EFFECTIVENESS OF "MEN IN MATERNITY HEALTH (MIM)" INTERVENTION TO IMPROVE HUSBAND INVOLVEMENT IN BIRTH PREPAREDNESS AND COMPLICATION READINESS FOR SAFE MOTHERHOOD IN NAY PYI TAW, MYANMAR: A QUASI-EXPERIMENTAL STUDY

Mrs. May Chan Oo

A Dissertation Submitted in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy in Public Health
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ผลของการมีส่วนร่วมของสามีในการเตรียมพร้อมก่อนการคลอดและภาวะแทรกซ้อน เพื่อความปลอดภัยของแม่ เมืองเนปิดอร์ ประเทศเมียนมา: การศึกษากึ่งทดลอง

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By	Mrs. May Chan Oo
Field of Study	Public Health
Thesis Advisor	Alessio Panza, M.D., M.Com.H., DTMH

Accepted by the College of Public Health Sciences, Chulalongkorn University in Partial Fulfillment of the Requirement for the Doctor of Philosophy

..... Dean of the College of Public Health Sciences
(Prof. SATHIRAKORN PONGPANICH, Ph.D.)

DISSERTATION COMMITTEE

..... Chairman
(Prof. SURASAK TANEEPANICHSKUL, M.D.)
..... Thesis Advisor
(Alessio Panza, M.D., M.Com.H., DTMH)
..... Examiner
(Assoc. Prof. Ratana Somrongthong, Ph.D.)
..... Examiner
(Wandee Sirichokchatchawan, Ph.D.)
..... External Examiner
(Nanta Auamkul, M.D., M.P.H.)

เมย์ ชาน โอ : ผลของการมีส่วนร่วมของสามีในการเตรียมพร้อมก่อนการคลอดและภาวะแทรกซ้อน เพื่อความปลอดภัยของแม่ เมืองเนปิดอร์ ประเทศเมียนมา: การศึกษากึ่งทดลอง . (EFFECTIVENESS OF "MEN IN MATERNITY HEALTH (MIM)" INTERVENTION TO IMPROVE HUSBAND INVOLVEMENT IN BIRTH PREPAREDNESS AND COMPLICATION READINESS FOR SAFE MOTHERHOOD IN NAY PYI TAW, MYANMAR: A QUASI-EXPERIMENTAL STUDY) อ. ที่ปรึกษาหลัก : อเลซซิโอ พันซ่าM.D., M.Com.H., DTMH

การมีส่วนร่วมของสามีในการเตรียมพร้อมสำหรับการคลอดและการเกิดภาวะแทรกซ้อนของหญิงตั้งครรภ์ ได้รับการส่งเสริมให้เป็นกลยุทธ์ใหม่ในการพัฒนาสุขภาพ เพื่อความปลอดภัยของมารดานับตั้งแต่ปี2543 ในสังคมประเทศเมียนมา สามีเป็นผู้ตัดสินใจในเรื่องสุขภาพของครอบครัว หากแต่การเข้ามามีส่วนร่วมในเรื่องของการส่งเสริมสุขภาพมารดายังมีไม่มากนัก การศึกษาแบบกึ่งทดลองนี้มีวัตถุประสงค์เพื่อ ประเมินประสิทธิผลของการโปรแกรมชายกับสุขภาพมารดา (MiM) เพื่อส่งเสริมการมีส่วนร่วมของสามี ในการเตรียมพร้อมสำหรับการคลอดและการเกิดภาวะแทรกซ้อนของหญิงตั้งครรภ์ และการคลอดอย่างปลอดภัยในสถานบริการสุขภาพ เมืองเนปิดอร์ ประเทศเมียนมา กลุ่มตัวอย่างในการศึกษานี้เป็นสามีของหญิงตั้งครรภ์รวมจำนวน 198 คน จาก 2 เมือง คือเมืองลีวี และเมืองทักโคน โดยเมืองลีวีเป็นกลุ่มทดลอง และ เมืองทักโคนเป็นกลุ่มควบคุม (กลุ่มละ 99 คน) เก็บรวบรวมข้อมูลโดยการสัมภาษณ์ แบบตัวต่อตัวโดยใช้ผู้สัมภาษณ์ การวิเคราะห์ข้อมูลใช้ t-test เพื่อเปรียบเทียบตัวแปรต่อเนื่อง ระหว่างกลุ่มทดลองและกลุ่มควบคุม และใช้ paired t-test สำหรับเปรียบเทียบภายในกลุ่ม จากนั้นPearsonChisquareถูกใช้เปรียบเทียบความแตกต่างของตัวแปร ที่จัดเป็นกลุ่มหลังจากที่ได้รับโปรแกรม'MiM' ความรู้และทัศนคติของสามีระหว่างกลุ่มทดลองและกลุ่มควบคุม มีการเปลี่ยนแปลงอย่างมีนัยสำคัญ (p=0.001,0.04) ตามลำดับ สามีในทั้งในกลุ่มทดลองและกลุ่มควบคุมมีแนวโน้มที่จะมีส่วนร่วมทางอ้อมมากกว่ าเช่นการให้ความช่วยเหลือทางการเงินมากกว่าการมีส่วนร่วมโดยตรง อาทิการวางแผนที่จะให้ภรรยาคลอดบุตรโดยผู้ที่ผ่านการอบรมด้านการคลอดฯ และเตรียมผู้บริจาคโลหิตในกรณีฉุกเฉินสำหรับภรรยาก่อนคลอด ในกลุ่มการทดลองการมีส่วนร่วมของสามีในการเตรียมพร้อมสำหรับการคลอดและการเกิดภาวะแทรกซ้อนของหญิงตั้งครรภ์มีมากกว่ากลุ่มควบคุม อย่างมีนัยสำคัญทางสถิติ (p <0.001) อัตราของการคลอดในสถานบริการสุขภาพ ระหว่างกลุ่มทดลองและกลุ่มควบคุมแตกต่างกันอย่างมีนัยสำคัญทางสถิติ 64.6%และ 39.4% ตามลำดับ สรุปได้ว่าการโปรแกรม'MiM' เพื่อส่งเสริมการมีส่วนร่วมของสามีในการเตรียมพร้อมสำหรับการคลอดและการเกิดภาวะแทรกซ้อนของหญิงตั้งครรภ์ และการคลอดบุตรการคลอดใน สถานบริการสุขภาพ ช่วยเพิ่มความปลอดภัยของมารดา

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May Chan Oo : EFFECTIVENESS OF "MEN IN MATERNITY HEALTH (MIM)" INTERVENTION TO IMPROVE HUSBAND INVOLVEMENT IN BIRTH PREPAREDNESS AND COMPLICATION READINESS FOR SAFE MOTHERHOOD IN NAY PYI TAW, MYANMAR: A QUASI-EXPERIMENTAL STUDY. Advisor: Alessio Panza, M.D., M.Com.H., DTMH

Involving husbands in birth preparedness and complication readiness (BP/CR) has been encouraged as a new strategy to improve maternal health for safe motherhood since 2000. Myanmar is a patriarchy society and despite the strong domination of husbands on the health of their families, their involvement in maternal health are still limited. This quasi-experimental study aimed to determine the effectiveness of 'Men in Maternity Health' (MiM) intervention to improve husband involvement in BP/CR and institutional delivery for safe motherhood in Nay Pyi Taw, Myanmar. Total 198 husbands of pregnant women were included (99 husbands from each Township): Lewe Township as study group and Takkone Township control group. Face to face interview using interviewer administered questionnaire was carried out to collect the data. The data was analyzed by independent t-test to compare the continuous variables between study and control groups including within group comparison by paired t-test. Pearson's Chi-square test was used to compare the difference of categorical variables. After 'MiM' programme, there were significantly changes in husbands' knowledge ($p=0.001$) and attitude ($p=0.04$) between study and control groups. Husbands in both groups were more likely to involve indirectly as financial support than direct involvement as planning skilled birth attendant and blood donor in case of emergency for their wives before give birth. In study group, husbands' involvement in BP/CR improved significantly ($p<0.001$). Institutional delivery prevalence was significant difference between study and control groups, 64.6% and 39.4% respectively. In conclusion, the implementation of 'MiM' programme for promoting partner involvement in BP/CR and institutional delivery among pregnant women couples can enhance the benefits for safe motherhood.

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Student's Signature .....
Advisor's Signature .....

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LIST OF ABBREVIATIONS

WHO	World Health Organization
MMR	Maternal mortality ratio
ASEAN	Association of Southeast Asian Nations
SEA	South East Asia
MiM	Men in Maternity
UN	United Nations
MDGs	Millennium Development Goals
SDGs	Sustainable Development Goals
ANC	Antenatal care
MoHS	Ministry of Health and Sports
NHP	National Health Plan
MDHS	Myanmar Demographic Health Survey
BP/CR	Birth preparedness and Complication Readiness
HI	Husband Involvement
NGOs	Non-governmental organizations
INGOs	International non-governmental organizations
OR	Odds ratio
AOR	Adjusted odds ratio
CI	Confidence interval

CHAPTER I

INTRODUCTION

1.1 Rationale and Justification

A mother's death is a catastrophic effect that has an enormous impact on survival and maturing of her children, especially the wellbeing of a family necessarily depends on mother. The death of each mother may adversely affect the society at large. Because of obstetric complications, the life of a woman could be threatened by pregnancy and child birth (WHO, 2013). In 2015, about 830 women die every day due to pregnancy and child birth complications worldwide. More than 50% of a million deaths are accounted by global maternal deaths annually, and among them, 99% arise in low income countries. (U. WHO, UNFPA, World Bank Group and the United Nations Population Division, 2015).

There is estimation that over 303,000 women died in 2015 due to preventable pregnancy and childbirth complications, and most of them occur in low-income countries (U. WHO, UNFPA, World Bank Group and the United Nations Population Division, 2015). Leading causes of these maternal deaths are bleeding severely, infections, pregnancy induced hypertension, complications from delivery and unsafe abortion that contribute around 75% of all maternal death (Say et al., 2014). In 2015, the maternal mortality ratio in high income countries was 12 per 100,000 live births when 239 per 100,000 live births in low income countries (Alkema et al., 2016). A woman living in a low income country has a risk of maternal related death during her lifetime which is 33 times higher compared to a woman in a high income country (U. WHO, UNFPA, World Bank Group and the United Nations Population Division, 2015).

Maternal mortality poses a great challenge to health system and maternal health programs globally especially in Sub-Saharan Africa, South and South East Asia (Nations, 2015). Since 1990, the maternal mortality ratio has fell by 57%, 320 in 1990 to 140 maternal deaths per 100,000 live births in 2014. In 2015, South East Asia reached moderate maternal mortality ratio, 110 maternal deaths per 100 000 live births, estimation about 13,000 maternal deaths (U. WHO, UNFPA, World Bank Group and the United Nations Population Division, 2015).

Myanmar stands second-highest maternal mortality ratio (MMR) in the Association of Southeast Asian Nations (ASEAN), at 282 per 100,000 live births in 2014 despite decades of safe motherhood programs. Multiple risk factors have been found which lead to maternal death and most deaths are caused by preventable and curable conditions such as bleeding and infection. These conditions are prominent in rural areas and particularly relevant for Myanmar as 70% of population resides in rural areas. Therefore, MMR is significantly higher in rural areas and women who live there are more likely to give birth at home although health facilities provide basic and emergency obstetric care, which illustrates that maternal health care does not reach everyone according to 2014 census report (Department of Population Ministry of Labour, 2016).

Men and women are different regarding to their physical appearances, but also to roles and accountabilities that society assign to them. Their position in family, organization and community impact on health care seeking practices including maternal health care (Ostlin, Eckermann, Mishra, Nkowane, & Wallstam, 2006). To improve maternal health, maternal health care strategies and approaches by health care providers tend to target only on women traditionally. Even though education and empowerment of women on decision making and choices are vitally important, there is inadequate and limited influence in addressing women's health related decisions when their husband are not considered (Alkema et al., 2016).

Involving husbands in reproductive health programs has been encouraged as a new strategy to improve maternal health since 2000 (UNFPA, 2000). WHO integrated husband involvement into reproductive health programs to carry out safe motherhood successfully since 2001. Husbands' involvement, behavior and awareness impact on not only reproductive health of women but also well-being of children, including society as well (WHO, 2007). Compared with past generation, society's expectation are increasingly for husbands to play an entire role throughout pregnancy, delivery, postnatal time and beyond (Royal College of Midwives, 2011). Educating husbands about the importance of health enhances the promotion of health-seeking behaviors (WHO, 2007) and providing health care and education services during antenatal period to pregnant women and their husbands can lessen complications during

pregnancy and delivery and also promote birth outcomes (Carroli, Rooney, & Villar, 2001).

A birth plan is a crucial strategy especially in low income countries where maternal health care services are weak and thus increasing maternal and infant morbidity and mortality significantly (Kaye, Mirembe, Aziga, & Namulema, 2003). Jhpiego adopted the husbands involvement strategy which include increasing their awareness about emergency obstetric conditions, and having them participating in birth preparedness and complication readiness (BP/CR) (M. a. N. H. M. P. JHPIEGO, 2004).

Birth preparedness is an extensive strategy targeted at contributing to the timely exploitation of skilled maternal and child health care. The fundamental elements of birth preparedness consist of: knowledge of danger signs; planning for birth attendant, transportation, saving money and optionally identified, a person who makes decision and a potential blood donor (M. a. N. H. M. P. JHPIEGO, 2004). Preparing for birth and being ready for obstetric complications could reduce the three delays; delay in seeking care, reaching care and receiving care well explained by the universally accepted 'Three-delay' model (Thaddeus & Maine, 1994). Husbands can play a vital role especially in the first and second delays in low income countries and therefore in improving birth outcomes positively (Odimegwu et al., 2005). Decision making for delivery is also very important and as husbands are decision makers, they should be aware about the essential care during pregnancy, delivery and after birth. Husbands not only support their spouses financially during maternity but also perform an essential part in decision making in various stages of maternal health care which give result in difference between life and death for women (CK Bhusal 2015).

The fifth of Millennium Development Goals "Improve maternal health" brought in intensive efforts to reduce maternal mortality and universal access to reproductive health. Low income countries in South East Asia (SEA) have made a remarkable progress in reducing maternal deaths, but it fell far short of goal and targets, reducing 57% in 2013 compared with 1990 maternal mortality rate (Nations, 2015). Even though Myanmar government increased more investments to promote maternal health programs for 5th MDG and significant MDG progress has been made, maternal deaths is still high. Therefore improving maternal health is still part of the

Post-2015 Development Agenda and necessitates new approaches (Department of Population Ministry of Labour, 2016). In Myanmar, women's decision to uptake maternal health care services are solely or jointly determined by sociocultural and economic factors. On the other hand, husbands involvement in maternal health also makes a challenge on women's uptake of maternal health services in Myanmar (Wai et al., 2015).

In Myanmar, maternal health intervention and education programs for safe motherhood are progressing but maternal mortality is still high. A search strategy aimed to identify all articles about husband involvement using Andersen model and which had been published between 2000 and March 2017 in both English and Myanmar language. Pub Med, Science direct, Pro Quest, Google scholar and electronic library of College of Public Health Sciences were used for the search, but that search was limited to studies conducted in Myanmar. To ensure that all potentially relevant articles had been identified, the key words including 'husband involvement' 'reproductive health' 'birth preparedness and complication readiness' 'Myanmar' were used. The researcher reviewed the retrieved articles for possible information on the husband involvement in RH in Myanmar using a three-step selection (1. title, 2. abstract, 3. full text) with pre-defined inclusion ion criteria for each step. At each step some articles were excluded and at the end, a total of 2 articles were yielded. One cross sectional study which was assessing the correlation of husband involvement in maternal and newborn health in Yangon and the result revealed that husbands' knowledge on maternal health was associated with increased husband involvement level (Ampt et al., 2015). Another cross sectional study by Wai who studied for husbands involving in their wives' utilization of maternal care services in Yangon and the results showed increase utilization of maternal health services was positively associated with wives of husband who accompanied them to ANC visits and those who had a well birth plan (Wai et al., 2015).

Even though sufficient evidences proved that husband can influence maternal health care service utilization during pregnancy and there by positively impact obstetric emergency, few interventions have focused on husband directly to involve and also effectiveness of husband involvement intervention on birth preparedness and complication readiness for safe motherhood are still limited in

Myanmar. Moreover, there were many independent variables such as availability and accessibility to maternal health care facility, plan/unplanned pregnancy and perceived needs for maternal health which can influence husband involvement in birth preparedness and complication readiness for safe motherhood however these variables were not assessed in previous quantitative studies in Myanmar. To my knowledge, Nay Pyi Taw accounts for 35.8% of institutional delivery even though the study about husband involvement in maternal health care, birth preparedness and complication readiness for safe motherhood has not been explored in Nay Pyi Taw.

Therefore, this study aims to help in enhancing effectiveness of Men in Maternity (MiM) education intervention to improve husband involvement in birth preparedness and decision making on safe delivery for safe motherhood in Nay Pyi Taw by applying Andersen Model to identify predisposing factors, enabling factors and need factors on involvement in birth preparedness and complication readiness for safe motherhood among husbands of pregnant mother. The result of this study will not only increase the data availability necessary to support but also guide effective maternal health care policies. It will also help Myanmar Maternal and Child Health Program, and other NGOs and INGOs which are working on maternal health promotion activities and useful to improve the future maternal health promotion and implementation program in Myanmar.

1.2 Research questions

- Does Men in Maternity Health (MiM) education intervention improve husband involvement in birth preparedness and complication readiness and institutional delivery for safe motherhood in Nay Pyi Taw, Myanmar?
- What are the predisposing actors, enabling factors and need factors of husband involvement in birth preparedness and complication readiness?
- Is there difference between husbands' knowledge and attitude on maternal health, birth preparedness and complication readiness within each group and between groups before and after implementation of MiM education?
- Is there difference between husband involvement in birth preparedness and complication readiness within each group and between groups before and after implementation of MiM education?

- Is there difference between number of institutional deliveries between study and control groups after implementation of MiM education?

1.3 Research objectives

General Objective

- To determine the effectiveness of Men in Maternity Health (MiM) education intervention to improve husband involvement in birth preparedness and complication readiness and institutional delivery for safe motherhood in Nay Pyi Taw, Myanmar

Specific Objective

- To study predisposing factors, enabling factors and need factors of husband involvement in birth preparedness and complication readiness
- To assess husbands' knowledge and attitude on maternal health, birth preparedness and complication readiness within each group and between groups before and after implementation of MiM education
- To assess husband involvement in birth preparedness and complication readiness within each group and between groups before and after implementation of MiM education
- To assess the number of institutional deliveries between intervention and control groups after implementation of MiM education

1.4 Research Hypothesis

- There is effect of Men in Maternity Health (MiM) education intervention to improve husband involvement in birth preparedness and complication readiness for safe motherhood in Nay Pyi Taw, Myanmar
- There is effect of Men in Maternity Health (MiM) education intervention to take institutional delivery in Nay Pyi Taw, Myanmar

1.5 Conceptual Framework

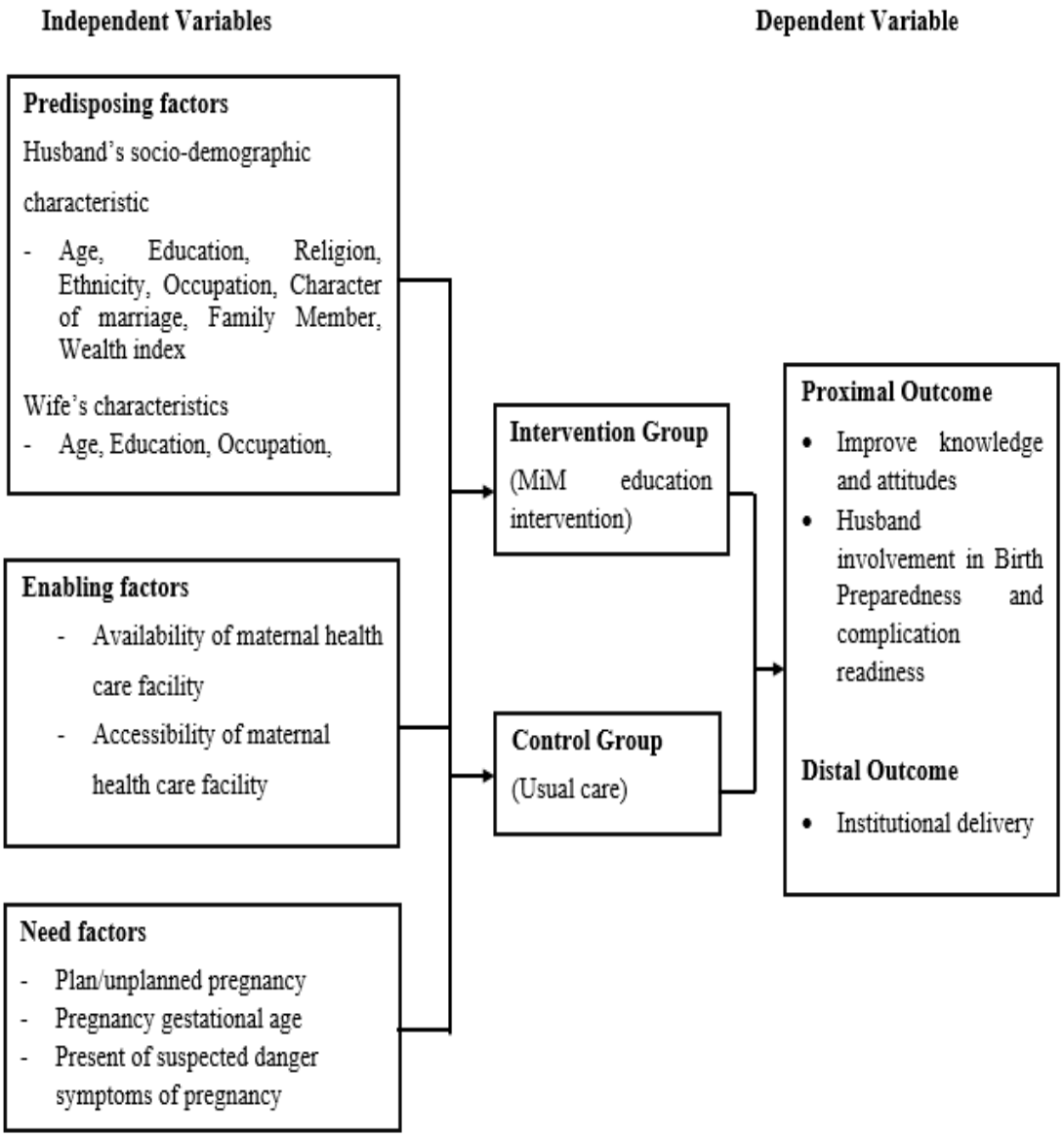

Figure 1: Conceptual Framework

1.6 Operational Definitions

Predisposing factors: The predisposing factors in this study means a condition or situation or set of personal characteristics that may affect a person's health awareness or cause a person more exposure or susceptible to illness. In this study, socio-demographic characteristics (Age, Education, Religion, Ethnicity, Occupation, Family member and Wealth index), and Wife's characteristics are measured by self-report.

