2009 – November 2009

Medical Officer,

Asia Taw Win Medical Center, Yangon, Myanmar