- **Age:** the number of completed years of participants at the time of data collection
- **Education:** highest education achievement of participants at the time of data collection and it is classified into illiterate or no formal education, primary education level, middle education level, high school education level and university/college education level.
- **Religion:** participants' belief religious of their own and it is classified into Buddhist, Christian, Hindu, Muslim and others.
- **Ethnicity:** participants' ethnic origin.
- **Occupation:** the main career of the participants at the time of interview and it is classified into 5 groups namely government staff, private employee, self-employee, manual worker and student.
- **Character of marriage:** Participant's marriage classified into monogamous and polygamous.
- **Family member**: the total number of family member of participants at the time of interview.
- **Wealth index**: Measurement of household's cumulative living standard. In this study, (1) ownership of seven assets (possession of housing unit in house hold, tap water as main source of non-drinking water, toilet, TV, internet, motorcycle / moped/ tuk tuk, bicycle), (2) six housing characteristics (main source of lighting, main source of drinking water, main types of cooking fuel, main construction material of housing walls, main construction material of housing roofs, main construction material of housing floors). These components will be self-reported by participants. The wealth status of participants will be categorized into five quintiles; poorest, second, middle, fourth and richest which is adopted from equity tool from 2014 Myanmar census

- **Wife's age**: the number of completed years of participants' wife at the time of data collection by husband report
- **Wife's education:** highest education achievement of participants' wife at the time of data collection and it is classified into illiterate or no formal education, primary education level, middle education level, high school education level and university/college education level.
- **Wife's occupation:** the main career of the participants' wife at the time of interview and it is classified into 5 groups such as government staff, private employee, self-employee, manual worker, dependent and student.

Enabling factors: The enabling factors are strength that facilitates individual, society, or environmental change based on their availability level. Such enabling factors include material resources, having health insurance and the availability of health services. Without the ability to access services a predisposition will not necessarily translate into utilization. In this study, availability and accessibility to maternal health care services are emphasized to measure the enabling factors.

- **Availability:** the obtainable conditions for participants' wives to receive sources of information for maternal health and taking maternal health care service
- **Accessibility:** It is easy or not for the participants' wives to seek maternal health care services by means of economic, physical and cultural accessibility. In this study, economic and physical accessibility will be measure except cultural accessibility because in study area, ethnicity of almost all of the people living in study area are Myanmar nationality, use Burmese language and are Buddhists.

  Economic accessibility – self-assessed economic accessible for service and transportation fees

  Physical accessibility – self-assessed physical accessible for distance and travel time to health care service, service use time and difficulty in transportation

Need factors: The need factors refer to that people recognize if there is a health problem or illness, they respond appropriately in order to prepare or prevent for that health problem and access health care services. In order for a health problem to be prevented and health service to be used, there must first be a need to do that

preventive and heath seeking action. In this study, plan/unplanned pregnancy and have suspected danger symptoms of pregnancy are emphasized to measure need factors.

- **Plan/unplanned pregnancy:** Husband and his wife already had a plan to have a baby and tried to have current pregnancy.
- **Gestational age of pregnancy:** Measurement of age of pregnancy in completed months/weeks at the time of data collection
- **Present of suspected danger symptoms of pregnancy:** Participants' wives who have suspected danger symptoms of pregnancy which are classified into fever, severe headache with blurred vision, severe abdominal pain, difficult breathing, convulsions/fits, vaginal bleeding and swelling of fingers, face and legs.

Knowledge: Husbands understanding about importance of antenatal care, danger signs during pregnancy, delivery, and postpartum and maternal health care

Attitude: Husbands' opinion concerning birth preparedness and complication readiness for maternal health care

Husband involvement in Birth Preparedness and Complication Readiness: Husband participation in birth preparedness and complication readiness plan for (1) birth place, (2) skilled birth attendant, (3) saving money, (4) transportation, and (5) potential blood donor before delivery of his wife

Institutional delivery: Husbands whose wives taking institutional delivery which means delivery take place in a health facility by skilled birth attendance using clean delivery kit

Men in maternity health (MiM) education intervention: Delivering health education about maternal health (pregnancy and its complications, obstetric danger signs, importance of maternal health care including antenatal care, delivery care and postnatal care, benefits of birth preparedness and complication readiness and importance of safe delivery by

- Sending invitation cards
- Face to face health education sessions
- Group discussion sessions

CHAPTER II
LITERATURE REVIEW

2.1 Introduction to Sustainable Development Goals

The United Nations (UN) General Assembly accepted 'Millennium Declaration', initiating a global partnership of countries and partners committed to eight 'Millennium Development Goals' (MDGs) to be achieved by 2015, in September 2015. One of the 8 goals has been dedicated to maternal health: "Improve maternal health" (WHO, 2015). The MDGs have not attained the universal approval including health status of mothers despite their overall achievement. The MDG era was recorded by significant process in decreasing maternal mortality although community fell short of reaching the maternal mortality targets prepared by MDGs no.5 globally. The worldwide MMR reduce by 44% between the years 1990 and 2015, but not reaching 75% reduction target. Therefore, Millennium Development Goal no. 5 for improving maternal health remain unmet needs for that target (Nations, 2015).

In September 2014, the UN General Assembly welcomed the 'Open Working Group Proposal' and created the guideline principle for organizing Sustainable Development Goals (SDGs) as post 2015 development agenda including goals. Then UN General Assembly established the new improvement agenda namely "Transforming our world: the 2030 agenda for sustainable development" on 25 September 2015. In January 2016, the SDGs entered into effect and these goals will continue guided by UNDP policy and get funding for next 15 years. As leading by UN development agency, UNDP is settled uniquely to aid implement the goals through 170 countries (WHO, 2015).

The 17 goals of new SDGs agenda unite three dimensions including social, economic and environmental of sustainable development around people, peace, partnership, prosperity and planet. Regarding with the health, an elemental assumption of SDGs is that health is a fundamental contributor and recipient of sustainable development policies. Goal no.3 stated that "Ensure healthy lives and promote well-being for all at all ages". The health goal is related with 13 targets, providing with four means of 3.a and 3.d implementation targets. MDG goal on

maternal health (3.1) have been kept in SDG agenda, strengthened by new and more definitive targets for 2030. The maternal health targets of SDGs build on and develop the MDGs in order to address the 'unfinished business' of MDG era. Therefore, it need to reduce the global MMR to less than 70 per 100,000 live births worldwide by 2030 according to SDGs (WHO, 2015).

2.2 Safe motherhood for maternal health

The initial public health society noticed and concurred to tackle the omitted and little understood problem, 'the remarkably high maternal death in low income countries, especially in region of sub-Saharan Africa and South Asia in 1987. World Health Organization analyzed and generated the data which indicated that more than half of a million women in low income countries were dying due to pregnancy and childbirth complications each year, an estimation about 99% occurred from that countries. There was estimation about 450 women were dead during pregnancy, delivery and postpartum period for every 100,000 live births across all low-income countries while comparing with the high-income countries, there was only 30. That enormous disparity points out one of the most remarkable aspects of maternal mortality as its enormously discrepancy burden on low income countries (Starrs, 1987).

Safe motherhood is one of the essential elements in reproductive health and in 1987, WHO and other international public health agencies launched the 'Global Safe Motherhood Initiative' (SMI) to increase the awareness about the extent and outcome of poor maternal health, and to generate actions to tackle high maternal mortality rates and complications during pregnancy and delivery. It is purposed to overcome maternal death due to pregnancy and childbirth complication and assures antennal, delivery and postnatal health care services and supervision. It means making sure that all pregnant women receive the maternal care they need throughout the pregnancy and delivery safely and healthily. (AbouZahr, 2003) (Starrs, 1987).

For preparing motherhood safety, four strategic interventions have been recommended by WHO which should be given through primary health care based on the equity for women at first then two strategies were added, then become six

intervention strategies. The fundamental principles are not new and controversial which are considered “Six Pillars of Safe Motherhood” (Starrs, 1997):

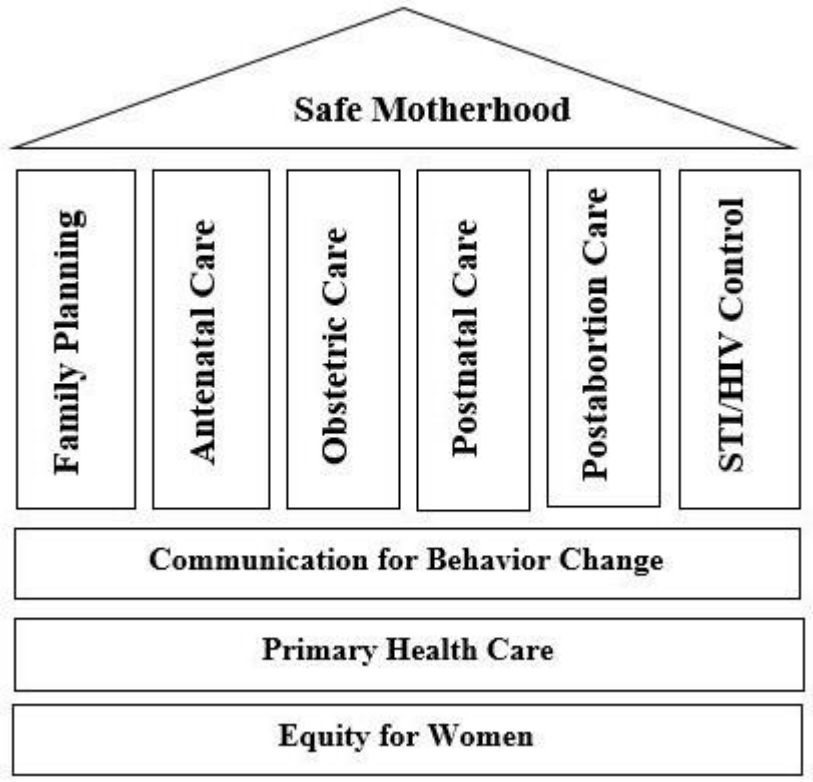

Figure 2: Pillars of Safe motherhood

1. **Family Planning** - To establish that not only individuals but also couples get information and health services to set up the number, timing and spacing of pregnancies.

2. **Antenatal Care** - To support require vaccinations, vitamin supplements, deworming and screening the risk factors to prevent possible complications and to assure that pregnancy complications are recognized early and gave treatment appropriately.

3. **Obstetric Care** - To assure that all birth attendants must have sound knowledge, skills and kits to take a clean and safe delivery and to ensure that complications and high-risk pregnancies emergency care must be available to all pregnant women who need it.

4. **Postnatal Care** - To assure that postpartum care is supported to both mother and baby, which include lactation, arranging of family planning services and handling the danger signs.

5. **Post abortion Care** - To prevent possible complications and assure that abortion complications are recognized early and gave treatment appropriately, to refer other reproductive health problems and to support family planning services as needed.

6. **STD/HIV/AIDS Control** - To prevent, screen and manage the transmission from mother to baby, to determine infection risk for future, to provide counseling and testing voluntarily, to encourage prevention and the place where services must be expanded appropriately to manage transmission from mother to baby (WHO, 2001).

2.3 Situation of maternal health in Myanmar

Myanmar stands second highest MMR among ASEAN countries and eight women die due to preventable and treatable causes of pregnancy, delivery and postpartum every day. There is estimated that about one in ten reproductive age women dead is a maternal dead. There is a discrepancy of MMR between states and regions and it is notably lower in urban areas and for pregnant women who take childbirth in health facility that can provide both basic and emergency care. Most of the maternal deaths are caused by bleeding and infection which are preventable and treatable in Myanmar. (Department of Population Ministry of Labour, 2016).

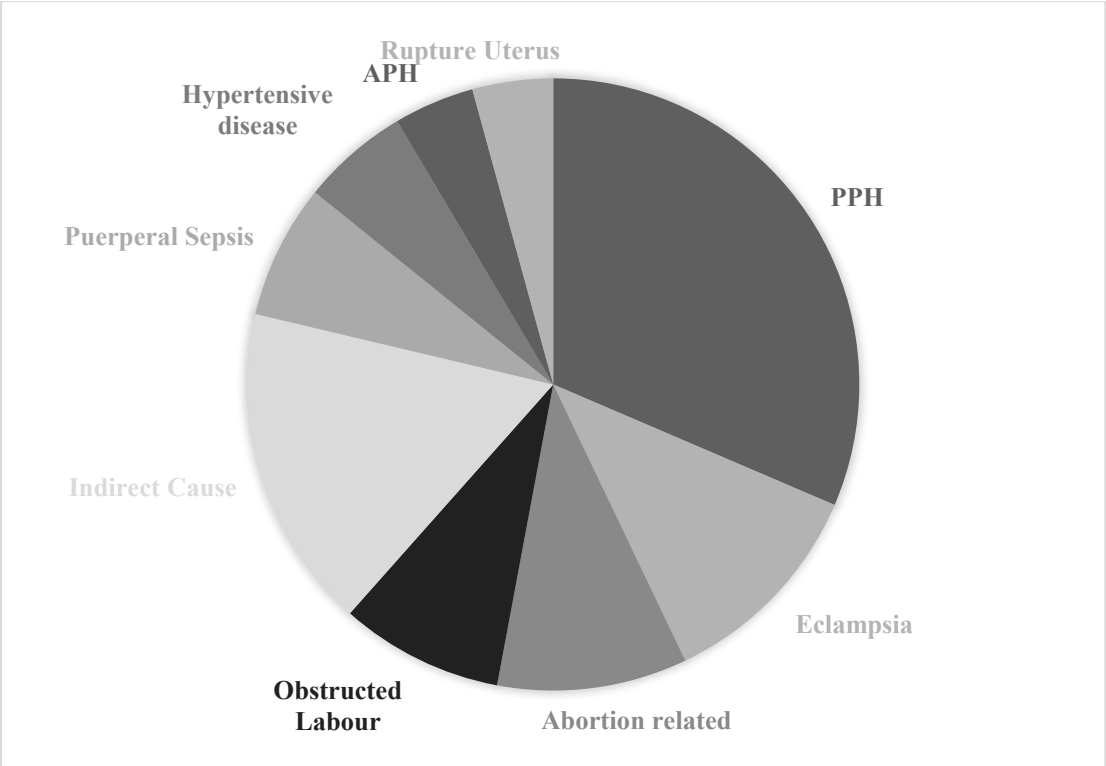

Figure 3: Causes of maternal mortality in Myanmar

Department of Health carried out the "Nationwide Cause-specific Maternal Mortality Survey" in 2004-2005. According to that survey, there was national level estimation about MMR which was 316 per 100,000 live births and rural areas accounted 89% of all maternal deaths (Ministry of Health and Ministry of Social Welfare, 2008).

Ministry of Health and Sports (MoHS) is making special efforts to attain the Sustainable Development Goals (SDGs), specifically in lowering maternal and child mortality by supporting quality health care services overwhelming the whole country. In 2002, the 'National Reproductive Health Policy' was developed, provided by three continuing reproductive health strategic plans. To increase mothers and children's health status by decreasing maternal, neonatal and child morbidity and mortality, the following important strategies were set up;

I. Create an enabling environment
II. Improve the information base for decision-making
III. Strengthen health systems and the capacity for delivery of reproductive health services

IV. Improve community and family practices (Department of Medical Research, 2016)

Maternal and child health status is the first concern issues of 'National Health Plan' in Myanmar. Myanmar is committed to promote overall reproductive health care for decreasing maternal mortality and improve the health care quality and obtainability of reproductive health care services. Goal of reproductive health care program is to achieve a better quality of life for all people by improving the men, women, adolescents and youths' reproductive health status (Maternal and Child Health Section, 2013).

National Health Plan (NHP) of Myanmar intents to reduce maternal, neonatal and child disability, morbidity and mortality and to promote the overall health status of people by improving services, providing coverage and obtainability, incorporating services and community involvement. Since NHP gave first priority to maternal health by building up the quality of care services, most of the focused activities have been giving workshops and trainings for basic health staff in every townships annually and regular expansion of trainings to additional townships (Sports, 2016).

In public health sector, continuing activities have been expanded and other additional care services have been established into basic health services. The core strategies and essential activities for successful implementation are as below:

1) Strengthening the health systems to enhance the provision of an essential package of reproductive health interventions;

2) Increasing access to quality, integrated reproductive health care services at all levels of care; 3) Engaging the community in the promotion and delivery of reproductive health;

4) Incorporating gender perspectives in reproductive health strategic plan; and

5) Integrating reproductive health in humanitarian settings.

Reproductive programme is cooperating with other departments and divisions and jointly with other ministries, health professional associations, academic, UN agencies, NGOs and INGOs, including bilateral donors and civil society organizations with a broad multi-sectorial approach (Maternal and Child Health Section, 2013).

WHO give recommendation that pregnant women must take a minimum four antenatal care visits from skilled health care providers to ensure that health care

problems are determined and managed. Myanmar adopted that WHO recommendation with its standard national guidelines for antenatal, delivery and postnatal care. The 2015-16 Myanmar Demographic Health Survey (MDHS) illustrates that four in five reproductive age (15-49) women (81%) received at least one time ANC visit with skilled health care providers during pregnancy regarding with their most recent birth (Sports, 2017).

Access to maternal health care facilities in urban areas is easier than in rural areas because of distance, accessibility, and present of appropriate health care facilities. Even though institutional delivery is stimulated, home delivery is still present in Myanmar, especially in hard to reach areas. Reproductive health programs in Myanmar encourage to use skilled birth attendants wherever the chill birth takes place. It is extremely recommended that skilled birth attendants must be present in every delivery even at home deliveries so that every childbirth must be clean and safe. Using clean delivery kits and birth preparedness plans are also recommended. According to MDHS 2015-16 results, 37% of live births were delivered in a health care facilities and 63% were delivered at home during 5 consecutive years (Sports, 2017).

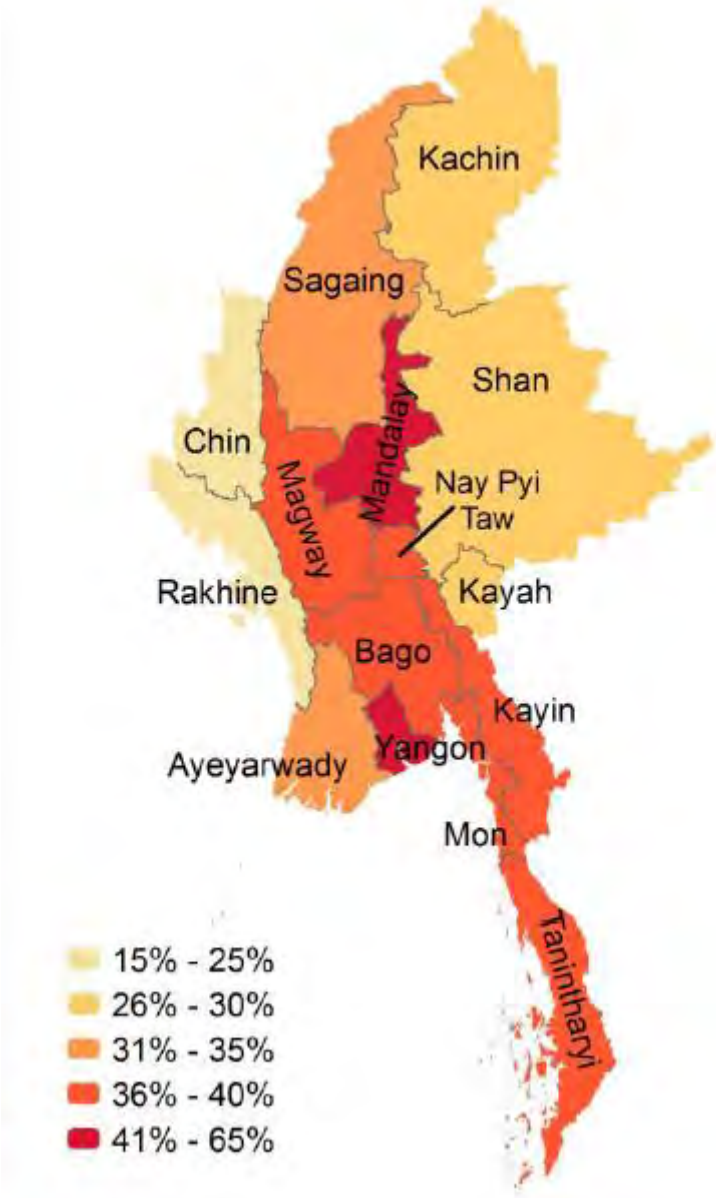

Figure 4: Institutional deliveries by states and regions

In Myanmar, most of the births are delivered by assistance of doctors, nurses/midwives or lady health visitors. Three fifths of births in Myanmar are delivered by 60% of skill health care providers including doctors, nurses and midwives while 29% of births by traditional birth attendants, 6% by auxiliary midwives and 4% by relatives or friends during the 5 consecutive years before MDHS survey in Myanmar in figure (5) (Sports, 2017).

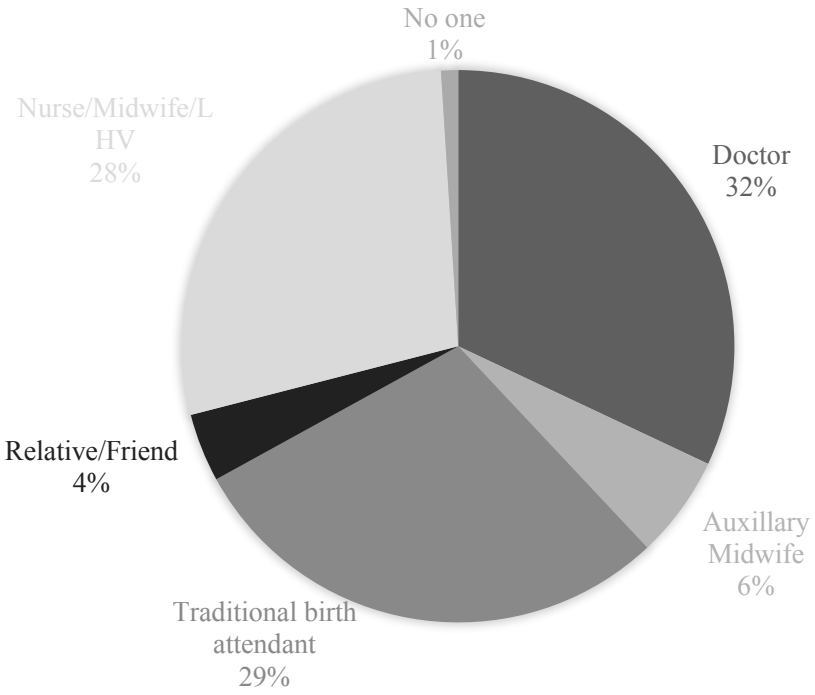

Figure 5: Delivery Assistance in Myanmar

2.4 Birth Preparedness and three delay model

Birth preparedness and Complication Readiness (BP/CR) is an action to improve the timely utilizing the skilled maternal and neonatal health care, mainly during delivery, based on the concept that providing for delivery and being ready for pregnancy complications which reducing delays in receiving the care. BP/CR means an overall strategy approach to provide for utilize and usefulness of maternal and newborn health care services, based on the statement that arranging for delivery and being ready for pregnancy complication which reduces all three delays in obtaining these maternal health care services (JHPIEGO, 2004).

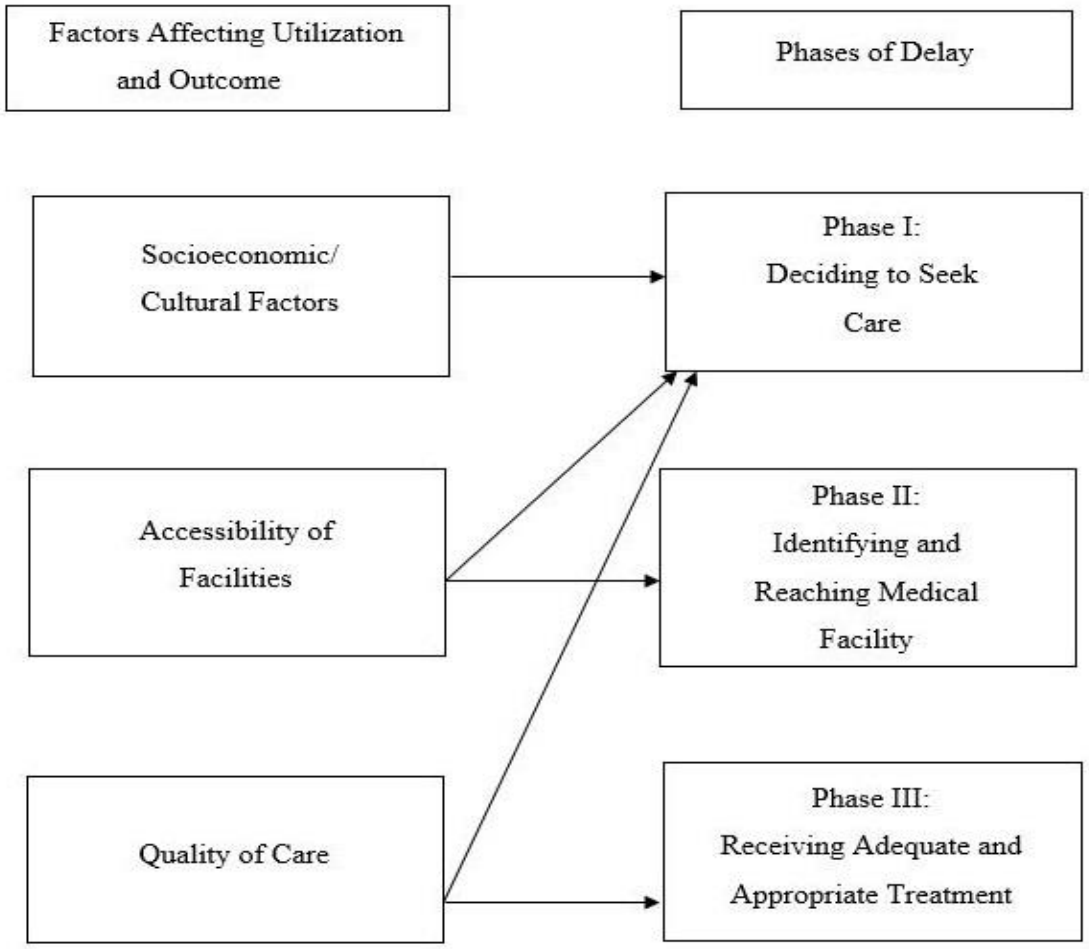

Figure 6: The Three Delays Model (Thaddeus & Maine, 1994)

In phase I, BP/CR reduce deciding to seek heath care delay in two ways. Firstly, BP stimulates people to prepare and plan to take childbirth by skilled health care provider in every childbirth case. If pregnant women, their husbands and families decide to seek care before labor process, and they pursue through the plan successfully, the pregnant women will arrive the health care facility before emerging any possible complications during delivery, thus avoiding the first two phases of delays totally. Secondly, CR improves the awareness of pregnancy danger sings among pregnant women, partners, families and communities, thereby providing problem identification and reducing the deciding to seek care delay (JHPIEGO, 2004).

In phase II, BP/CR motivates pregnant women and their partners, families and communities to plan requirements such as recognizing or organizing available

transportation, saving money to pay for transportation and service fees, and finding a blood donor in order to facilitate right decision making for emergency and reduce reaching care delays when the possible problem occur. In addition, at phase II demand level, BP/CR provides the using of skilled health care providers at birth through improving both demand and access (JHPIEGO, 2004).

In phase III, BP/CR helps to reduce receiving appropriate care delays. It depends on health care providers and facilitates to be planned deliveries and be ready to take care and treat pregnancy complications. To have BP/CR at provider level, doctors, nurses and midwives must possess sound knowledge and skills necessary to give care, treat and refer pregnant women with complication, and they must have sound birth skills and practices that reduce the possible preventive complications. Facilities also must fulfil with skilled health care personnel, well trained staffs, equipment, supplies and necessary infrastructure to provide pregnant women with normal births or complications, and they must be open, clean and inviting. Policymakers must also work on BP/CR to strengthen the health care service delivery environment and also remove the strategies and policies that restrict health care facilities, systems and providers from giving care to their patients adequately. Therefore, at supply level, BP/CR provides using skilled health care provider at childbirth by promoting the quality and availability of skilled birth attendance (JHPIEGO, 2004).

2.5 Husband involvement in Birth Preparedness and Complication readiness

It is not always that pregnant women make decision on place for delivery herself, but rather her husband and family members. Therefore, BP/CR enterprises must focus both pregnant women and those people including their husbands and family members most likely to make decision. In general, husbands are the most powerful decision makers in societies and even if others offer their ideas, opinions and decisions, he will make financial decision totally. Husband can provide by doing plans and arrangements for transportation, saving money, blood donor for emergency situation and his wife in reaching and receiving treatment in emergency obstetric conditions. So, husbands have been included as the important role of the family to

reduce two phases of delays, deciding to seeking care delay and, recognizing and reaching to health care facility delay as in figure (7) (JHPIEGO, 2004).

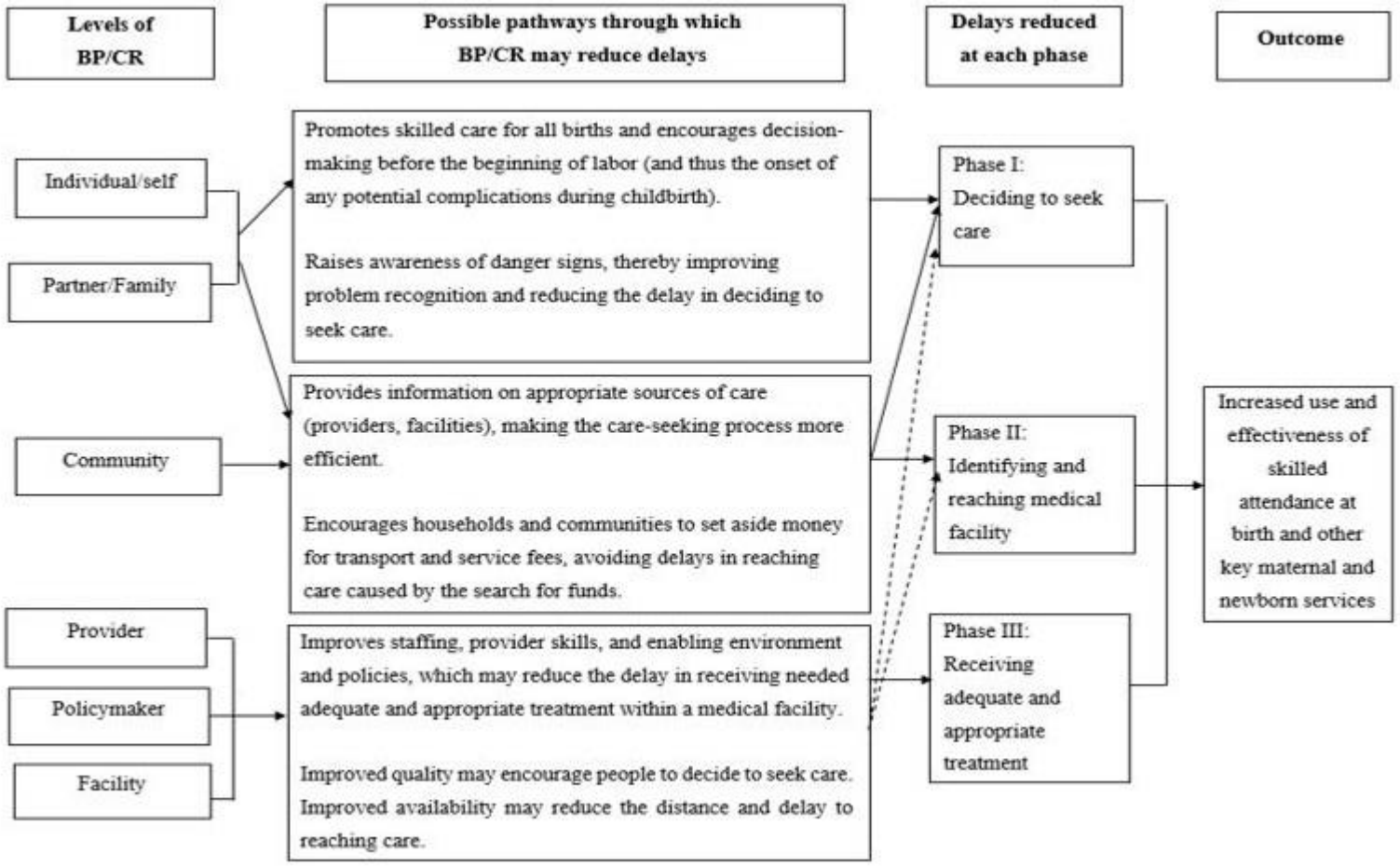

Figure 7: Conceptual Diagram of how BP\CR may increase the use of skilled care

2.6 Review of theoretical model used

This study is based on Andersen Model (Health care utilization model). The origin of Andersen's behavioral model was developed since 1968 (R. Andersen, 1968). And the model framework is developed in 1973 (Andersen & Newman, 1973) as the later version of the model, which target on the unit of analysis individually. The first framework was developed in 1960 and then it has gone through four phases. The purpose of this model framework is to discover the conditions of utilization of health care services. This model consists of three sets of predictive factors: predisposing, enabling and need factors (R. M. Andersen, 1995) (R. Andersen & Newman, 2005).

The predisposing factors are based on the socio-cultural characteristics of individuals prior to their illness. These characteristics can be divided into three components: family composition, social structure and health beliefs (R. Andersen, 1968). The variables of predisposing factors include age and sex as biological imperatives, education, occupation, ethnicity, family size and social relationships as family composition and social structure as social factors, and mental factors in terms of health beliefs including attitudes and knowledge on health and health care services (Babitsch, Gohl, & von Lengerke, 2012). These indicate the position of the family in society which could influence their lifestyle and their physical and social environments (R. Andersen & Newman, 2005). Contextual factors predisposing individuals to the use of health services include the demographic and social composition of communities, collective and organizational values, cultural norms and political perspectives (Babitsch et al., 2012).

The enabling factors are based on the material resources, income, having health insurance and the availability of health services (R. Andersen, 1968) (R. Andersen & Newman, 2005). Financing and organizational factors are considered to serve as conditions enabling services utilization. Individual financing factors involve the income and wealth at an individual’s disposal to pay for health services and the effective price of health care which is determined by the individual’s health insurance status and cost-sharing requirements. Organizational factors entail whether an individual has a regular source of care and the nature of that source. They also include means of transportation, travel time to and waiting time for health care. At the contextual level, financing encompasses the resources available within the community

for health services, such as per capita community income, affluence, the rate of health insurance coverage, the relative price of goods and services, methods of compensating providers, and health care expenditures. Organization at this level refers to the amount, varieties, locations, structures and distribution of health services facilities and personnel. It also involves physician and hospital density, office hours, provider mix, quality management oversight, and outreach and education programs. Health policies also fall into the category of contextual enabling factors (Babitsch et al., 2012).

In order to use the health care services, there must first be need factors which is the most immediate use of health service, from functional and health problems that cause the need for health care service (R. Andersen, 1968). At the individual level, Andersen and Davidson differentiate between perceived need for health services (i.e., how people view and experience their own general health, functional state and illness symptoms) and evaluated need (i.e., professional assessments and objective measurements of patients health status and need for medical care) (Andersen RM & PL, 2001). Perceived need help to understand health care seeking and adherence to medical regimen and evaluated need is more closely associated with the kind and amount of treatment that is provided after patients have presented to medical health care providers. (R. M. Andersen, 1995) (R. Andersen & Newman, 2005). At the contextual level, they make a distinction between environmental need characteristics and population health indices. Environmental need reflects the health-related conditions of the environment (e.g., occupational and traffic and crime-related injury and death rates). Population health indices are overall measures of community health, including epidemiological indicators of mortality, morbidity, and disability (Babitsch et al., 2012). The figure below shows the fourth phase which was developed in 1990 (R. M. Andersen, 1995) .

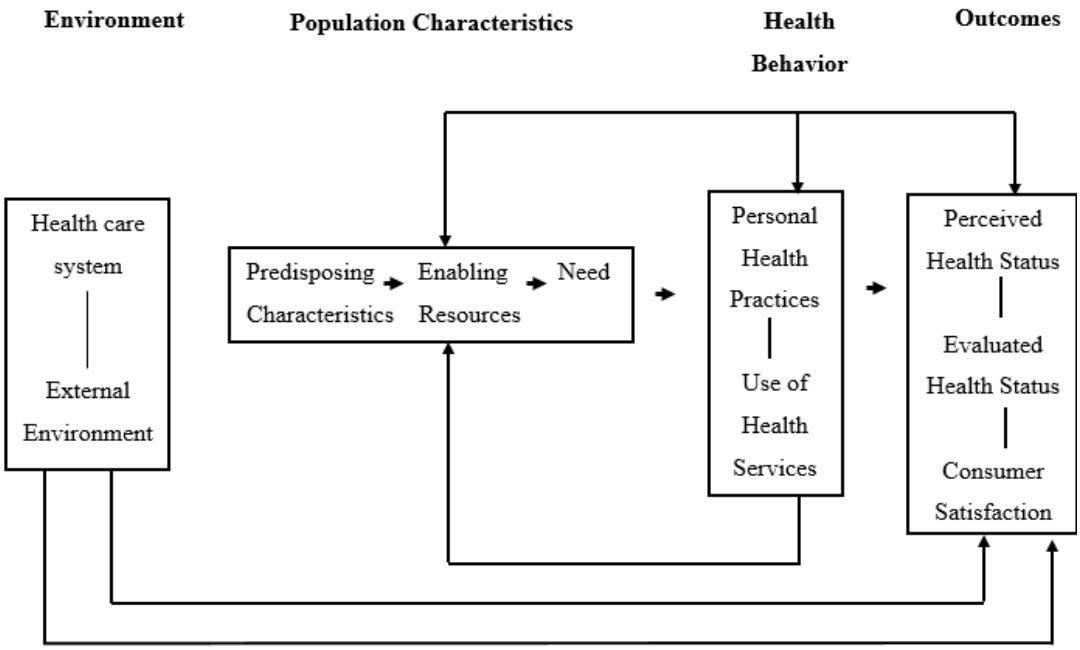

Figure 8: Andersen's behavioral model (Health care utilization model) (R. M. Andersen, 1995)

2.7 Health education and maternal health education for husband

Health education is the very fundamental and foundation of every effective public health projects and programme and therefore one of the vital functions is that educations should be able to help everyone grow a healthy body, a peace and alert mind, active emotional attitudes. Health education targets at bridging the gap between health care knowledge and practices of every person. Health education is the cooperating of communities improving their health and experiences of learning outline to help individuals (Glanz, Rimer, & Viswanath, 2008).

According to Griffiths in 1972, "health education attempts to close the gap between what is known about optimum health practice and that which is actually practiced." In 1976, Simonds defined health education as "bringing about behavioral changes in individuals, groups, and larger populations from behaviors that are presumed to be detrimental to health, to behaviors that are conducive to present and future health." Later definitions highlighted voluntary, informed the changes of behaviors. Regarding to Green (1980), "any combination of learning experiences

designed to facilitate voluntary adaptations of behavior conducive to health" (Green, Kreuter, Deeds, & Partridge, 1980).

Health education describe the sequence from disease prevention and promotion of health care to the observing of illness condition to treatment, long term care providing and rehabilitation. It includes not only chronic and infectious diseases but also consideration to environmental issues. Health education can delivered in every feasible setting and environment including schools, universities, pharmacies, hospitals, recreation settings, working sites, labor camps, health organizations, and can also through media over newspaper, journals, radio, television, internet, in people's homes, and in departments of health at every levels of government (Glanz et al., 2008).

Several health education interventions had been conducted for preventing the major pregnancy, delivery and postpartum complications which in turns strengthening maternal health. Health education include both instructional activity, strategies to change health behavior individually and economic supports, policy, organizational effort, community level and environmental activity program (Glanz et al., 2008). Without involving, there is no health education. Involvement is the key word in health education for encouraging people towards actively with health care personnel and others in recognizing their own health problem and also in establishing the solutions and plans to perform them. A high degree of involvement tends to establish a sense of involvement, personal compliance, decision making and maximum personal feedback (Park, 2011) (M. a. N. H. M. P. JHPIEGO, 2004).

2.8 Previous study of husband involvement in maternal health for safe motherhood

Nowadays, birth preparedness and complication readiness is a necessary strategy for safe motherhood in developing countries (Kaye et al., 2003) and men can also play as benevolent supporters and caretakers for health of the whole family (Carter, 2002). Therefore husband involvement in reproductive health has been encouraged recently as an up to date approach to enhance maternal health (UNFPA, 2000). Strategies for husband involvement illustrate improving their awareness in

obstetric conditions for emergency and also engaging them to participate in birth preparedness and complication readiness (M. a. N. H. M. P. JHPIEGO, 2004).

A study from Indonesia done by Santoso and friends illustrated birth preparedness and complication readiness by applying android as an innovative study namely “Suami-Siaga Plus” in 2017. Randomized controlled trial study design was carried out to assess about the important pregnancy danger signs knowledge of husband and five standard principles in birth preparedness and complication readiness practices. The proportion of husbands who understand main pregnancy danger signs in Suami Siaga intervention group was higher those in the control group. The score of the husband in control group was 61.5 to 62.6 while the score boosted 20% from 60.4 to 72.9 (p-value 0.000) among those who exposed android application intervention group (Santoso et al., 2017).

Varkey from India studied the effect of comprehensive strategy engaging husband involvement in their wives’ antenatal and postnatal care and also infant outcomes in 2004. Totally 1897 husbands were invited to attend antenatal counselling for intervention and knowledge of key pregnancy danger sign was 24% in intervention group significantly whereas only 13% in control group. Moreover, the proportion of breast feeding initiation was higher among husbands attending ANC counselling intervention group while 47.3% women breast feed in those whose husband did not attend (Varkey et al., 2004).

In previous study of examining the association of husband in ANC accompaniment and adherence supporting on PMTCT by Kalembo in Malawi, totally 476 participants were involved in retrospective cohort study. Husbands accompanied their wives intervention group were 25.9 times more likely to take delivery in hospital compared with those who attended ANC without their husband (aOR 25.9, 95% CI 10.6-63.6, p<0.001) (Kalembo, Zgambo, Mulaga, Yukai, & Ahmed, 2013).

One randomized controlled study in Nepal was done by Mullany in 2009 to assess the impact of husband participation in ANC education on maternal health knowledge. Totally 442 participants were involved in that study and couples getting ANC education together was 1.15 higher odds in knowing pregnancy complication than control group (aRR 1.15, 95% CI 1.00-1.32). Moreover, knowledge score in

intervention group was also 1.18 times greater than those in the control group (aRR 1.18, 95% CI 1.01-1.38) (Mullany, Becker, & Hindin, 2007).

In Myanmar, there is no intervention study for husband involvement in maternal health including birth preparedness and complication readiness except descriptive and cross-sectional study. In 2015, Frances studied about the correlation of husband involvement in maternal and newborn health in peri-urban region of Myanmar. About 210 men participated in that cross-sectional study and the results showed that most of the men had middle involvement level scores 64% while only 13% had highest level score. Husband's level of knowledge was also positively associated with involvement in maternal health (AOR 1.2, 95% CI 1.1-1.3, p<0.001) (Ampt et al., 2015).

Another community based cross sectional study was conducted by Wai in Yangon, Myanmar in 2015. Of 426 husbands, 69.7% made decision for place of delivery. On birth preparedness, majority 91.1% prepared for skilled birth attendance, 83.6% for delivery place and 81.7% saved money before their wives gave birth while planning was weak in seeking potential blood donor and collecting a safe delivery kit, 15.5% and 21.1% respectively. Utilization of maternal health services was strongly associated with husbands who followed their wives to ANC visits (AOR 5.82, 95% CI, 3.34-10.15) and those who had a well birth preparedness (AOR 2.42, 95% CI, 1.34-4.39 for AN visit and AOR 2.88, 95% CI, 1.52-5.47 for PN visit (Wai et al., 2015)

CHAPTER III
MATERIALS AND METHODS

3.1 Study area

Nay Pyi Taw was purposely selected which has two districts namely Dekkhina district and Ottara district. Dekkhina has 4 townships namely Dekkhinathiri, Lewe, Pyinmana and Zabuthiri and Ottara has 4 townships namely Ottarathiri, Pobbathiri, Takkone and Zeyathiri. The study was conducted in two comparable townships community: Lewe Township from Dekkhina district (Intervention group) and Takkone Township from Ottara district (Control group). These two comparable township areas were be purposively selected as intervention and control group where population density and socioeconomic status are nearly the same, 217,093 in Takkone and 284,393 in Lewe.

3.2 Study design

A quasi-experimental study design was carried out to both intervention and control group living in Nay Pyi Taw. The data was collected two times (1-time pretest and 1-time posttest) to assess the effect of intervention for proximal outcome and one-time data collection for distal outcome institutional delivery after delivery from birth certificate register book.

(1) One pretest questionnaire before the intervention start to assess a baseline data

(2) One posttest questionnaire at the end of the 6 months intervention period to establish the effects of post intervention.

(3) Assessment of husband involvement in BP/CR and other maternal health care practices to participants' wives by using checklist

(3) Register book for birth certificate will be checked to collect institutional delivery data after delivery of pregnant women.

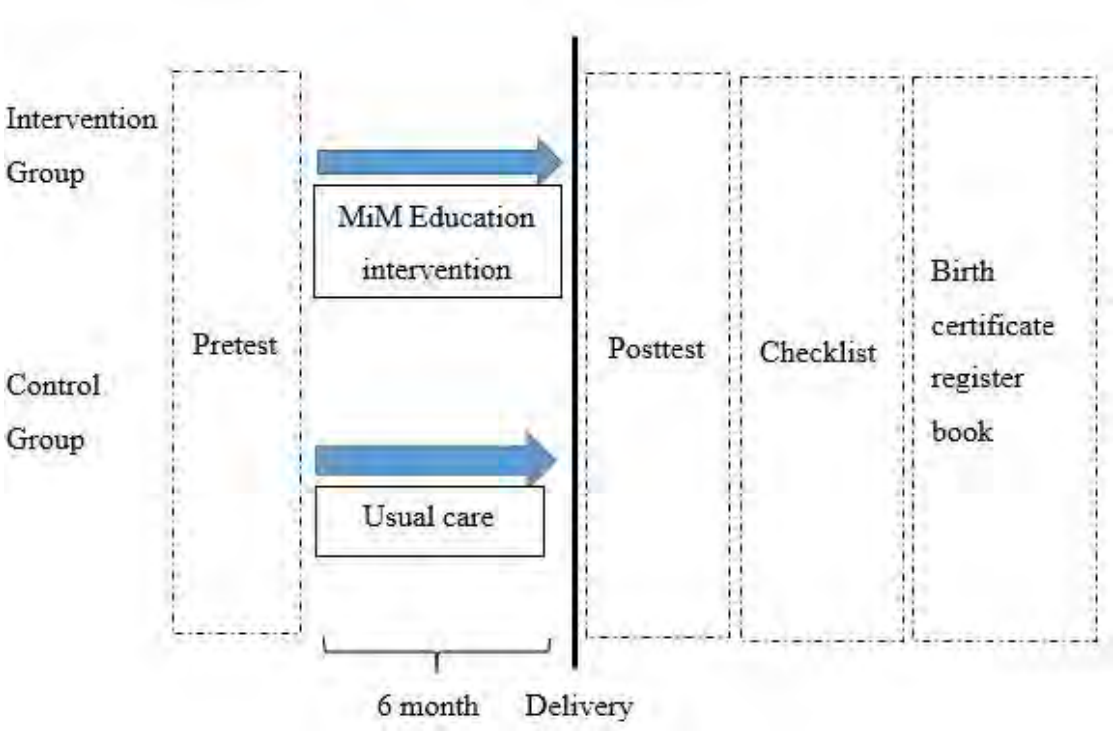

Figure 9: Diagram showing intervention and follow up for each group

3.3 Study population

The study population was husbands and their wives having pregnancy in Nay Pyi Taw Territory.

Study population in intervention area

Target population in study area was husbands and their wives having pregnancy and living in Lewe Township, Dekkhina District of Nay Pyi Taw.

Study population in control area

Target population in control area was husbands and their wives having pregnancy and living in Takkone Township, Ottara District of Nay Pyi Taw.

3.4 Sampling Technique

To get the study participants in each group, multiple stage sampling technique was used according to figure 10.

Step (1) - The study was done in Nay Pyi Taw which was purposively selected because it is the new capital of Myanmar which was quietly relocated from Yangon

on 2006. Nay Pyi Taw has two districts namely Dekhina and Ottara districts. Although there some studies for husband involvement in maternal health in Yangon, there was no intervention study for husband involvement study in Nay Pyi Taw and also institutional delivery was between 35.8% according to National Demographic Survey in 2015.

Step (2) – The two districts were randomly assigned either to study and control area. There are totally 8 townships, divided by two districts, each district possesses four townships equally. Among the two districts, two comparable townships, Lewe and Takkone were purposively selected due to high population as study and control group.

Step (3) – There are totally 9 health centers in Lewe Township and 7 health centers in Takkone Township. Among them, 5 health centers' catchment area from each township were selected purposively by two lowest, one middle and two highest pregnant women population to reflect the variety of health centers' catchment area.

Step (4) – Researcher made the list of husbands of pregnant women from selected health centers' catchment area through assigned area midwives. There were totally 409 eligible husbands in Lewe Township and 366 in Takkone Township who were selected by inclusion and exclusion criteria.

Step (5) – After compiling the list of all eligible participants, the researcher assigned a unique consecutive number to each participant in the intervention and control list. Required sample size was 99 participants in each group. Then sampling fraction was calculated by using number of eligible participants and required sample size which resulted as 4 and 3 in study and control groups respectively. Since we need to select the first starting person, random number generator was used to choose first person using the link https://www.random.org/. After getting the first unit, researcher collected the study participants according to sampling fraction interval. It was a quasi-experimental study design and therefore it was not strictly necessary to use a random sampling technique but, in this study, systematic random sampling was used so that study participants represented a higher variety of the general population of pregnant

women's husbands. This higher variety allowed for some kind of inference from the sample findings to all husbands of pregnant women in the study area.

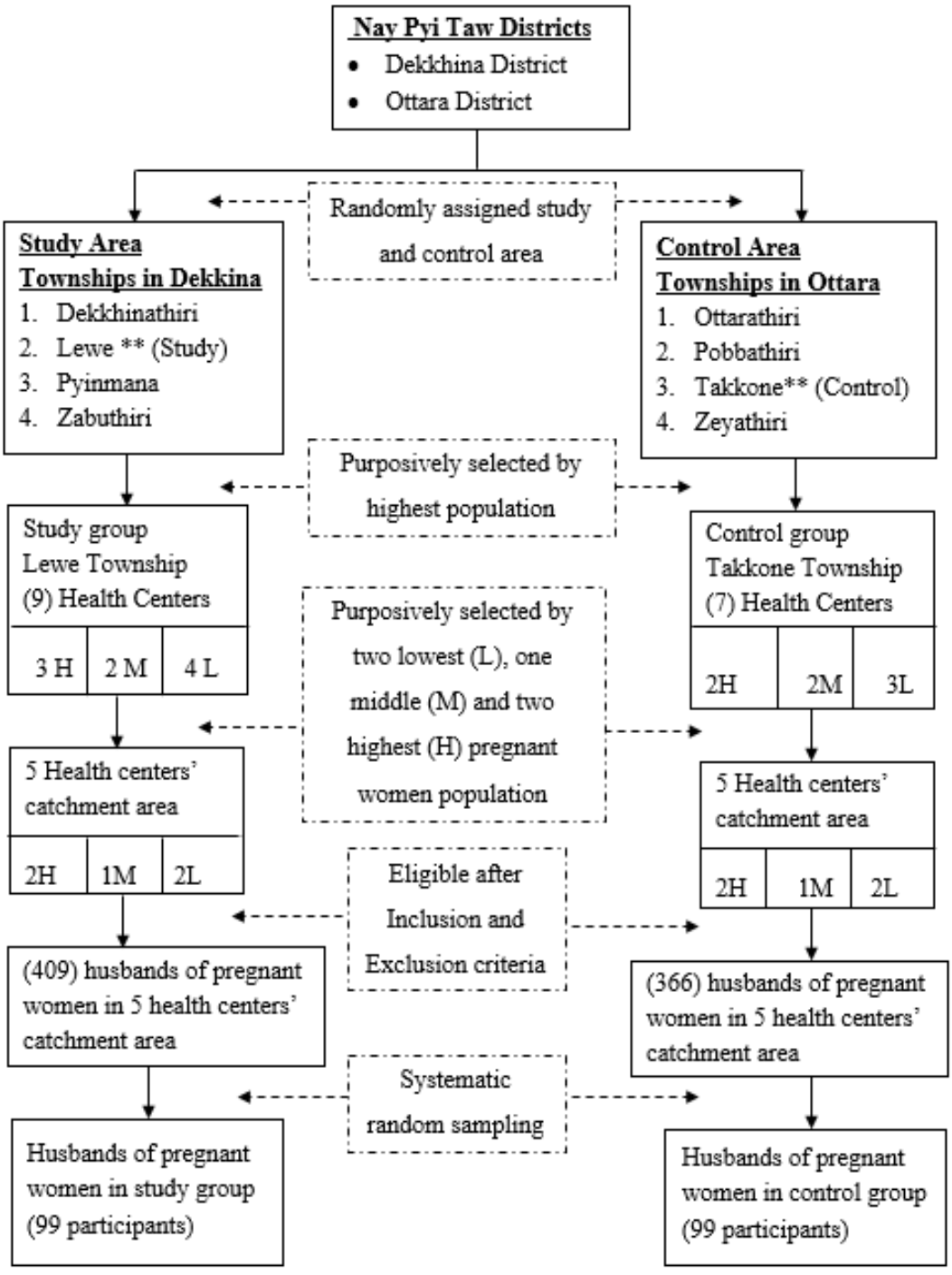

Figure 10: Flowchart of the study

Criteria of selection of the sample husbands and wives

3.4.1 Inclusion criteria

Those husbands and wives who were included in this study:

(1) Husbands and wives age ≥ 18 years

(2) Husbands and their wives with ≤16-week gestational age

(3) Husbands and their wives were primigravida

(4) Husbands and wives currently living together

(5) Have been living in the study area at least 1 year

3.4.2 Exclusion criteria

Those husbands and wives who were excluded from the study:

(1) Husbands and their pregnant wives who were severely ill and cannot communicate

(2) Husbands and wives who did not give consent

3.4.3 Discontinuation criteria

(1) Husbands and wives who feel uncomfortable to participate in this study and refuse to continue participating and discontinue the interaction.

3.5 Sample size calculation

Regarding to the study design, the sample size was calculated by using two independent proportion formula. According to Demissie's study, husband involvement in birth preparedness and complication readiness and had good practice in Ethiopia was 50.8% (Demissie, Bulto, & Terfassa, 2016) which was also low income countries, and had comparable MMR and ANC services with Myanmar. According to the formula,

$$n_1 = \left[\frac{z_{1-\frac{\alpha}{2}} \sqrt{\bar{p}\bar{q}\left(1+\frac{1}{r}\right)} + z_{1-\beta} \sqrt{p_1 q_1 + \frac{p_2 q_2}{r}}}{\Delta} \right]^2$$ (Lemeshow & World Health, 1995)

n = desired sample size

Z α = the standard normal deviate set at 1.96, which corresponds to the 95% confidence level

Z β = a type II error probability set at 0.84 which corresponds to the 80% power

p1 = proportion of husband existing involvement in BP/CR and had proper practice = 0.51 (Demissie et al., 2016)

p2 = expected proportion of husband involvement in BR/CR and had proper practice = 0.66

r = ratio between sample size of two groups = 1

After computation, the sample size is 76 for each group and 10% of refusal for participants and 20 % of estimated sample size is added in each group for drop out. Therefore, total minimum number of study population was 99 in each group and total number of participants in this study is 198.

3.6 Procedure of the study

The procedure of the study was divided into 4 phases such as

Phase (1) Preparation phase

Phase (2) Baseline survey

Phase (3) Intervention phase

Phase (4) Post intervention phase

Phase (1) Preparation phase

Developing, study approach, preparation of instrument, training to both research assistant and data collector were included in this phase.

(a) Developing intervention and research instruments were obtained according to the title of this study and literature review. Invitation cards, developing health education topics and flip charts, handout for participants, pictorial and taken action cards were developed during this phase.

(b) Ten village health volunteers were trained to become interviewers for data collection of this study. Researcher trained data collectors for one day prior to collect data in order to reduce interviewer bias. Data collection intensive training was about orientation on the objectives of this study, research methodology, and make study participants willing to participate, how to build trust before interview,

detail explanation about the questionnaires, ethics and how to ask questions to get appropriate answers. Researcher also explained detail covering all training topics to interviewers with related forms and documents. At the end of the training, researcher allowed data collectors to ask questions for unclear parts and what they wanted to know more. After that section, data collectors performed role-play as interviewer and interviewee to each other to assess their understanding about training, conducting procedures and performance of data collectors. Every data collector had to practice as interviewer with different interviewees at least two times to be familiar with question and to reduce the interviewer bias. At the end of all training sections, all data collectors had to practice field testing with three husbands of pregnant women by using the questionnaires on account of assessing their performance. Their performance was observed and corrected by researcher during their practices.

(c) Four midwives from Myanmar Maternal and Child Welfare Association were trained to become research assistants for intervention of this study. Researcher trained research assistants for two day prior to facilitate and give health education sessions for study participants. The first day intensive training was about orientation on the objectives of this study, research methodology, topics included in health education sessions, how to use flip charts and make study participants interestingly participate in health education sessions. Detail explanation about each topic and how to give health education on each topic were performed in the training. On second day, researcher trained to research assistants how to use pictorial and taken action cards, and how to supervise group discussion sessions. At the end of the training, researcher allowed research assistants to ask questions for unclear parts and what they want to know more. After that section, research assistants performed role-play as trainer and trainee to each other to assess their understanding about training, conducting procedures and performance of research assistants on giving health education. Every research assistant had to practice as trainer with trainee at least two times to be familiar with health education topics and to reduce difficulties during giving health education. At the end of all training sections, all research assistants had to practice field testing with three husbands of pregnant women by using flipchart, pictorial and taken action cards on account of

assessing their performance. Their performance was observed and corrected by researcher during their practices.

Phase (2) Baseline survey

Participants in townships of respective area in both study and control group were invited and the researcher and her team explained the objective and process of the research. Before starting the baseline survey, consent form was provided to all participants who voluntarily participate in this research. Baseline information for both study and control groups was assessed by researcher and the team. As more than half of the husbands were manual and daily wages workers, nearly 15% of participants in both study and control groups could not come to the assemble areas for baseline data collection interviews. For those participants, researcher and the team went to the participants' work place or residence directly to complete baseline data collection.

Phase (3) Intervention phase

This phase, Men in Maternity health programme was carried out in Lewe Township, Dekkhina District of Nay Pyi Taw. In this intervention phase, the activity plan was divided into 4 parts.

(1) Sending invitation letters
(2) Giving maternal health education to husbands
(3) Group discussion about maternal health care
(4) Meeting monthly

(1) Sending invitation letters

Sending invitation letters to the study participants was taken to involve husbands in birth preparedness and complication readiness for maternal health. Other methods and forms of invitation have been sent through their wives' antenatal visit and card although it was proved that invitation letter sending directly to study participants have to be systemic and should target at reaching all husbands to be effective (Theuring et al., 2009). In this study, invitation letters were sent to study participants every first and third week of 6 months intervention period to not only welcome to MiM education program but also remind them to attend this HE sessions and group discussion.

(2) Giving maternal health education to husbands

All participants in the study group were received maternal education messages for 6 months. The key of maternal health education address “Standardized Health Messages Handbook” distributed by Ministry of Health and Sports in Myanmar. That book was intended for community people, so that everyone could easily understand about the content of the message. Health education about maternity such as pregnancy and its complications, obstetric danger signs, importance of maternal health care including antenatal care, delivery care and postnatal care, importance and benefits of birth preparedness and safe delivery were given to all participants in intervention groups. The researcher or one trained research assistant provided the 2 hours long health education session. There were total five groups of husbands distributed in one group for each health centers’ catchment area and each group consisted of about (25) husbands. Health education sessions were taken place in the selected five health centers of Lewe Township. Each 2 hours long health education session were held once a month, every 2nd week of each month for six months intervention period and were held on Sunday as most of the participants did not free with their jobs on weekdays. Face to face health education to husbands were done in this session using guideline of “Standardized Health Messages Handbook”. Flip charts including pictures, main and short point health messages were used and handout for these messages were distributed to participants. At the end of the sessions, participants were allowed to ask unclear points and what they want to know more regarding the health education topics. Attendance of HE session at selected health centers was about 80% in every month. For those who were absent to attend, health education was given at their home by the research team. Curriculum of MiM programme was as follow (see Annex G);

a) Introduction of ‘Men in Maternity’ Programme
   - What is ‘Men in Maternity’ Programme?
   - Maternal heath situation in Myanmar
   - Importance of maternal health care

b) Pregnancy care
   - Importance of ANC

- Components of ANC – Abdominal examination, Immunization, deworming, BP measurement, Body weight measurement, urine examination, supplementations
- Harmful substances to be avoided in pregnancy
- Danger signs during pregnancy
- Pregnancy in advanced maternal age (elderly gravida and teenage pregnancy)
- Birth preparedness and complication readiness – need for advance preparation for birth place for delivery, skilled birth attendant, financial support, transportation, blood donor for emergency situation
- Emotional support and communication in pregnancy

c) Delivery care

- Types of pregnant women who must deliver at hospital
- Danger signs during delivery
- Risk factors for complicated deliveries
- Safe delivery practices
- Safe delivery kit
- Place of delivery and need skilled birth attendant for institutional delivery

d) Postpartum care

- Danger signs during postpartum
- Immediate postpartum needs for mother
- Recommendation for postpartum visit to hospital
- Emotional support and communication in postpartum period

e) Family planning

- Importance of family planning
- Variety of family planning methods
- Type of family planning suitable to use after delivery

f) Role of husbands in maternal health care

- Gender Hierarchy and gender inequality in Myanmar
- Responsibility of husband in maternal health care (Accompany to ANC, know the danger signs during pregnancy, delivery and postpartum, discuss and make right decision, involve in collection of basic essential things for mother and baby before delivery, helping in household chores)
- Husbands' involvement in birth preparedness and complication readiness; need for advance preparation for birth place for delivery, skilled birth attendant, financial support, transportation, blood donor not only for normal but also for emergency situations

(3) Group discussion about maternal health care

Same with the health education sessions, there were five groups of about 25 husbands for group discussion. The researcher or one trained research assistant facilitated the 2 hours long group discussion session which was held in the health centers of Lewe Township. Firstly, pictorial and take action cards methods were used as an icebreaker in this session to assess maternal health care knowledge what they have learnt in health education sessions. Pictorial and take action cards contained images depicting pregnancy danger signs, maternal health important points and potential problem on one side and on the reverse side, answers and information on what action to take for each. Researcher and research assistants showed the picture side of cards to participants and participants must discuss the information and answers regarding with the picture. Then, all husbands in study group were allowed to discuss about maternal health what they get from health education sessions and were encouraged to share their experiences on the discussed topics as well as their feelings and intentions to practice new behavior. They could also share their experiences, knowledge and information of maternal health care regarding with the pregnancy of their wives. Group discussion sessions were held once a month, every 4th week of each month for six months intervention period. Attendance of discussion session was around 80% in group discussion session. Absent participants only had a chance to discuss and ask directly to the research team what they would like to know on maternal health when the research team followed up to their home.

(4) Monthly meeting with health center staffs

Monthly meeting was conducted in Lewe Township hospital in Nay Pyi Taw on Sunday every fourth week per month. Activities were including discussion, sharing experience and difficulties between researcher, research team and health staffs from health center.

Table 1: Intervention TimeLine

	1st month				2nd month				3rd month				4th month				5th month				6th month			
	Weeks				Weeks				Weeks				Weeks				Weeks				Weeks			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Sending Invitation Card																								
Assigned area MW	√				√				√				√				√				√			
HE session																								
PR		HC1				HC2				HC3				HC4				HC5				HC1		
RA1		HC2				HC3				HC4				HC5				HC1				HC2		
RA2		HC3				HC4				HC5				HC1				HC2				HC3		
RA3		HC4				HC5				HC1				HC2				HC3				HC4		
RA4		HC5				HC1				HC2				HC3				HC4				HC5		
Sending Invitation Card																								
Assigned area MW			√				√				√				√				√				√	
Group Discussion																								
PR				HC1				HC2				HC3				HC4				HC5				HC1
RA1				HC2				HC3				HC4				HC5				HC1				HC2
RA2				HC3				HC4				HC5				HC1				HC2				HC3
RA3				HC4				HC5				HC1				HC2				HC3				HC4
RA4				HC5				HC1				HC2				HC3				HC4				HC5
Monthly meeting																								
Research team & health staffs				√				√				√				√				√				√

(PR= Principal investigator, RA= Research assistant, HC= Health center' catchment area,)

Phase (4) Post intervention phase

Post intervention survey was conducted after implementing the intervention programme, 6 months after the baseline survey. The questionnaire was the same with that of baseline, but socio-demographic characteristics were not asked again in posttest because these characteristics were not changed over 6 months. And posttest was asked after delivery of participants' wives so questionnaire format of part (C) accessing the husband involvement in BP/CR was changed. Same with the baseline data collection, researcher and the team conducted post intervention data at the

participants' home who could not come to the assemble areas for data collection interview.

In order to determine the actual behavior of husband involvement in BP/CR and other maternal health care practice, participants' wives were asked using checklist. Assessing the institutional delivery, the distal outcome of this study, was checked after delivery. Birth certificate register book from health staffs of health centers or hospital was checked for this assessment.

3.7 Measurement tools

3.7.1 Back translation of questionnaire

The instrument for data collection was structured questionnaires which was prepared in English language. And then, English questionnaire was translated into Myanmar language by Deputy Director of Maternal and Reproductive Health section, MoHS who is fluent in English and Myanmar language related to Maternal and Child Health to ensure correspondence between words of Myanmar and English. Back translation was done from Myanmar to English by a second person, Senior Technical Officer from Jhpiego Myanmar (Maternal and Child Health Project), who did not know the original English questionnaire in case of discrepancies between the translations of two persons and come together to agree on a common translation. If there was difference between them and cannot get on a common translation, researcher and two translators came together to resolve these differences. If the two translators did not reach agreement with each other in discussion and the researcher became third moderate person and facilitated their discussion firstly to get the final wording. If the agreement was not yet achieved for final wording, the researcher made final decision for choosing the correct words of questionnaires and the right translation with the agreement by at least one translator.

3.7.2 Questionnaire

The questionnaires were constructed to get the information needed in this study. It was composed of 4 main parts;

1. Predisposing factors
   - Husbands' socio-demographic characteristics

- Wife's characteristic

2. Enabling factors

- Availability to maternal health care facility
- Accessibility to maternal health care facility

3. Need factors

- Plan/unplanned pregnancy
- Pregnancy gestational age
- Present of suspected danger symptoms of pregnancy

4. Husband knowledge and attitude on maternal health, birth preparedness and complication readiness and husband involvement in birth preparedness and complication readiness

Part I. Predisposing factors

Socio-demographic factors and wife's characteristics were asked in this part and this part includes information about age, educational status, occupation, religion, ethnicity, character of marriage, wife's age, wife's education, wife's occupation and wealth index with total 25 questions including wealth index sub-questions. Age groups of husbands were divided into four groups; 18-29, 30-39, 40-49, ≥50 years (Gebrehiwot H, 2013) according to the general concept of the previous studies. Age groups of pregnant women were categorized into 3 groups 18-29, 30-39, ≥40 years according to the general concept of reproductive age of women and previous studies (Gebrehiwot H, 2013).

Educational status of husbands and wives was categorized into illiterate or no formal education, primary school level, middle school level, high school level and university/college level according to previous studies in Myanmar (Ampt et al., 2015). Occupation of husbands and wives was classified into government staff, private employee, self-employee, manual worker, unemployed/ dependent based on the previous studies (Ampt et al., 2015) (Punam & Bhawana, 2017). Ethnicity and number of family members was asked by open ended question and religion was divided into Buddhism, Christian, Hindu and Muslim, and character of marriage was divided into monogamous and polygamous according to the study by Wai (Wai et al., 2015).

Wealth Index scoring was calculated into five quintiles using questionnaires and principal component analysis already validated in Myanmar Equity tool (Ministry of Labour, 2014).Wealth Index scoring was done according to coding and values depending on rural and urban areas used in Myanmar Equity Tool. Decision of rural and urban could be done by asking directly to the participants or determination by interviewer based on guidance provided such as if interviews take place in or very near to people's homes, and if the data collectors could be trained on the same rules to determine if an area is urban or rural.

However, in this study, the interviewer asked directly to the study participants where they live in urban or rural areas. Coding was ranged from 1-4 depending on participants' choice according to option 1-4. Scoring of rural area was done using coding number according standardize scoring in Myanmar Equity Tool according to Myanmar Census and detail calculation can be seen in Appendix D.

Then, each participant's quintile will be classified as followed (Ministry of Labour, 2014);

National Quintile =5, if National Score >=0.8080955

National Quintile =4, if National Score >=0.1008179

National Quintile =3, if National Score >=-0.3114549

National Quintile =2, if National Score >=-0.7352678

National Quintile =1, if National Score <-0.7352678

Part II. Enabling factors

This part included 14 questions (from number 13 to 26) which information about availability and accessibility of maternal health care facility were. There were 5 questions (from number 13-17) in this part for getting maternal health care information or not, frequency of getting information, where and who give information about maternal health care facility in their environment. To assess the availability, getting information of maternal health care and present of maternal health care service in participants' residence ward/ village were asked with 'Yes' or 'No' in question no. 13 and 17 (Onasoga, Osaji, Alade, & Egbuniwe, 2014). Among the participants who get maternal health information, frequency of getting information - no.14, information getting from media – no.14 (Radio, television, pamphlet, newspapers, magazines and

journals), and information getting from personnel – no.15 (Family members, friends, neighbors and health care providers) were continued to ask based on the previous studies questionnaires (Punam & Bhawana, 2017).

Accessibility of maternal health care facility: There were 9 questions in this part from question number 18 to 26. Person who encourage to seek maternal care – no. 18, the distance of maternal health care facility from their home - no.19, mode of transportation-no.20, the time taken to reach that facility – no. 21, service use time – no.22, transportation and service cost – no.23, 24, that cost expensive and difficulty or not – no. 25, 26 were assessed. Distance to health care facility was categorized into 3 groups (<2miles, 2-4, >4 miles) and time take to reach health care facility was categorized into three groups (<30 minutes, 30-60, >60 minutes) based on previous literature (T. Win, Vapattanawong, & Vong-ek, 2015) in Myanmar according to the general concept person who take short distance and less travel time to the health facility more accessible to take care from that health facility. Question no. 22 to 26 were developed by the researcher and validated by three experts.

Part III. Need factors

This section included 9 questions (from number 27 to 35) which were about plan/unplanned for current pregnancy, current gestational age, present or absence of suspected danger symptoms of pregnancy such as fever, severe headache with blurred vision, severe abdominal pain, difficult breathing, convulsions/fits, vaginal bleeding and swelling of fingers, face and legs. Plan/unplanned for pregnancy (no. 27-30) were taken from studies in Nepal and Ethiopia (Mullany et al., 2007) (Asefa, 2014) and revised by the researcher. Asking current gestational age questions (no. 31) and present/absent of suspected danger symptoms of pregnancy (no. 32 – 35) were adopted from already validated JHPIEGO standard tool questionnaires (JHPIEGO, 2004).

Part IV. Husbands' knowledge, attitude and level of involvement in BP/CR

This part included husbands' knowledge and attitude on maternal health care, birth preparedness and complication readiness and husband involvement in birth preparedness and complication readiness. Assessing knowledge, attitude and BP/CR

questionnaires for husband in this part were adopted from JHPIEGO's monitoring birth preparedness and complication readiness standard tools (JHPIEGO, 2004).

A. Knowledge on maternal health

In this part, 14 questions were included (from number 36 to 47) which were adopted from already validated previous study (Ampt et al., 2015). There were multiple choices questions for assessing the knowledge on maternal health care (no. 36-39 and no. 44-45), danger signs during pregnancy (no. 40-41), delivery (no. 42-43) and postpartum period (no. 46-47). Scoring is '1' for each correct answer and others will be '0'. The minimum score will be '0' and maximum score will be '52'. Mean score for knowledge on maternal health was calculated and mean scores ± standard deviation was used to compare within and between study and control groups.

B. Attitude on maternal health

For attitude, 12 questions (from number 48 to 59) were included and the questions are 4-point Likert type scale of strongly agree, agree, disagree and strongly disagree. All attitude questions were adopted from JHPIEGO monitoring tools questionnaire of birth preparedness and complication readiness. For positive statements, scoring was 4, 3, 2, 1 for strongly agree, agree, disagree and strongly disagree and for negative statements, scoring was 1, 2, 3, 4 for strongly disagree, disagree, agree and strongly agree. Minimum score was 12 and maximum score was 48. Mean score for attitude on maternal health was calculated and mean scores ± standard deviation was used to compare within and between study and control groups.

C. Husband involvement in birth preparedness and complication readiness (BP/CR)

For this section, 5 questionnaires (from number 60 -64) regarding the plan for (1) birth place, (2) skilled birth attendant, (3) potential blood donor for emergency, (4) saving money and (5) transportation before delivery of his wife plan for birth place, were included. Scoring were 1 for 'Yes' and 0 for 'No' and therefore minimum score was 0 and maximum score is 5. The level of husband involvement was classified as follow:

1. Complete preparedness : all 5 BP/CR practice activities

2. Partial preparedness : 4 BP/CR practice activities (potential blood donor for emergency was excluded)
3. Non-preparedness : any other mix and number of BP/CR practice activities

3.7.3 Checklist

To assess the actual behavior not for intention of husband involvement in main five elements of BP/CR and other maternal health care practices, cross checking measurement was conducted through participants' wives by using checklist after delivery. Beyond 5 main elements of BP/CR, husband involvement in other maternal health care practices including accompany to AN visit, share maternal health care knowledge to their wives, decision making in maternal health care practice, accompany to hospital for delivery and helping in household chores during pregnant period were assessed.

3.7.4 Birth certificate registration book

Birth certificate register book from health center and hospital was checked to access the institutional delivery outcome. For institutional delivery outcome, place of delivery and birth attendant for delivery was checked at the end of 6 months study period. All the children who born in sub-center, rural health center, public or private hospital and home delivery has been registered for birth certificate in immigration office via township hospital. So, husbands and wives who came to health center or directly to township hospital to make birth certificate for their babies after delivery were collected for the delivery place, birth attendant and mode of delivery to assess institutional delivery or not.

3.8 Quality of measurement tools

3.8.1 Validity of questionnaire

Construct Validity

The questionnaire was developed and revised according to conceptual framework using theory, Anderson health utilization model, objectives of the study, operational definitions and questionnaire are firstly prepared by JHPIEGO's monitoring birth preparedness and complication readiness tools which was already

tested validity. After that, other questionnaires which were developed matching with the conceptual framework using Andersen health utilization model and operational definitions but were not found in previous literature were validated by three experts and exam committee members (1. Dr. Alessio Panza, thesis advisor who is also expert in reproductive health, 2. Prof. Surasak Taneepanichskul, Professor and Senior Consultant, College of Public Health Sciences, Chulalongkorn University, 3**.** Dr. Ratana Somrongthong, Associate Professor, Associate Dean, College of Public Health Sciences, Chulalongkorn University). The questionnaires were revised according to exam committee members' comment and experts' comment.

Content Validity

After that, the questionnaires which were structured and modified by researcher using guideline and not taken from already validated questions in previous literature were validated using item-objective congruence (IOC) by three experts (1. Dr. Alessio Panza, thesis advisor who is expert in Reproductive Health, 2. Prof. San San Myint Aung, President of Myanmar Maternal and Child Welfare Association and 3. Dr. Myint Mo Soe, Deputy Director of Maternal and Reproductive Health Section, MoHS. The score was given by three experts for each question part (+1, 0, -1). If IOC score was equal or more than 0.8, the questionnaire was accepted. If there was a question which was less than 0.8, it was revised according to exam committee member and other experts' comments and advice.

Face Validity

For face validity, questionnaire was checked and certified during pre-test which was done among husbands of pregnant women living in Pyinmana Township with similar characteristics to the study area of Nay Pyi Taw for clarification and comprehension of each question.

3.8.2 Pretesting

Pre-test for questionnaires was carried out in Pyimana Township of Dekkhina District in Nay Pyi Taw with similar socioeconomic characteristics and geographical location with study population and areas. The pretest was conducted by the researcher and 30 husbands of pregnant women was included in pretest. The aim of pretest was

to understand the process of conducting research including the participants' comprehension regarding each question in the questionnaire (face validity), the flow of questionnaire and interviewing time, whether the contents of questionnaires were relevant for participants to answer or not and to check the internal consistency of questionnaires.

3.8.3 Validity of birth certificate register book

Birth certificate register book was prepared by combination of two ministries, (1) Ministry of Labour, Immigration and Population and (2) Ministry of Health and Sports. All offices which register birth certificate follow standard guideline and fill the register book for standard format. Birth certificate must be applied during one month after delivery and every parent must requested where ever delivery take place at home or health facility place. Birth certificate is the official use for applying education and national identity card.

3.8.4 Reliability

Pre testing was conducted for internal consistency reliability by using Cronbach's Coefficient of Alpha ≥0.7 for attitude part of the questionnaire (DeVellis, 2017). To test the internal consistency of the questions with dichotomous choices in knowledge and husband involvement in BP/CR, Kuder-Richardson formula 20 (KR20) was considered satisfactory. The questionnaire was revised after testing reliability and validity. This research proposal was submitted to the Ethics Review Committee on Medical Research Involving Human Subjects, Department of Medical Research, Ministry of Health and Sports, Yangon, Myanmar.

3.9 Data collection

After getting the ethical approval from ethical review committee for research involving human research subjects, Department of Medical Research, Myanmar, written or verbal consent from Township Medical Officer from each study area was taken. Before the date of data collection in respective health centers, health assistant, lady health visitor, midwife and basic health staffs was informed and confirmed the date for data collection and intervention process. The researcher went to the health centers' catchment area and selected the study participant, husbands of pregnant women

through assigned area midwives. Then, researcher and research assistants recruited the study participants whether they met the inclusion and exclusion criteria to conduct the interview process. Study participants were chosen from eligible participants by systematic random sampling using random number generator and if the selected participants refused to participate, next number of selected participants were recruited. Data collection was done in weekends as participants in this study were husbands and most of them were busy during weekdays. Therefore, totally data collection were two days per week till to get enough sample size. In order to control the possible bias, the researcher also performed both regular and close supervision of data collection. If participants were willing to participate, the interview process was done using interviewer structured questionnaire which were already translated in Burmese language at participant's home. To prevent annoying or influence of others' opinion during interview, research requested study participants a place where they could get convenience and protect privacy.

The researcher provided information sheets and explained the objectives and procedure of data collection. Participants were explained about free participation and freedom to withdraw by the researcher and research assistants. Interviewing the questionnaire took around 30-45 minutes to interview for each participant. After each interview, the researchers and research assistants checked the completeness of answers for each question in questionnaire after each interview to prevent losing documents during data collection. If there was something missing, the research assistants have to interview again for missing questions before leaving the field sites. All the answers of the participants were kept confidentially, and code was used to identify the data collection form.

3.10 Statistical Analysis

The obtained data was coded and entered into the computer by the researcher. After collecting and cleaning the data, Microsoft Excel was used for data entry. For data analysis, SPSS version 23 was used for transferring the data.

Descriptive statistics including frequency, percentage, mean, SD, minimum and maximum for numerical variables and, frequency and percentage was used to describe categorical variable.

For inferential statistics, paired t-test for continuous data within each group and independent t-test was used for continuous data and chi-square test was

used for categorical data to test of homogeneity between intervention and control group. P value less than 0.05 was used for statistically significant. Fisher's exact test was used with P value level of 0.05 if cells' frequencies of cells less than 5 were more than 20%. Unpaired t-test was used for knowledge and attitude score between and control groups and Chi-square test was used for husband involvement level in BP/CR and institutional delivery between and within intervention and control groups.

Table 2: Data analysis

(1) To compare the difference between intervention and control group at baseline

Variable Name	Variable type	Descriptive statistics	Inferential statistics	Significance
Age (Grouping)	Continuous numerical	Mean, SD, Min, Max	Chi - square	p=0.05
Wife's age (Grouping)	Continuous numerical	Mean, SD, Min, Max	Chi - square	p=0.05
Education	Nominal categorical	Frequency, Percentage	Chi - square	p=0.05
Wife' education	Nominal categorical	Frequency, Percentage	Chi - square	p=0.05
Religion	Nominal categorical	Frequency, Percentage	Chi - square	p=0.05
Character of marriage	Nominal categorical	Frequency, Percentage	Chi - square	p=0.05
Occupation	Nominal categorical	Frequency, Percentage	Chi - square	p=0.05
Wife's occupation	Nominal categorical	Frequency, Percentage	Chi - square	p=0.05
Family member (Grouping)	Discrete numerical	Frequency, Percentage	Chi - square	p=0.05
Wealth Index	Ordinal Categorical	Frequency, Percentage	Chi - square	p=0.05

Getting maternal health care information	Nominal categorical	Frequency, Percentage	Chi - square	p=0.05
Frequency of getting maternal health care information per month	Discrete Numerical	Frequency, Percentage	Chi - square	p=0.05
Place of getting information	Nominal categorical	Frequency, Percentage	Chi - square	p=0.05
Person who give information	Nominal categorical	Frequency, Percentage	Chi - square	p=0.05
Availability of maternal health care facility	Nominal categorical	Frequency, Percentage	Chi - square	p=0.05
Distance from home to health facility (Grouping)	Continuous numerical	Mean, SD, Min, Max	Chi - square	p=0.05
Route of transportation	Nominal categorical	Frequency, Percentage	Chi - square	p=0.05
Time taken to reach health facility (Grouping)	Continuous numerical	Mean, SD, Min, Max	Chi - square	p=0.05
Time taken to wait and get treatment (service use time grouping)	Continuous numerical	Mean, SD, Min, Max	Chi - square	p=0.05
Transportation cost (Grouping)	Continuous numerical	Frequency, Percentage, Mean, SD, Min, Max	Chi - square	p=0.05

Service cost (Grouping)	Continuous numerical	Frequency, Percentage, Mean, SD, Min, Max	Chi - square	p=0.05
Plan/unplanned pregnancy	Nominal categorical	Frequency, Percentage	Chi - square	p=0.05
Gestational age of pregnancy	Continuous numerical	Frequency, Percentage, Mean, SD	Unpaired t test	p=0.05
Present of suspected any pregnancy danger symptoms	Nominal categorical	Frequency, Percentage	Chi - square	p=0.05

(II) To compare the difference in between and within groups of baselines, immediate post intervention and 3 months follow up after intervention

Variable Name	Variable type	Descriptive statistics	Inferential stat	Significance
Knowledge level	Continuous numerical	Mean, SD, Min, Max	Unpaired t test	p=0.05
Attitude level	Continuous numerical	Mean, SD, Min, Max	Unpaired t test	p=0.05
BP/CR level	Continuous numerical	Mean, SD, Min, Max	Chi - square	p=0.05

(III) To compare the difference of institutional delivery between groups after delivery

Variable Name	Variable type	Descriptive statistics	Inferential stat	Significance
Institutional delivery	Binary	Frequency, Percentage	Chi – square	p=0.05

3.11 Ethical consideration

This research proposal was submitted to the Ethics Review Committee on Medical Research Involving Human Subjects, Department of Medical Research, Ministry of Health and Sports, Yangon, Myanmar. Permission to collect data for this study was asked from Township Medical Officer from Lewe Township and Tekkone Township in respective health centers in Nay Pyi Taw, Myanmar. Before data collection, the consent was taken from all study participants. All the participants were informed clearly that involvement to this study was totally voluntary and unwillingness to participate were never posed a negative impact on their seeking care.

Participants were allowed to stop or skip the questions and withdraw from the study at any point during interviewing if they feel uncomfortable. The researcher and the interviewers used cautions and polite manners and also stopped interviewing when there were uncomfortable sings of the participants. All the data receive from the participants were kept carefully and privately with no name on the paper and code was used to identify the data collection forms. The collected data was put into the database and then all the answer sheets was destroyed afterwards. Correct answer to the knowledge questions were given to study participants at the end of the study because it was unethical to keep them with their wrong knowledge.

3.12 Benefit of the study

The result of this study not only increased the data availability necessary to support but also guided effective maternal health care policies. The findings of this study were summarized and presented to National Maternal and Child Health Programme and other NGOs and INGOs. The results of this study helped those organization which were working on maternal health promotion activities and useful to improve the future maternal health promotion and implementation programme in Myanmar.

CHAPTER IV
RESULTS

Part (I) Husbands' involvement in birth preparedness and complication readiness

4.1 Predisposing factors

4.1.1 Socio demographic characteristics of study husbands

Table (3) showed the socio demographic characteristics of study husbands and the mean age of each group was 29.61±5.68 and 30.55±6.16 in MiM study group and control group respectively. Majority of husbands finished their education at middle education level (33.3%) and primary education level (28.8%) respectively, and education between MiM study and control group was similar. Ethnicity and religion of the study participants were not statistically different, most of the husbands were Burma (98%) and Buddhist (95%). Regarding the type of marriage, most of the husbands were monogamous and the result was homogeneity between MiM study and control group. In term of the occupational status of husbands, half of them in both study and control groups were manual workers (52%). More than half of husbands responded that they do not live with mother or mother in law together. The statistical results presented that number of family members and dependent family members between study and control groups were similar. The level of economic status was assessed on the basis of national quintile of wealth index and the majority were in the highest (39.4%) and fourth levels (39.9%).

Table 3: Numbers and percentage distribution of study husbands by socio demographic characteristics at baseline

Characteristics	Study group (n=99) %	Control group (n=99) %	Total (n=198) %	p-value
Age of husbands				
18 – 29	54 (54.5%)	45 (45.5%)	99 (50.0%)	0.381
30 – 39	40 (40.4%)	46 (46.5%)	86 (43.4%)	
≥ 40	5 (5.1%)	8 (8.1%)	13 (6.6%)	
	29.61±5.68	30.55±6.16		
Education of husbands				
Illiterate or no formal education	4 (4.0%)	6 (6.1%)	10 (5.0%)	[a]0.969
Primary education level	28 (28.3%)	29 (29.3%)	57 (28.8%)	
Middle education level	34 (34.3%)	32 (32.3%)	66 (33.3%)	
High education level	25 (25.3%)	25 (25.3%)	50 (25.3%)	
University/College education level	8 (8.1%)	7 (7.1%)	15 (7.6%)	
Ethnicity				
Burma	97 (98.0%)	97 (98.0%)	194 (98.0%)	[#]0.651
Others	3 (1.5%)	2 (2.0%)	5 (2.5%)	
Religion				
Buddhist	96 (97.0%)	92 (92.9%)	188 (95.0%)	0.194
Others	3 (3.0%)	7 (7.1%)	10 (5.0%)	
Type of marriage				
Monogamous	92 (92.9%)	95 (96.0%)	187 (94.4%)	[a]0.352
Polygamous	7 (7.1%)	4 (4%)	11 (5.6%)	

Occupation of husbands				
Self – employee	37 (37.4%)	41 (41.4%)	78 (39.4%)	0.776
Manual worker	54 (54.5%)	49 (49.5%)	103 (52.0%)	
Others	8 (8.1%)	9 (9.1%)	17 (8.6%)	
Family Member				
≤4	69 (69.7%)	74 (74.7%)	143 (72.2%)	[a]0.428
>4	30 (30.3%)	25 (25.3%)	55 (27.8%)	
Mean ± SD	3.74 ± 1.45	3.63 ± 1.58		
Dependent Family Member				
≤4	96 (97.0%)	94 (94.9%)	190 (96.0%)	[a]0.470
>4	3 (3.0%)	5 (5.1%)	8 (4.0%)	
Mean ± SD	2.08± 1.31	1.74± 1.43		
Live with mother/ mother in law				
No	59 (59.6%)	67 (67.7%)	126 (63.6%)	[a]0.237
Yes	40 (40.4%)	32 (32.3%)	72 (36.4%)	
Wealth Index				
Highest	36 (36.4%)	42 (42.4%)	78 (39.4%)	[a]0.463
Fourth	38 (38.4%)	41 (41.4%)	79 (39.9%)	
Middle	13 (13.1%)	8 (8.1%)	21 (10.6%)	
Second	12 (12.2%)	8 (8.1%)	20 (10.1%)	
Lowest	0 (0.0%)	0 (0.0%)	0 (0.0%)	

[a]Pearson's Chi-square test, [#]Fisher Exact Test

4.1.2 General characteristics of studied husbands' wives

For the age of wives, the mean age between MiM study group (27.55±6.01) and control group (28.65±5.75) was statistically insignificant which showed in table (4). For education attainment of wives, the result was similar with their husbands and most of them finished primary (39.9%) and middle education level (26.8%). In terms of occupational status of wives, majority were housewives (60.1%), followed by self-employee (19.2%), manual workers (15.7%) and government staffs (5.1%), and both MiM study and control groups were similar.

Table 4: Numbers and percentage distribution of studied husbands' wives by general characteristics at baseline

General Characteristics	Study group (n=99) %	Control group (n=99) %	Total (n=198) %	p-value
Age of wives				
18 – 29	66 (66.7%)	58 (58.6%)	124 (62.6%)	#0.486
30 – 39	30 (30.3%)	36 (36.4%)	66 (33.3%)	
≥40	3 (3.0%)	5 (5.0%)	8 (4.0%)	
Mean ± SD	27.55± 6.01	28.65± 5.75		
Education of wives				
Illiterate or no formal education	1 (1%)	7(7.1%)	8 (4.0%)	#0.07
Primary education level	38 (38.4%)	41(41.4%)	79 (39.9%)	
Middle education level	29 (29.3%)	24(24.2%)	53 (26.8%)	
High education level	17 (17.2%)	21(21.2%)	38 (19.2%)	
University/College education level	14 (14.1%)	6(6.1%)	20 (10.1%)	
Occupation of wives				
Government staff	4 (4.0%)	6(6.1%)	10 (5.0%)	a0.832
Self – employee	20 (20.2%)	18(18.2%)	38 (19.2%)	
Housewives/Dependent	58 (58.6%)	61(61.6%)	119 (60.1%)	
Manual worker	17 (17.2%)	14(14.2%)	31 (15.7%)	

[a] *Pearson's Chi-square test,* [#] *Fisher Exact Test*

4.2. Enabling factors

The enabling factors of this study including availability to maternal health care facility, physical and economic accessibility of maternal health care facility were showed in table (5), (6) and (7).

4.2.1 Availability and Accessibility of maternal health care facility

Table (5) presented the availability to maternal health care facility and half of the husbands heard information of maternal health care (56.6%). Among the husbands who got information of maternal health care, the largest group received information 2 to 3 times in a month. Regarding to the availability of maternal health care services, 97% of husbands reported that there was maternal health care service at their residing ward or villages and 95.5% had encouraging person to take maternal health services for their wives' pregnancies.

Table 5: Availability of maternal health care facility at baseline

Characteristics	Study group n (%)	Control group n (%)	Total n (%)	P-value
Get information about maternal health care				[a]0.774
No	42 (42.4%)	44 (44.4%)	86 (43.4%)	
Yes	57 (57.6%)	55 (55.6%)	112 (56.6%)	
Frequency of getting information (n=112)				[a]0.408
1 time per month	21(36.8%)	21(36.8%)	42 (37.5%)	
2-3 time per month	26 (23.2%)	29 (25.9%)	55 (49.1%)	
> 3 time per month	10 (8.9%)	5 (4.5%)	15 (13.4%)	
Maternal Health care service in ward/village				[#]0.683
No	2 (2.0%)	4 (4.0%)	6 (3.0%)	
Yes	97 (98.0%)	95 (96.0%)	192 (97.0%)	
Encourage person to take maternal health care				[#]0.498
No	3 (3.0%)	6 (6.0%)	9 (4.5%)	
Yes	96 (97.0%)	93 (93.0%)	189 (95.5%)	

[a] Pearson's Chi-square test, [#] Fisher Exact Test

Figure 11 summarize results from the source of information for getting maternal health care. The data of the figure are not shown in the table because it cannot be statistically tested by Chi square due to allowed multiple answers. Being the multiple answers similar in study and control groups, the figure has been construed for the two joint groups. Among the place of getting information, 59.8% total participants got maternal health care information from TV and 38.4% from radio. Participants who got information from social media via internet (28.6%) were higher than those from newspaper (14.3%) and magazine/journal (8%). From the persons, majority (50.9%) got information about maternal health from health care personnel and 44.6% from family member.

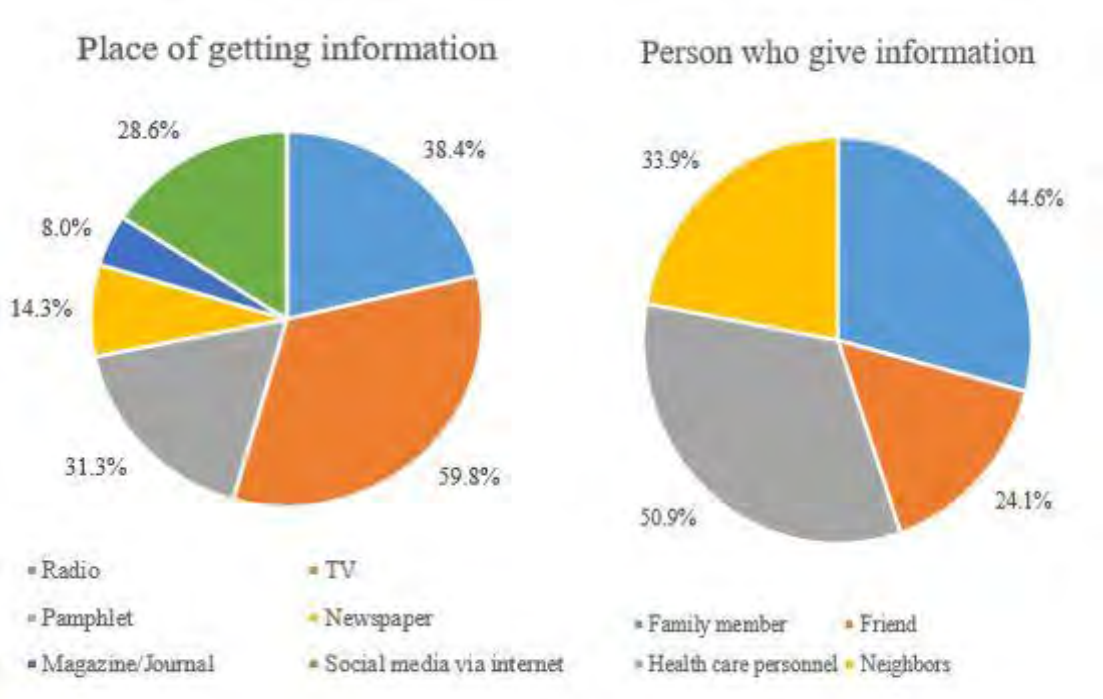

Figure 11: Source of information for maternal health care at baseline for combined study and control participants

4.2.2 Physical accessibility to maternal health care facility

Table (6) presented the physical accessibility to maternal health care facility and half of the respondents (49.5%) could easily go to maternal health care service not more than 2 miles. The minimum and maximum travel distance was 0.2 and 9 respectively and there was no significant difference between study and control groups.

Concerning travelling time, the time was ranging from 3 minutes to 90 minutes and travelling time between study and control groups was similar (p-value = 0.484). There was also no significant difference between study and control groups regarding with the service use time, ranging from 5 minutes to 240 minutes.

Table 6: Physical accessibility of maternal health care facility at baseline

Characteristics	Study group (n=99) %	Control group (n=99) %	Total (n=198) %	p-value
Travel distance (miles)				
<2	52 (52.5%)	46 (46.5%)	98 (49.5%)	¥0.581
2 – 4	37 (37.4%)	39 (39.4%)	76 (38.4%)	
>4	10 (10.1%)	14 (7.1%)	24 (12.1%)	
	Min=0.2	Max=9		
Far or not				
Yes	22 (22.2%)	25 (25.3%)	47 (23.7%)	¥0.616
No	77 (77.8%)	74 (74.7%)	151 (76.3%)	
Travelling hours (minutes)				
<30	71 (71.7%)	78 (78.8%)	149 (75.3%)	¥0.484
30 to 60	26 (26.3%)	20 (20.2%)	46 (23.2%)	
>60	2 (2%)	1 (1%)	3 (1.5%)	
	Min=3	Max=90		
Take much time (Travelling hours)				
No	94 (94.9%)	89 (89.9%)	183 (92.4%)	¥0.179
Yes	5 (5.1%)	10 (10.1%)	15 (7.6%)	

Service use time				
<30	49 (49.5%)	46 (46.5%)	95 (48%)	#0.211
30 to 60	45 (45.5%)	52 (52.5%)	97 (49%)	
>60	4 (5%)	1 (1%)	6 (3%)	
	Min=5	Max=240		
Take much time (Service use time)				
No	87 (87.9%)	84 (84.8%)	171 (86.4%)	a0.534
Yes	12 (12.1%)	15 (15.2%)	27 (13.6%)	

a Pearson's Chi-square test, # Fisher Exact Test

Figure (12) summarize the route of transportation from participants' home to maternal health care facility. Among them, majority used motorcycle followed by bicycle or trishaw. Regarding to the route of transportation, there was no significant difference between study and control groups.

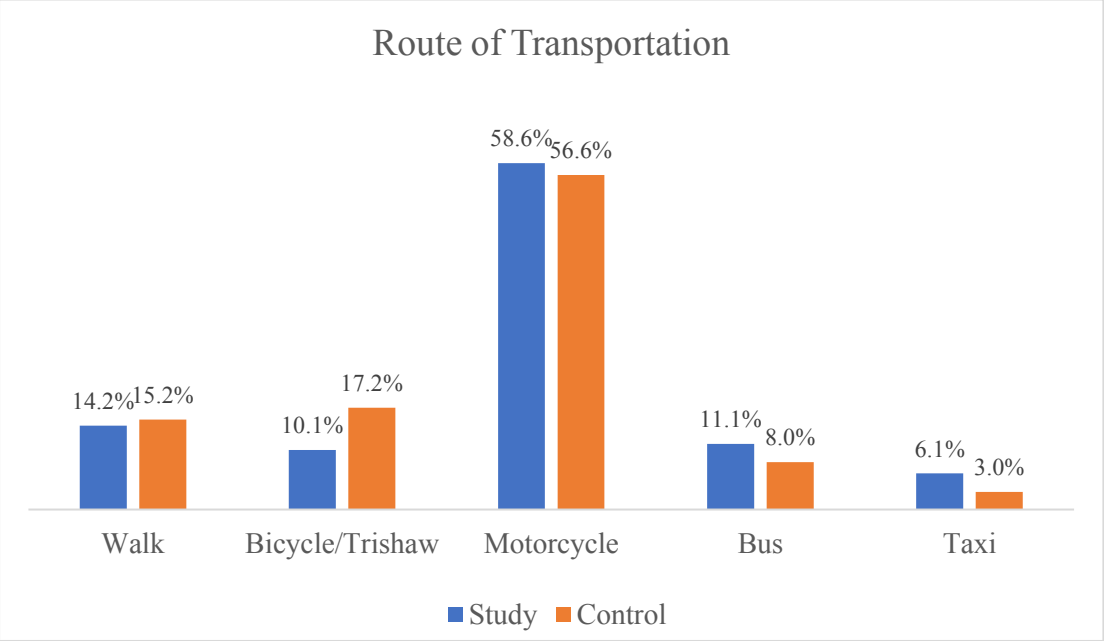

Figure 12: Route of transportation among study and control group at baseline

4.2.3 Economic accessibility to maternal health care facility

The economic accessibility to maternal health care facility was wisely shown in Table (7). About 64.4% in the study group spent not more than 1,000 kyats for transportation cost while it was 56.6% in the control and there was statistically insignificant between study and control groups. In terms of maternal health care service fees, majority of husbands spent not more than 1,000 kyats (1000kyats equivalent to 0.7 US $ according to June 2019 exchange or 3.6 PPP $) for their wives and the average service fees expense were 2601 and 2203 kyats respectively in each intervention and control group. Most of the husbands accepted that both transportation costs (82.8%) and service fees (81.8%) were not expensive for them.

Table 7: Economic accessibility to maternal health care facility at baseline

Genera Characteristics	Study group (n=99) %	Control group (n=99) %	Total (n=198) %	p-value
Transportation cost (Kyat*)				
≤1000	64 (64.6%)	56 (56.6%)	120 (60.6%)	ǂ0.441
1001 – 3000	25 (25.3%)	33 (33.3%)	58 (29.3%)	
>3000	10 (10.1%)	10 (10.1%)	20 (10.1%)	
	Min=0	Max=15000		
Service fees (Kyat*)				
≤1000	42 (42.4%)	50 (50.5%)	92 (46.5%)	ǂ0.499
1001 – 3000	38 (38.4%)	34 (34.3%)	72 (36.4%)	
>3000	19 (19.2%)	15 (15.2%)	34 (17.2%)	
	Min=0	Max=20000		
Expensive (Transportation cost)				
No	83 (83.8%)	81 (81.8%)	164 (82.8%)	ǂ0.499
Yes	16 (16.2%)	18 (18.2%)	34 (17.2%)	
Expensive (Service cost)				
No	82 (82.8%)	80 (80.8%)	162 (81.8%)	ǂ0.706
Yes	17 (17.2%)	19 (19.2%)	36 (18.2%)	

[a] *Pearson's Chi-square test, * 1 USD = 1,525 Kyat (June 2019 exchange) or 1US $ = 275 Kyat at PPP (i.e. 275 Kyat buy the same amount of goods/services in Myanmar as a U.S. dollar buys in the USA)* (Bank, 2019)

4.3 Need factors

The summarized results from table (8) showed the need factors of this study. More than half of the husbands responded that their couple used contraception before getting the current pregnancy in each group. Half of the husbands (50%) revealed that they planned well to get current pregnancy along with their wives. Independent t-test found that mean gestational age of current pregnancy between MiM study group (11.51 ± 3.29) and control group (11.38 ±3.47) was statistically insignificant which showed in table (7). One in five husbands suspect danger sign of pregnancy

Table 8: Need factors at baseline

Genera Characteristics	Study group (n=99) %	Control group (n=99) %	Total (n=198) %	p-value
Contraception use				
No	38 (38.4%)	44 (44.4%)	82 (41.4%)	[a]0.387
Yes	61 (61.6%)	55 (55.6%)	116 (58.6%)	
Plan well to get this pregnancy				
No	47 (47.5%)	52 (52.5%)	99 (50%)	[a]0.477
Yes	52 (52.5%)	47 (47.5%)	99 (50%)	
Wife's current pregnancy gestational age				
Mean±SD	11.51 ± 3.29	11.38 ±3.47		[b]0.790
Suspect danger signs of pregnancy				
No	78 (78.8%)	81 (81.8%)	159 (80.3%)	[a]0.592
Yes	21 (21.2%)	18 (18.2%)	39 (19.7%)	

[a] *Pearson's Chi-square test,* [b] *Independent t-test*

4.4 Difference in overall Knowledge and Attitude levels before and after implementing 'Men in Maternity Health' (MiM) Intervention

In order to determine the changes in the overall knowledge and attitude scores after the 6-month MiM intervention, the mean scores and corresponding standard deviations (SD) of each knowledge and attitude for the study group were illustrated and compared with those of the control group, as shown in figure (13) and (14). Table (9) and (10) showed the overall mean scores of knowledge and attitude which was measured by independent t-test and both knowledge and attitude scores increased noticeably after post intervention assessment, particularly in study communities. Minimum score of knowledge was '0' and maximum score was '52'. In attitude, the score ranged from 12 to 48.

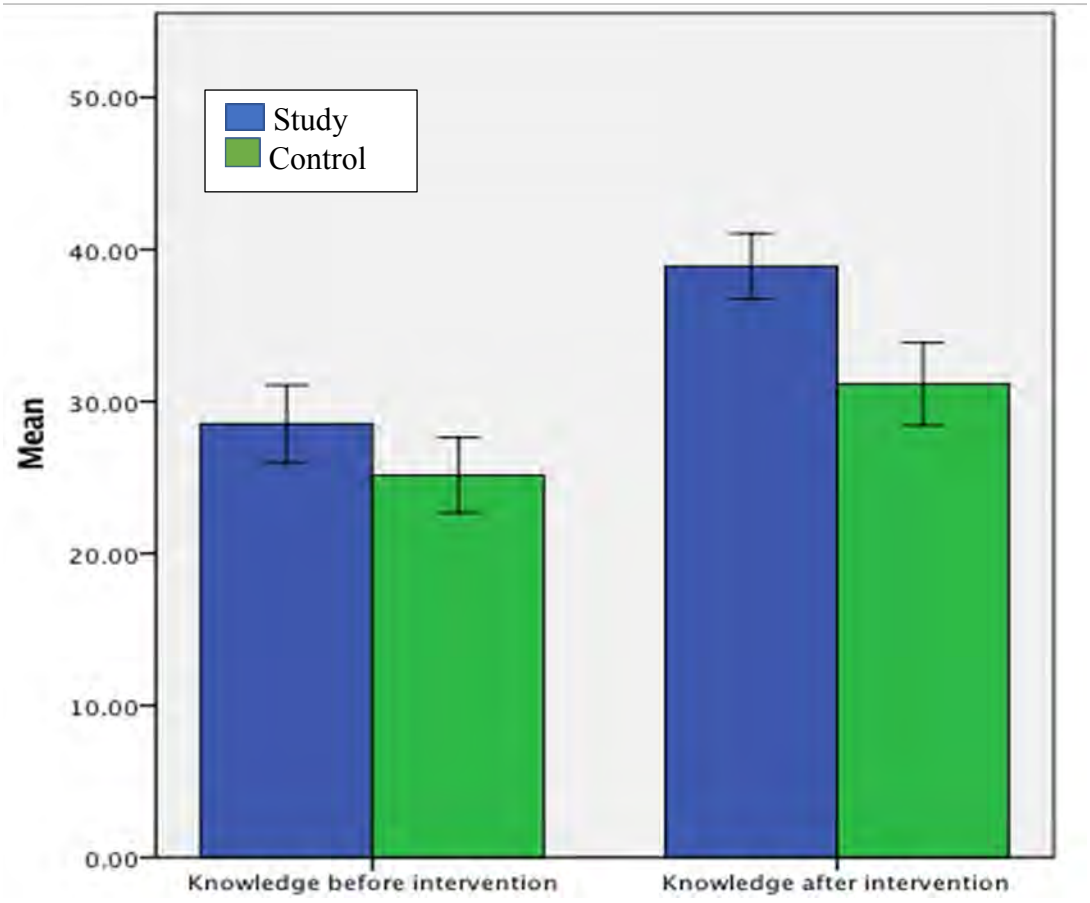

Figure 13: Changes in mean scores of overall knowledge before and after intervention

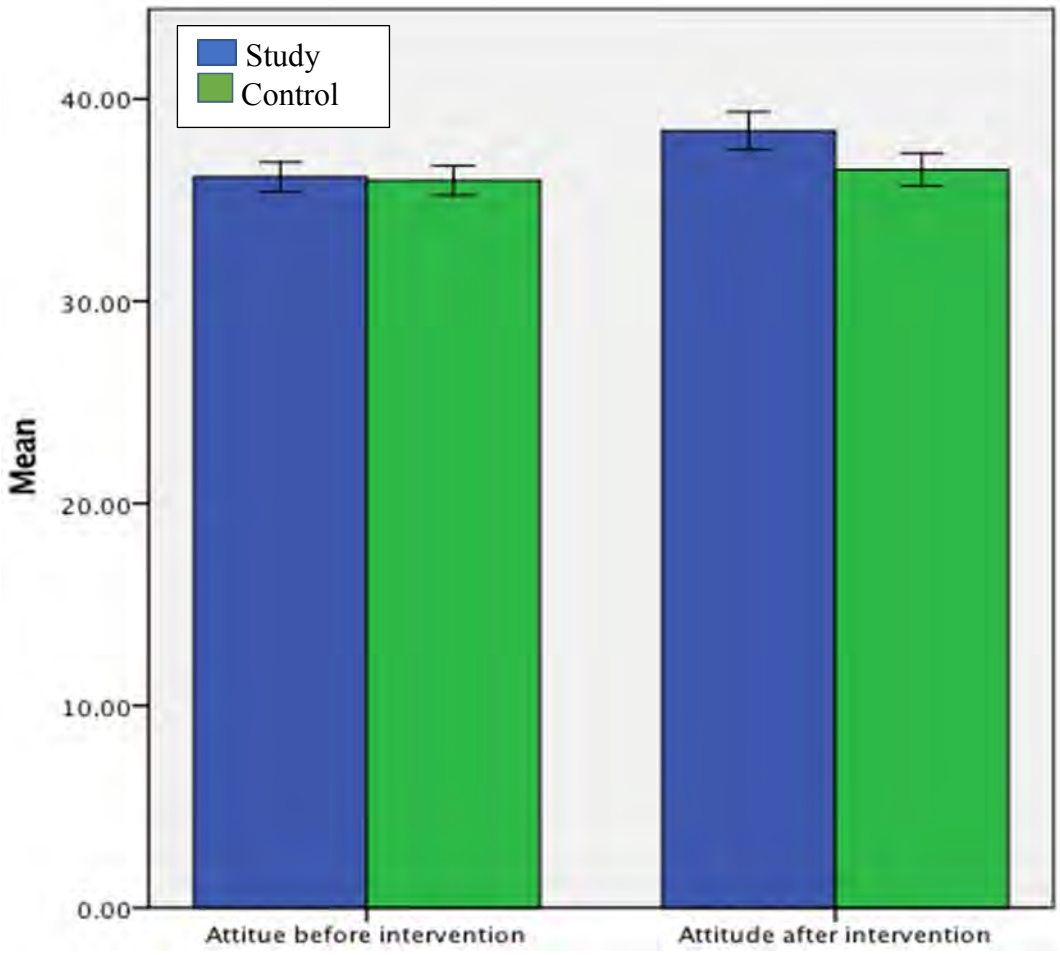

Figure 14: Changes in mean scores of overall attitudes before and after intervention

To compare knowledge between study and control groups at pre and post intervention, independent t test was used to determine mean score difference. The results revealed that both study and control group have similar result (p=0.947) during pre-intervention however a statistically significant difference was noted between study and control group during post intervention test (p-value=0.001) in terms of their maternal health knowledge. Total mean score of knowledge was 38.9±10.83 in study group and 31.2±13.63 in control group respectively at post intervention assessment.

In addition to group differentiation, within study and control group results were also measured to compare the effect of intervention. For study group, post intervention test assessment presented statistically significant differences in knowledge and attitudes of maternal health (p value<0.001). As an unpredictable result, the knowledge scores at post-intervention assessment was also significantly

higher in the control compared to the pre-intervention scores ($p<0.001$). The progress of knowledge scores was higher in study group than in the control group, 28.53±12.80 to 38.90±10.83 in study group and 25.15±12.38 to 31.15±13.63 in control group respectively.

Total attitude scores showed similar results and there was statistically insignificant difference between groups at pre-intervention assessment ($p=0.644$) but a statistically significant difference was found at post intervention assessment ($p=0.044$). Attitude mean score in study group at post intervention was 38.42±4.67 while the attitude mean score of control group remained equivalent to the pre-intervention scores, 36.51±4.04.

Table 9: Mean Scores and mean difference of knowledge and attitude among two groups before and after intervention

Description	Before Intervention				After Intervention				Before/ After:			
									Study		Control	
	Study	Control	Mean difference (95% CI)	p^a	Study	Control	Mean difference (95% CI)	p^a	Mean difference (95% CI)	P^b	Mean difference (95% CI)	P^b
Total knowledge (mean±SD)	28.5±12.8	25.2±12.4	3.4 (-0.2,6.9)	0.947	38.9±10.8	31.2±13.6	7.8 (4.3, 11.2)	0.001*	-10.4 (-13.4,-7.3)	<0.001**	-6.0 (-8.5,-3.5)	<0.001**
Total attitude (mean±SD)	36.2±3.7	35.9±3.6	0.2 (-0.8, 1.2)	0.644	38.4±4.7	36.3±4.0	1.2 (0.7,3.1)	0.044*	-2.3 (-3.4,-1.2)	<0.001**	-0.5 (-1.4,0.3)	0.215

p-value[a] - *between group comparison using independent t-test*, p-value[b] – *within group comparison using paired t-test*,

**Significance at p-value<0.05, **Significance at p-value<0.001*

Table 10: Summary of total mean scores of knowledge and attitude

Description	Study	Control	p-value[a]
a) Total knowledge			
Before intervention	28.5±12.8	25.2±12.4	0.947
After intervention	38.9±10.8	31.2±13.6	0.001*
p-value[b]	<0.001**	<0.001**	
b) Total attitude			
Before intervention	36.2±3.7	35.9±3.6	0.644
After intervention	38.4±4.7	36.5±4.0	0.004*
p-value[b]	<0.001**	0.215	

p-value[a] - *between group comparison using independent t-test,* p-value[b] – *within group comparison using paired t-test, *Significance at p-value<0.05, **Significance at p-value<0.001*

Table (11) and (12) revealed the details knowledge part which consisted of five parts; antenatal care knowledge, pregnancy, delivery and postpartum danger signs, and maternal health care. There was no significant difference between study and control group at pre-intervention assessment in each knowledge part. But there was statistically significant difference between groups except postpartum knowledge part. Within group comparison results, post intervention results of all knowledge parts presented statistically significant differences at p-value<0.001 in study group. But in control group, all of the knowledge parts also significantly difference between pre and post intervention results except delivery danger sign results.

Table 11 : Mean scores and difference of knowledge for each area in both group before and after intervention

Description	Before Intervention				After Intervention				Before/ After:			
									Study		Control	
	Study	Control	Mean difference (95% CI)	p^a	Study	Control	Mean difference (95% CI)	p^a	Mean difference (95% CI)	P^b	Mean difference (95% CI)	P^b
ANC	11.1±3.0	10.7±2.7	0.4 (-0.4,1.2)	0.125	13.7±1.9	12.6±3.7	1.2 (0.3,1.9)	<0.001**	-2.6 (-3.3, -1.9)	<0.001**	-1.9 (-2.7, -0.9)	<0.001**
Pregnancy danger signs	5.6±3.9	4.3±3.9	1.3 (0.2,2.4)	0.127	7.5±3.8	5.4±4.3	2.1 (0.9,3.2)	0.006*	-1.9 (-2.9, -0.8)	<0.001**	-1.1 (-1.9, -0.2)	0.013*
Delivery danger signs	4.7±3.2	4.2±3.2	0.5 (-0.4,1.4)	0.820	6.6±2.8	4.7±3.4	1.8 (0.9,2.7)	0.003*	-1.9 (-2.6, -1.1)	<0.001**	-0.5 (-1.2, 0.2)	0.176
Postpartum danger signs	3.1±2.6	2.5±2.5	0.6 (-0.9,1.3)	0.779	4.8±2.7	3.7±2.8	1.1 (0.4,1.9)	0.262	-1.7 (-2.5, -0.9)	<0.001**	-1.2 (-1.8, -0.7)	<0.001**
Maternal health care	4.0±3.2	3.4±3.2	0.6 (-0.3,1.5)	0.329	6.3±2.5	4.8±3.3	1.5 (0.7,2.4)	<0.001**	-2.3 (-3.1, -1.6)	<0.001*	-1.4 (-2.2, -0.6)	0.001*

p-value[a] - *between group comparison using independent t-test,* p-value[b] – *within group comparison using paired t-test, *Significance at p-value<0.05, **Significance at p-value<0.001*

Table 12: Knowledge mean score for each area in both groups before and after intervention

Knowledege	Study	Control	p-value[a]
a) Antenatal care			
Before intervention	11.11±3.04	10.72±2.66	0.125
After intervention	13.72±1.98	12.57±3.66	<0.001**
p-value[b]	<0.001**	<0.001**	
b) Pregnancy danger signs			
Before intervention	5.59±3.89	4.31±3.98	0.127
After intervention	7.46±3.83	5.36±4.29	0.006*
p-value[b]	<0.001**	0.013*	
c) Delivery danger signs			
Before intervention	4.73±3.24	4.23±3.19	0.820
After intervention	6.58±2.8	4.74±3.35	0.003*
p-value[b]	<0.001**	0.176	
d) Postpartum danger signs			
Before intervention	3.09±2.63	2.46±2.48	0.779
After intervention	4.81±2.71	3.69±2.78	0.262
p-value[b]	<0.001**	<0.001**	
e) Maternal health care			
Before intervention	4.0±3.2	3.42±3.21	0.329
After intervention	6.33±2.47	4.79±3.31	<0.001**
p-value[b]	<0.001**	0.001*	

*p-value[a] - between group comparison using independent t-test, p-value[b] – within group comparison using paired t-test, *Significance at p-value<0.05, **Significance at p-value<0.001*

4.5 Difference in husband involvement in birth preparedness and complication readiness before and after implementing 'Men in Maternity Health (MiM)' Intervention

Husband involvement in BP/CR was assessed by 5 questions, allowing response with 'Yes' and 'No'. In order to assure the changes in husband involvement in BP/CR level after the 6-month intervention, individual birth preparedness and complication readiness components of the control group were compared with those of the study group, as shown in Table (13). Individual BP/CR components were noticeably high after intervention, especially in MiM intervention study communities. In the control group, husbands were more likely to plan delivery place and skill birth attendant during post assessment comparing with baseline.

Table 13: Effect of MiM intervention on husband involvement (HI) in BP/CR before and after intervention among study and control group

Characteristics	Study n (%)	Control n (%)	p-value[a]
HI in BP/CR:			
a) HI in planning for delivery place			
Before intervention	60(60.6%)	62(62.6%)	0.770
After intervention	92(92.9%)	68(68.7%)	<0.001*
p-value[b]	<0.001*	0.369	
b) HI in arranging skill birth attendant			
Before intervention	56(56.6%)	53(53.5%)	0.668
After intervention	88(88.9%)	69(69.7%)	0.001*
p-value[b]	<0.001*	0.019*	
c) HI in saving money			
Before intervention	78(78.8%)	80(80.8%)	0.723
After intervention	93(93.9%)	81(81.8%)	0.009*
p-value[b]	0.002*	0.855	
d) HI in planning for transportation			
Before intervention	54(54.5%)	59(59.6%)	0.473
After intervention	81(81.8%)	61(61.6%)	0.002*
p-value[b]	<0.001*	0.771	
e) HI in planning for blood donor			
Before intervention	34(34.3%)	33(33.3%)	0.881
After intervention	66(66.7%)	36(36.4%)	<0.001*
p-value[b]	<0.001*	0.655	

**Significance at Pearson's Chi square test with p-value<0.05,* p-value[a] - *between group comparison using Pearson's Chi square test,* p-value[b] - *within groups comparison using Pearson's Chi square test*

Husbands' involvement in BP/CR were summed up by transforming it into preparedness level and group into three levels such as complete preparedness, partial preparedness and non-preparedness which showed in table 14. In pre-intervention assessment, there was no statistically significant difference between groups (p=0.657)

and majority of husbands were in the non-preparedness group for BP/CR in both study (73.7%) and control group (69.7%). Contrary to the pre-intervention assessment, the result revealed statistically significant difference between study and control group ($p<0.001$) and majority of husbands in study group were in the compete preparedness group (62.6%) while 26.3% in control group.

Table 14 : Husband Involvement in level of BP\CR among two groups before and after intervention

HI levels in BP/CR	Before Intervention			After Intervention			Before/After	
	Study n (%)	Control n (%)	p-value [a]	Study n (%)	Control n (%)	p-value [a]	Study p-value[b]	Control p-value[b]
Complete preparedness	16 (16.2%)	21 (21.2%)	0.657	62 (62.6%)	26 (26.3%)	<0.001*	<0.001*	0.162
Partial preparedness	10 (10.1%)	9 (9.1%)		13 (13.1%)	16 (16.2%)			
Non-preparedness	73 (73.7%)	69 (69.7%)		24 (24.2%)	54 (57.6%)			

p-value[a] - *between group comparison using Pearson's Chi square test,* p-value[b] - *within groups comparison using Pearson's Chi square test, *Significance at Pearson's Chi square with p-value<0.05*

Part (II) Assessment of husband involvement in BP/CR and other maternal health care practices by checklist

Additionally, to assess the actual behavior not for intention of husband involvement in main five elements of BP/CR and other maternal health care practices, cross checking measurement was conducted through participants' wives by using checklist after delivery. Regards to the five elements of BP/CR, similar with the results presented by husbands, wives of participants in study group revealed that their husbands planned delivery place (91.9%), skilled birth attendant (87.9%), saving money (92.9%), transportation (82%), identified blood donor in case of emergency (66.7%) and showed statistically significant between study and control group in each BP/CR elements.

Husband involvement in other maternal health care practices were also assessed to participants' wives. Four out of five husbands accompanied to their wives during antenatal visit and the results reveal the same in both groups, 85.9% in study group and 81.8% in control group. In terms of sharing maternal health knowledge with their wives, husbands in study group were more likely to share their knowledge than those in the control group ($p<0.001$). There was also no statistically significant result between groups regarding with the decision making of husbands for their wives' maternal health care during pregnancy. Wives in the study group presented that more than half of their husbands (61.6%) accompanied when their wives went to health facility for delivery while 39.4% in control group. Husbands in the study group (94.9%) were more likely to help in household chores than those in the control group (74%) during their wives' pregnancy.

Table 15: Husbands' involvement in BP/CR and other maternal practices through participants' wives by checklist after intervention

Characteristics	Study group n (%)	Control group n (%)	Total n (%)	p-value[a]
Involvement in five BP/CR elements				
Plan delivery place	91 (91.9%)	70 (70.7%)	161 (81.3%)	<0.001*
Plan skilled birth attendant	87 (87.9%)	68 (68.7%)	155 (78.3%)	0.001*
Saving money	92 (92.9%)	83 (83.8%)	175 (88.4%)	0.046*
Plan transportation	82 (82.8%)	58 (58.6%)	140 (70.7%)	<0.001*
Plan blood donor	66 (66.7%)	36 (36.4%)	102 (51.5)	<0.001*
Involvement in other maternal health care practices				
Accompany to antennal visit	85 (85.9%)	81 (81.8%)	166 (83.8%)	0.440
Sharing knowledge	90 (90.9%)	61 (61.6%)	151 (76.3%)	<0.001*
Decision making	96 (97%)	93 (93.9%)	189 (95.5%)	#0.498
Accompany to hospital	61 (61.6%)	39 (39.4%)	100 (50.5%)	0.002*
Household chores	94 (94.9%)	74 (74.7%)	168 (84.8%)	<0.00*1

*[a] Pearson's Chi-square test, [#] Fisher Exact Test, *Significance at Pearson's Chi square test with p-value<0.05*

Part (III) Assessment of Institutional delivery

In addition to measuring the extent of the MiM intervention, it is also important to assess the delivery place and birth attendance towards institutional delivery when considering future implementation. Therefore, delivery place and birth attendant were checked through birth certificate register book which showed in table 16. Participants in the study group delivered their babies at public and private hospital (64.6%) while it was (39.9%) in control group. Regards to birth attendant, participants in the study group chose doctor (64.6%), midwife (26.3%) and traditional birth

attendance (9.1%) while it was 39.4%, 37.4% and 23.2% respectively in control group.

Table 16: Delivery place and birth attendant utilization for delivery among study and control group after intervention

Characteristics	Study group	Control group	Total	p-value [a]
Delivery place				
Hospital	64 (64.6%)	39 (39.4%)	103 (52.0%)	0.001*
Home	35 (35.4%)	60 (60.6%)	95 (48.0%)	
Birth Attendant				
Doctor	64 (64.6%)	39 (39.4%)	103 (52.0%)	0.001*
MW	26 (26.3%)	37 (37.4%)	63 (31.8%)	
TBA	9 (9.1%)	23 (23.2%)	32 (16.2%)	

*[a] Pearson's Chi square test, *Significance at Pearson's Chi square test with p-value<0.05*

Table (17) show the prevalence of institutional delivery among study and control group. For institutional delivery, delivery must be taken at health facility as hospitals including public or private by health care providers. In study group, prevalence of institutional delivery was 64.6% while there was 39.4% in control group and a statistically significant difference was found in prevalence of institutional delivery assessment (p<0.001).

Table 17: Prevalence of Institutional delivery among study and control group after intervention

Characteristics	Study group		Control group		p-value [a]
	n	%	n	%	
Institutional delivery	64	64.6%	39	39.4%	<0.001*
Home delivery	35	35.4%	60	60.6%	

*[a] Pearson's Chi square test, *Significance at Pearson's Chi square with p-value<0.05*

CHAPTER V
DISCUSSION, CONCLUSION AND RECOMMENDATION

This chapter include discussion, conclusion and recommendation for programme based on research findings and advice future research. The quasi experimental study design with two groups was conducted at Lewe Township from Dekkhian district (study group) and Takkone Township from Ottara district (control group) at Nay Pyi Taw Union Territory. In these comparable townships of Nay Pyi Taw Union Territory, number of population and also pregnant women population was high. The main purpose of the study was to determine the effectiveness of Men in Maternity Health (MiM) education intervention to improve husband involvement in birth preparedness and complication readiness and institutional delivery for safe motherhood in Nay Pyi Taw, Myanmar. This study was undertaken with the expectations of husbands' participation in maternal health care practices for their pregnant women wives to improve the utilization of maternal health services and institutional delivery through MiM education approach.

Totally 198 husbands of pregnant women from two townships participated in this study. MiM intervention program emphasized on disseminating health education on importance of maternal health care including antenatal care, delivery care and postnatal care, pregnancy and its complications, obstetric danger signs, benefits of birth preparedness and complication readiness and importance of safe delivery conducted by midwives using flip charts, handout for participants, pictorial and taken action cards. Conforming to the objectives of the study, the data were collected as follow;

(1) Pre-intervention was conducted by interviewing husbands of pregnant women for collecting information on socio demographic characteristics, availability and accessibility of maternal health care service, need factors including pregnancy planning and suspected danger signs of pregnancy, knowledge, attitude and their involvement in BP/CR.

(2) Result assessment was carried out by doing post intervention interview using the same questionnaire as pre-intervention for exploring the changes in knowledge, attitude and husband involvement in BP/CR after delivery.

(3) To ascertain husband involvement in BP/CR, participants' wives were asked about their husbands' involvement by using checklist after delivery.

(4) Institutional delivery prevalence among participants was assessed from birth certificate register book.

The effectiveness of 'Men in Maternity Health' program was determined by exploring the changes in (1) husbands' knowledge and attitude of maternal health care (2) husband involvement in birth preparedness and complication readiness and (3) institutional delivery prevalence after delivery and 6-month intervention period.

5.1 Discussion of findings

5.1.1 Socio demographic characteristics of the studied population

All the husbands in both study and control group were within the age of 19 to 50 years (29.3±5.5 in the study and 30.8±6.5 in the control group). According to the national census report, married male population aged 18-39 were 50% of all married male population living in Nay Pyi Taw (Population, 2015). In this study, 94% of participants were in 18-39 years age group. It may be because of inclusion and exclusion criteria, participants were husbands of pregnant women whose pregnancies was Gravida 1. All of the participants were fully employed even though their education background varied, mostly finished primary and middle education level and were manual workers in both groups. The results were identical with 2014 Census report of Nay Pyi Taw which showed that most of the male population aged 18-49 years attained primary and middle education level (Population, 2015). The occupation result of this study might be due to two-third of population in Nay Pyi Taw were living in rural area so that most of husbands worked manually as farm-hands or self-employed as farmers in their own farms.

Nearly all of the husbands in both study and control groups were ethnically Burma, Buddhist by religion and monogamous by marriage. This may be due to the law on monogamy marriage which was promulgated in 2015 and is compiled among Myanmar Nationals, especially Buddhist ones (H. H. Win, 2016). Other similar characteristics of study and control group were age of wives, education and occupation of wives, number of family member, dependent family member, living with mother or mother in law and economic status by means of wealth index.

Moreover, there were no poorest participants measured by wealth index tool in both study and control group. The contrary findings were found in community based cross sectional studies among married male assessing their awareness of pregnancy danger signs and their involvement in birth preparedness practice in Bangladesh (Rahman et al., 2018) and Ethiopia (Debiso, Gello, & Malaju, 2015) in both studies, one of five husbands were in lowest wealth index quintile. This study result was also different from the wealth index status of Myanmar Demographic Health Survey where 20.9% were in lowest wealth index (Sports, 2017) and it may be due to different populations of husbands of pregnant women living in Nay Pyi Taw in this study and general population of the whole country in a demographic health survey. For instance, all respondents in Nay Pyi Taw have electricity and own private motorcycle (both are used in the calculation of the wealth index) but electricity and motorcycle ownership are scarcely available nationwide.

5.1.2 Availability and Accessibility of maternal health care facility

Regarding the availability of information, more than half of the husbands got information about maternal health care and among them, the largest group received it 2 to 3 times per month. Regarding to the source of information, majority (60%) got from Television and health care personnel (51%). The result was aligned with a community based cross-sectional study conducted among husbands whose wives delivering their babies within 1 year about the assessment of husband participation in BP/CR in which main sources of information for maternal health care were health care providers, television and radio in Ethiopia (Gebrehiwot H, 2013). Surprisingly, participants who get information from Facebook via internet were more than those of newspaper, magazine or journal. The result may be due to that Facebook, popular social media in Myanmar, was used by 34 percent of the Myanmar population and among the users, 62% of active social media users were male according to the survey results about Myanmar Media users (Emilie, 2018) and impact assessment of Facebook in Myanmar (BSR, 2018). Therefore, it might be that husbands can get maternal health care information through health education sharing pages in Facebook.

Regarding the availability of maternal health care facility, nearly all of the participants responded that there were maternal health care services in their residing

ward or villages. The result was aligned with a cross sectional study done by Tenaw in Ethiopia among pregnant women assessing the magnitude the association factors with institutional delivery (Tenaw Z, Mekonnen M, Mengistu M, & T, 2017). It can be seen that maternal health care services can cover the whole population living in the study area. But in this study, availability of nearby health centres was assessed but not for the availability of a referral hospital in case of obstetric care requiring a higher level of service. Moreover, quantity of available maternal health care services was measured but quality of available maternal health care services was not assessed in this study. It is important because a health center with vacant midwife or available midwife who cannot diagnose a life-threatening obstetric emergency that requires referral to a hospital can affect the quality of maternal health care service.

Regarding accessibility, there were homogeneity results between study and control groups on physical and economic accessibility to maternal health care facility. Half of the participants responded that they could easily reach maternal health care facility within 2 miles by motorcycle which takes not more than 30 minutes. This might be due to that there is no public bus service and motorcycle is the typical transportation means in Nay Pyi Taw. Again, 2014 census showed that ownership of motorcycle was 41.9% followed by bicycle 34.2% (Population, 2015). More than 80% of participants in each group accepted that transportation cost and service cost were not expensive. Again, more than half of the participants used not more than 1,000 kyats for transportation as most of the participants used own or motorbike taxi and daily minimum wage of unskilled worker was 4800 kyats (1 USD = 1,525 Kyat according to June 2019 exchange or 1USD = 275 Kyat at PPP) in Myanmar (Economics, 2019). Participants only used out of pocket money for transportation while most of the public maternal health care services were free of charge in Myanmar (Latt et al., 2016) (EuroCham, 2018). In this study, economic and physical accessibility were assessed but not for sociocultural accessibility because almost all participants are of the same race, religion and language usage. Moreover, attitude of service providers towards service users is also important in sociocultural accessibility. Responsiveness and respect to the service users is critical in sociocultural accessibility and link to attitude between providers and users. Providers must respect the decision makers or the users and listen carefully to the rights of the service users. There is no

sociocultural accessibility if service providers do not have attitudes of respect for the users' autonomous decision or respect for the personal dignity of users and their right to confidentiality. Negative attitude of health care service providers contribute to maternal mortality by discouraging pregnant women from seeking birth attendance at delivery and other maternal services (Abiodun, 2010). As negative attitude of health care providers towards service providers have adverse implications in the way majority people across the world respond to health care, which can lead to considerable health disparities (Uduji, 2006).

5.1.3 Need factors

If there is a health problem to be prevented and health service to be used, there must be a need to do that preventive and health seeking action. In this study, prevalence of contraception usage, plan well to get pregnancy or not, wife's current pregnancy gestational age, having suspected danger symptoms of pregnancy are measured as need factors and there was no significant difference between study and control group. Contraceptive prevalence before getting the current pregnancy in this study was about 58.6% and the result was coincident with the UNFPA 2017 annual report result showing 51.3% (UNFPA, 2018). Half of the husbands in the study responded that their wives' pregnancies were intended and plan well together to get current pregnancy. This may be because husbands can influence on the occurrence of unplanned or planned pregnancies among their wives which was proved in the cross sectional studies about assessment of unplanned pregnancy and associated factors among pregnant women by Ayele (M Ayele, N Hamba, & Gudeta, 2017) and husbands' involvement in utilization of skilled birth attendants done by Teklesilasie in Ethiopia (Teklesilasie & Deressa, 2018). In this study, only one-fifth of husbands in both study and control group suspected danger signs of pregnancy before delivery. It may be due to that husbands did not have knowledge of pregnancy danger signs or their wives did not have any suspected danger signs of pregnancy. It is important because it is lifesaving knowledge and need to know the suspected danger signs in time if the pregnant women have.

5.1.4 Effect of MiM intervention on maternal health knowledge of husbands

Before introducing the intervention called 'Men in Maternity health' programme, pre-intervention assessment on knowledge, attitude and husband involvement in BP/CR were conducted. At baseline, total knowledge mean score were 28.5±12.8 in the study group and 25.2±12.4 in the control group respectively. There was no significant difference on each knowledge component of maternal health care between study and control group which showed the consistent study result with a randomized controlled trial study done among pregnant women's couple in Indonesia regarding husbands involvement in BP/CR (Santoso et al., 2017). MiM intervention was conducted among husbands of pregnant women living in Nay Pyi Taw where there were existing maternal health care services in both urban and rural area (Latt et al., 2016) (Sports, 2017). Even though there were existing maternal health education programme in maternal health care service delivery points in which pregnant women and their family members could freely join, baseline result showed low knowledge level. This outcome might be because husbands thought that attending maternal health education was mostly pregnant women's matter and did not need to participate.

The mean change of knowledge score before and after intervention was measured to assess the effect of intervention. Statistical analysis showed that total knowledge mean score was statistically significant difference after 6 months intervention period, 25.2 to 31.2 in control group and 28.5 to 38.9 in study group. This study result was similar with a study done in Indonesia by Santoso among pregnant women's couple assessing husbands involvement in BP/CR (Santoso et al., 2017). Moreover, total knowledge mean score was unexpectedly high in post intervention assessment in control group. This might be due to that participants in the control group receive maternal health education from neighbors, locale health care providers and mass media including television, radios and mobile phones. In Myanmar, radio and TV series of maternal health, mobile application namely 'May May' and 'Phay Phay' has been broadcasting maternal health education programme since 2014 (Barrie, 2015).

5.1.5 Effect of MiM intervention on husbands' attitude towards birth preparedness and complication readiness

In pre-intervention assessment of this study, total attitude score was 36.15 in study group and 35.97 in control group and there was no significance difference between groups.

After implementation of MiM intervention, the trend of attitude increased slightly from 36.15 to 38.42 in study group and 35.97 to 36.51 in control group. The attitude result was not satisfactorily improved after MiM intervention. This might be due to that Myanmar is essentially a patriarchal society and men's mind-sets are difficult to change in assuming maternal health care as women's concern resulting in unchanged attitude score as reported in a cross sectional study done among married men regarding their involvement in maternal health care in Myanmar by Wai (Wai et al., 2015). Moreover, in a general concept, there are four levels of changes namely knowledge changes, attitude changes, behaviour changes and organization performance changes. Knowledge, the easiest way and least time-consuming thing to change in people, changes can occur as a result of reading an article or book and hearing news from information source or knowledgeable person. Attitude is emotionally charged bits of knowledge in positive or negative ways. The second level of changes concerns attitudes which are much more difficult to change than knowledge. The reason is when trying to change an attitude, people will consciously hear what knowledgeable people are saying, but they will not necessarily accept those knowledgeable persons' opinion or point of view (Hiam, 1997) (Pathak, 2010).

5.1.6 Effect of MiM intervention on husbands' involvement in birth preparedness and complication readiness

Husbands' involvement in 5 elements of birth preparedness and complication readiness including planning for delivery place, skilled birth attendant, saving money, transportation and blood donor in case of emergency were assessed to measure the effect of MiM intervention. In pre-intervention assessment among 5 elements of BP/CR, husbands in both study and control group were more likely to involve indirectly as financial support than direct involvement as planning skilled birth attendant for delivery and blood donor in case of emergency for their wives before

give birth. That result was in agreement with the cross sectional study among husbands of pregnant women in southern Ethiopia regarding husbands' participation in BP/CR (Tadesse, Boltena, & Asamoah, 2018) and a quasi-experimental study among married men in northern Nigeria assessing the effect of behavioral intervention on husband involvement in birth preparedness (Ibrahim et al., 2014). There were also no significant difference results in each component of birth preparedness and complication readiness between study and control groups at baseline. But the results scores were significantly increased in post-intervention assessment especially in the study group. This improved result was similar to the result of a randomized controlled study among couples of husbands and pregnant women in Indonesia regarding husbands' engagement in BP/CR using mobile phone (Santoso et al., 2017). This study confirmed that MiM programme had positive impact on improving husbands' participation in maternal health practices for their wives and babies.

Total BP/CR scores were divided into three groups namely; complete preparedness, partial preparedness and non-preparedness. One out of five husbands had complete preparedness in both study and control groups before intervention assessment. In post intervention assessment, three in five husbands had complete preparedness level among study group while the result of control group remained the same result with pre-intervention assessment. Precisely, most of the husbands who failed to identify blood donor in case of emergency had partial and non – preparedness level.

In pre and post intervention assessment, husbands' involvement in preparing blood donor in case of emergency for their wives before give birth were lower than other BP/CR components in both study and control groups. In Myanmar, three out of ten pregnant women had blood loss problem due to antepartum and postpartum hemorrhage which was one of the increasing causes of maternal mortality (Department of Population Ministry of Labour, 2016). This study presented an alarming result highlighting that husbands are ignoring life-saving measures. It could be the risk of maternal emergency in case of bleeding during antenatal, delivery and postpartum period leading to maternal death.

5.1.7 Wives' assessment of husband involvement in BP/CR and other maternal health care practices

Wives of studied husbands were asked to assess their husbands' involvement in BP/CR and other maternal health care practices by using checklist after delivery. While checking five components of BP/CR, wives' responses were consistent with the husbands' answers. Regarding assessing other maternal health care practices, one-fifth of husbands did not accompany their wives to antenatal visit in both groups. Participants' wives in both study and control groups similarly responded that most of their husbands made the decisions regarding maternal health care practices. There was no significant difference between study and control groups regarding husbands accompanying wives to antenatal visits and regarding decision making on maternal health care practices. This might be because of patriarchal society and male dominated household leadership in Myanmar. Husbands can influence the whole family and make decision in almost every aspect of family matter.

More than half of the husbands (61.6%) were accompanying their wives to hospital for delivery in study group which was higher than in the control group (39.4%). It may be due to that husbands who did not accompany their wives to hospitals because their wives delivered their babies at home. Husbands in the study group were more likely to share maternal health knowledge (90.9% in study group and 61.6% in control group) and help in household chores (94.9% study group and 74.7% in control group) during antenatal and postnatal period than those in the control group. The result was not similar to that of a quasi-experimental study done in Nigeria among husbands of pregnant women in which husbands' participation in household chores showed no significant change between pre and post intervention assessment in both groups (Ibrahim, Sabitu, Sufiyan, & Abubakar, 2017). Moreover, husband's involvement in household chores may not be a surprise result because the husbands in the study group shared their maternal health knowledge with their wives and knew the danger signs and important points of maternal health so that they were taking care of their wives by helping them in household chores due to MiM programme. Therefore, MiM programme had positive effect in involvement of husbands on maternal health care practices.

5.1.8 Effect of MiM intervention on institutional delivery practice

To measure the extent of MiM programme, delivery place and birth attendance towards institutional delivery were checked through birth certificate register book. Most of the participants in the study group chose skilled birth attendant as doctors and midwives and only one in ten husbands chose TBA as birth attendant when delivering their babies. Conversely, one fourth of participants' babies in control group were delivered by TBA. Regarding the delivery place, participants choosing home as delivery place in the control group were two times higher than study group. Therefore, prevalence of institutional delivery was statistically significant difference between study and control group, 64.6% and 39.4% respectively. The study result was different from the randomized controlled trial study among pregnant women in Nepal which showed that providing maternal health education programme with or without husbands had no impact on institutional delivery (Mullany et al., 2007). In this study, the result on institutional delivery of control group was similar with demographic health survey report which showed that institutional delivery was 35.8% in Nay Pyi Taw (Sports, 2017). Thus, it can be assumed that MiM programme had benefits by increasing institutional delivery practices towards safe motherhood.

According to the results obtained from the questionnaire and checklist completed by husbands and their wives, most of the husbands planned delivery place and birth attendant in both study (92.9% and 88.9%) and control group (68.7% and 69.7%). But, the results obtained from the birth register book showed that the percentage of participants choosing health facility for delivery place and skilled birth attendant were lower than those obtained from questionnaire and checklist. This may be due to the fact that even though most of the participants planned delivery at health facility and skilled birth attendant as intention of BP/CR before give birth, they finally choose more convenient home delivery by MW or TBA in the actual behavior.

5.2 Conclusion

This study was quasi experimental study with pre and post intervention design that was conducted among husbands of pregnant women population in Nay Pyi Taw Union Territory. After the completion of 'Men in Maternity Health' intervention, large and significant improvements of overall KAP scores were recorded. Therefore,

this intervention is seen to be effective and feasible as a kind of integrated activity in promoting institutional delivery and reducing maternal mortality through husbands' involvement in birth preparedness and complication readiness.

In conclusion, husband participation based maternal health education intervention using flip charts, pictorial and taken action cards had positive impact on husbands' knowledge, attitude and involvement in birth preparedness and complication readiness and institutional delivery. Therefore, implementing the 'Men in Maternity Health' programme for promoting partner involvement in BP/CR and institutional delivery among pregnant women couples can enhance the benefits for safe motherhood.

5.3 Limitation of the study

- The research selected two townships with largest population purposively in Nay Pyi Taw Union Territory so that results may not be generalized to and represented the other townships with middle and low population of Dekkhina and Ottara district in Nay Pyi Taw.
- External co-intervention like information of maternal health care from locale health care providers and mass media could not be controlled.
- Researcher conducted one immediate post intervention measurement to assess the effect of intervention. If researcher got more time to follow up the participants, the result would have included the measurement of the result retention over a longer term.
- Researcher conducted the partial investigation of quantity availability of maternal health care service because the availability of the referral hospitals in case of obstetric care requiring a higher level of service was not investigated in this study.
- Researcher did not investigate on quality of available maternal health care service in this study.
- Due to limited time, some important aspect of sociocultural acceptability such as age, sex and attitude of the providers cannot be investigated in this study.
- Researcher assessed the nearest health facility for antenatal care but did not assess the nearest health facility for delivery.

- Researcher did not investigate the birth outcome difference between the participants who chose institutional delivery and home delivery in this study.
- There was about 20% absence in health education and group discussions sessions participation at health centers every month. Even though research team followed up and provided face to face MiM education at home to each participant, the face to face education could not generate learning through group discussion.

5.4 Strength of the study

In Nay Pyi Taw, this study is the first intervention study of Men in maternity health education to improving husband involvement in birth preparedness and complication readiness for safe motherhood and institutional delivery. Intensive training was also provided for data collectors to reduce bias. Systemic random sampling was used for selecting the participants to prevent selection bias. Regards to post-intervention assessment result, to ascertain the actual behavior not for intention of birth preparedness and complication readiness, this measurement result was conducted twice by using checklist to their wives and institutional delivery by checking local authority birth registries.

5.5 Recommendation

Based on the result of the study, statements below are recommendations which are divided research and programme level for improving husband involvement in birth preparedness and complication readiness and institutional delivery practice for safe motherhood.

5.5.1 Recommendation for future research

- This study should be carried out in large population and long-term period to get a greater number of pregnant women and husbands to determine the changes in husbands' knowledge, attitude and involvement in BP/CR towards institutional delivery for safe motherhood.

- Similar study design with different location should be conducted also to assess the effect of MiM programme on husbands' involvement and institutional delivery practices.
- In-depth interview with key formats should be conducted among midwives, doctors including obstetricians and members on maternal reproductive health committee to explore their concern, suggestion and opinion on MiM education programme.
- Focus group discussion should be conducted with husbands to explore the underlying reasons of those who did not involve in BP/CR and with their wives to assess the underlying reasons of choosing home delivery.
- The further research expanding investigation on 'quantity of available maternal health care service including higher level of referral hospitals in case of obstetric care' is recommended.
- The further research expanding investigation on 'quality of available maternal health care service including health centers and referral hospitals in case of life-threatening obstetric emergency' is recommended.
- The further research expanding investigation on sociocultural acceptability to include age, sex and attitudes of service providers in Myanmar is recommended.
- The further intervention study assessing the nearest health facility for delivery and birth outcome difference between institutional delivery and home delivery is also recommended.

5.5.2 Recommendation for programme level

The results of this study provide a number of important implications for advancement of institutional delivery practices where there is low rate of institutional delivery and high maternal mortality.

- Beyond husband involvement in maternal health, community participation is also needed for sharing the information of maternal health care practices among pregnant women population and their husbands. Government and National Maternal and Reproductive Health Programme should implement the community based maternal health promotion programmes through community

participatory approach for emergency preparedness and institutional delivery practices.

- Also, knowledge on danger signs and importance of maternal health care were increased after MiM programme except postpartum related knowledge. Thus, health education programmes should emphasize and disseminate more on important of postpartum period.
- In Myanmar, there is guideline for childbirth of primigravida pregnant women who must deliver their babies by skilled birth attendant at hospital for reducing maternal mortality. In this study, there were still too many home deliveries practices among participants even in the study group. Therefore, policymakers need to strengthen the existing policy and health care providers need to encourage more on institutional deliveries practices among pregnant women and their families.
- Experience on implementing MiM programme, husbands who were leaders of household used most of their time in their work even in weekend and there was difficulty in gathering participants in one place to conduct MiM health education sessions. Therefore, further health education sessions of MiM programme should be conducted in convenient ways like door to door education and workplace education sessions.
- According to the results of this study, there were mobile phone users and internet users who responded that they got maternal health care via internet and social media. Thus, National Maternal and Reproductive Health Programme should collaborate with international and national non-governmental organization to implement mobile health education (m-health) on maternal health care for pregnant women population, their family members and community.
- To improve institutional delivery practice for safe motherhood, grassroots support is needed at family and community level through community organizations making local partnership with local government, NGOs and INGOs.
- The National Maternal and Reproductive Health Programme, international and non-governmental organization can implement this intervention as a user-

friendly practice with cheaper cost consumption while maintaining its long-term sustainability to improve institutional delivery for safe motherhood.

5.6 Lesson Learnt

In this study, midwives from Myanmar Maternal and Child Welfare Association voluntarily provided health education sessions and facilitated group discussion sessions. Monetary incentive or in kind for motivation of volunteers who are responsible for health education and group discussion sessions is a critical strategy for successful and stainable MiM programme for longer period. Volunteers needed to be recruited selectively, trained, supported and supervised adequately.

As more than half of the husbands were manual and daily wages workers, there was nearly 15% of study participants in both study and control groups who did not come to assembling place for pre and post data collection. Time and resources should be planned for additional data collection at home when participants cannot convene at the assembling place. Moreover, there was about 20% of study groups absent in health education and group discussion sessions holding at health centers every month. Health education and discussions sessions should be conduced face to face and door to door home based approach instead of grouping in health centers and should be held weekends.

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APPENDIX A

Information sheet and inform consent form for husbands (English)

Ethics Review Committee

Department of Medical Research

Ministry of Health and Sports

Republic of the Union of Myanmar

This informed consent form is for among husbands of pregnant women who are ≥ 18 years old and residing in the study area prior to the data collection and who we are requesting to participate in research, titled "Effectiveness of 'Men in Maternity Health (MiM)' intervention to improve husband involvement in Birth preparedness and Complication readiness for safe motherhood in Nay Pyi Taw, Myanmar: A Quasi Experimental Study".

Name of Principal Investigator	: Dr. May Chan Oo
Name of Organization	: PhD Candidate, Collage of Public Health Sciences, Chulalongkorn University
Name of funding organization	**:** Graduate School Thesis Grant, Graduate School, Chulalongkorn University
Title of the Study	: Effectiveness of 'Men in Maternity Health (MiM)' intervention to improve husband involvement in Birth preparedness and Complication readiness for safe motherhood in Nay Pyi Taw, Myanmar: A Quasi Experimental Study

PART I: Information Sheet

Introduction

I am May Chan Oo, currently studying Ph.D. (International Program) at the College of Public Health Science, Chulalongkorn University in Thailand. I am doing research on "Effectiveness of 'Men in Maternity Health (MiM)' intervention to improve husband involvement in Birth preparedness and Complication readiness for safe motherhood in Nay Pyi Taw, Myanmar: A Quasi Experimental Study". I am going to give you information and invite you to be part of this research. Before you

decide to participate, you can talk to anyone you feel comfortable with about the research.

There may be some words that you do not understand. Please ask me to stop as we go through the information and I will take time to explain. If you have questions later, you can ask them of me, the interviewer or the staff.

Purpose of the research

The research aims to determine the effectiveness of Men in Maternity Health (MiM) education intervention to improve husband involvement in birth preparedness and complication readiness for safe motherhood in Nay Pyi Taw, Myanmar.

Type of research intervention

In 'Men in Maternity Health (MiM) education intervention, the activity plan is sending invitation letter, giving maternal health education and discussion about maternal health care. Firstly, invitation letters will be sent to study participants one week ahead of maternal health education session in every month of 6 months intervention period to not only welcome to MiM education program but also remind them to attend this HE sessions and group discussion. Those who receive invitation letter need to attend health education session and discussion once a month for 6 months intervention period.

Participant Selection

You are being invited to take part in this research because you are one of the husbands of pregnant women (gestational age ≤ 16 weeks), more than 18 years old and living in the study area prior to the data collection.

Voluntary Participation

Your participation in this research is entirely voluntary. It is your choice whether to participate or not. You may change your mind during the process and stop participating even if you agreed earlier.

Procedures

It will be included two parts for data collection. The first one is face to face interview by using structured questionnaires and the second one is collection of delivery information from birth certificate register book. For the first part, you will be asked questions about your predisposing factors (e.g., sociodemographic characteristic like age, education, religion, occupational status, family member, wife's age, education and occupation), enabling factors (e.g., availability and accessibility to health care facility), need factors (e.g., plan/unplanned pregnancy and present of suspect danger symptoms of pregnancy) and questions on knowledge, attitude and husband involvement in birth preparedness and complication readiness. This interview will be will be done by well-trained interviewers and the whole interview will be taken around 30 minutes per each individual. You will be asked second time interview subsequent to child delivery, 6 months of intervention period.

For the second part, checklist will also be used for your wife to assess your actual involvement in birth preparedness and complication readiness. Your wife's delivery history such as place of delivery and birth attendance result will be followed up from birth certificate register book to access institutional delivery.

Duration

The research takes place about 6 months. During that time, it will be necessary for you to come to the health center for 12 days, for 2 hours each day. In total, you will be asked to join health education session for 6 times and group discussion for 6 months in 6 months (twice a month). At the end of six months, the research will be finished.

Risks and Discomforts

There will be no or little risk by participating in this research. You may feel uncomfortable while answering the questions but as the questionnaire will be asked privately and it is less likely to happen. However, if you feel uncomfortable any time during interview, you can stop answering and quit your participation.

Benefits

Participating in this research will not directly benefit to you but it is likely to help us find the answer to the research question. But your participation will be the very beneficial to show need for further improvement in achieving safe motherhood. So, the result of this study will be useful to improve the future maternal health care programme in your area and other regions of Myanmar.

Incentives

You will not be provided any incentive to take part in the research.

Confidentiality

We will not be sharing information about you to anyone outside of the research team. The information that we collect from this research project will be kept private. Any information about you will have a number on it instead of your name. Only the researchers will know what your number is.

Sharing the Results

The knowledge that we got from doing this study will be shared with you and local health authorities before it is made widely available to the public. We will publish the results so that other interested people may learn from this study. Anyhow the confidential information will not be shared.

Right to Refuse or Withdraw

You can withdraw from the study anytime without losing or paying anything. You will be informed any new information that may affect your wife's health by the researcher. You will also be provided the confidentiality and privacy.

Who to Contact

If you have any questions, you can ask now or later. If you wish to ask questions later, you may contact any of the following: Dr May Chan Oo, No.29/98, No.2 ward, Nwe Thar Gi Street, Shwe Pyi Tha Township, Yangon. Tel: +95-9-784976279, Email: maechanoo@gmail.com

This proposal has been reviewed and approved by the Ethics Review Committee, Department of Medical Research which is a committee whose task is to

make sure that research participants are protected from harm. If you wish to find out more about the Committee, contact the secretary of the committee at the Department of Medical Research, No 5 Ziwaka Road, Dagon PO, Yangon, phone 375457- ext: 118.

Part II: Certificate of Consent

I have been invited to participate in research about "Effectiveness of 'Men in Maternity Health (MiM)' intervention to improve husband involvement in Birth preparedness and Complication readiness for safe motherhood in Nay Pyi Taw, Myanmar: A Quasi Experimental Study". I have been informed clearly about this study. I understand that being among husbands of pregnant women who are ≥ 18 years old and residing in the study area prior to the data collection, I am eligible to participate in this study. I have been informed that the risks are minimal. I am aware that there may be no benefit to me personally. I consent voluntarily to be a participant in this study and understand that I have the right to withdraw from the research at any time without in any way affecting my future.

Name of participant _____

Signature of participant_____

Date_____

Day/month/year

If illiterate

I have witnessed the accurate reading of the consent form to the potential participant, and the individual has had the opportunity to ask questions. I confirm that the individual has given consent freely.

Name of witness_____ and thumb print of parent

Signature of witness _____

Date _____

Day/month/year

I have accurately read or witnessed the accurate reading of the consent form to the potential participant, and the individual has had the opportunity to ask questions. I confirm that the individual has given consent freely.

Name of Researcher_____

Signature of Researcher _____

Date _____

Day/month/year

A copy of this Informed Consent Form has been provided to participant _____(initialed by the researcher/assistant)

Information sheet and inform consent form for husbands (Myanmar)

လူပုဂ္ဂိုလ်များအပေါ် သုတေသနစမ်းသပ်မှုဆိုင်ရာကျင့်ဝတ်ကော်မတီ

ဆေးသုတေသနဦးစီးဌာန

ကျန်းမာရေးနှင့်အားကစားဝန်ကြီးဌာန

ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်

စမ်းသပ်ခံပုဂ္ဂိုလ်၏ သဘောတူခွင့်ပြုလွှာ (အမျိုးသား)

ဤသဘောတူခွင့်ပြုလွှာသည် မြန်မာနိုင်ငံနေပြည်တော်ပြည်ထောင်စုနယ်မြေတွင် နေထိုင်သော ကိုယ်ဝန်ဆောင်မိခင်များ၏ ကျန်းမာရေးစောင့်ရှောက်မှု နှင့် မွေးဖွားရန် ကြိုတင်ပြင်ဆင်မှု ကိစ္စရပ်များတွင် အိမ်ထောင်သည် အမျိုးသားများ၏ ပါဝင်ဆောင်ရွက်မှု အခန်းကဏ္ဍနှင့် သက်ဆိုင်သည့် အကြောင်းအရာများအား လေ့လာသော သုတေသန စီမံချက်တွင် ပါဝင်ရန် ဖိတ်ခေါ်အပ်ပါသည်။

အဓိကသုတေသီအမည် : ဒေါက်တာ မေချမ်းဦး

အဖွဲ့အစည်းအမည် : ပါရဂူကျောင်းသူ၊ ပြည်သူ့ကျန်းမာရေးကောလိပ်၊ ချူလာလောင်ကွန်းတက္ကသိုလ်

သုတေသနခေါင်းစဉ် :

မြန်မာနိုင်ငံနေပြည်တော်ပြည်ထောင်စုနယ်မြေတွင်နေထိုင်သော ကိုယ်ဝန်ဆောင်မိခင်များ၏ ကျန်းမာရေးစောင့်ရှောက်မှုနှင့် မွေးဖွားရန် ကြိုတင်ပြင်ဆင်မှု ကိစ္စရပ်များတွင် အိမ်ထောင်သည်အမျိုးသားများ၏ပါဝင်ဆောင်ရွက်မှု အခန်းကဏ္ဍနှင့် သက်ဆိုင်သည့် အကြောင်းအရာများအား လေ့လာခြင်း။

အပိုင်း(၁) သုတေသနနှင့် ပက်သက်သည့် အကြောင်းအရာများ မိတ်ဆက်ခြင်း

ကျွန်မဒေါက်တာမေချမ်းဦးသည် ထိုင်းနိုင်ငံ၊ ချူလာလောင်ကွန်းတက္ကသိုလ်၊ ပြည်သူ့ကျန်းမာရေးကောလိပ်တွင် ပညာသင်ကြားနေသောကျောင်းသူတစ်ဦးဖြစ်ပါသည်။ ကျွန်မသည် "မြန်မာနိုင်ငံ၊ နေပြည်တော်ပြည်ထောင်စုနယ်မြေတွင်နေထိုင်သော ကိုယ်ဝန်ဆောင် မိခင်များ၏ ကျန်းမာရေးစောင့်ရှောက်မှု နှင့် မွေးဖွားရန်ကြိုတင်ပြင်ဆင်မှု ကိစ္စရပ်များတွင် အိမ်ထောင်သည် အမျိုးသားများ၏ ပါဝင်ဆောင်ရွက်မှု အခန်းကဏ္ဍနှင့် သက်ဆိုင်သော အကြောင်းအရာများအား လေ့လာခြင်း" သုတေသနစာတမ်းအား ပြုလုပ်မည်ဖြစ်ပါသည်။ သင့်ကို ကျွန်ုပ်၏ သုတေသနတွင် ပါဝင်ရန်ဖိတ်ခေါ်အပ်ပါသည်။ နားမလည်သောစကားရပ်များရှိပါက ကျွန်ုပ် (သို့မဟုတ်) သုတေသနတွင် ပါဝင်သူ တစ်ဦးဦးအား အချိန်မရွေး မေးမြန်းနိုင်ပါသည်။

သုတေသန၏ ရည်ရွယ်ချက်

မြန်မာနိုင်ငံ၊ နေပြည်တော်ပြည်ထောင်စုနယ်မြေတွင် နေထိုင်သော ကိုယ်ဝန်ဆောင် မိခင်များ၏ ကျန်းမာရေးစောင့်ရှောက်မှုနှင့် မွေးဖွားရန် ကြိုတင်ပြင်ဆင်မှု ကိစ္စရပ်များတွင် အိမ်ထောင်သည် အမျိုးသားများ၏ ပါဝင်ဆောင်ရွက်မှု အခန်းကဏ္ဍနှင့် သက်ဆိုင်သော အကြောင်းအရာများအား လေ့လာဖော်ထုတ်ရန်။

သုတေသနဆောင်ရွက်ပုံအမျိုးအစား

ဤသုတေသနတွင် အိမ်ထောင်သည်အမျိုးသားများနှင့် ကိုယ်ဝန်ဆောင်မိခင် ကျန်းမာရေးစောင့်ရှောက်မှု ပညာပေးအခန်းကဏ္ဍ ပါဝင်မည်ဖြစ်သည်။ ယင်းတွင် ပါဝင်မည့်သူများအား ဖိတ်စာများဖြန့်ဝေခြင်း၊ ကိုယ်ဝန်ဆောင်မိခင်ကျန်းမာရေး

စောင့်ရှောက်မှု၊ ကြိုတင်ပြင်ဆင်မှု ပညာပေးခြင်း နှင့် ဆွေးနွေးခြင်း အစီအစဉ်များ ပါဝင်မည်ဖြစ်သည်။ ဖိတ်စာများကို ပါဝင်မည့်သူအမျိုးသားများထံသို့ လစဉ်ကျန်းမာရေး အသိပညာပေး နှင့် ဆွေးနွေးပွဲ မပြုလုပ်မီ တစ်ပါတ်ခန့်စော၍ ပို့ပေးမည်ဖြစ်ပါသည်။ ထို့ကြောင့် သုတေသနတွင် ပါဝင်မည့် အိမ်ထောင်သည်အမျိုးသားများသည် ကိုယ်ဝန်ဆောင်မိခင် ကျန်းမာရေး စောင့်ရှောက်မှုနှင့်ပက်သက်သော ကျန်းမာရေး အသိပညာပေးပွဲနှင့်ဆွေးနွေးပွဲကို တစ်လလျှင် (၂) ကြိမ်နှင့် သုတေသနကာလ (၆) လအတွင်း (၁၂) ကြိမ်တက်ရောက်ရမည် ဖြစ်သည်။

သုတေသနတွင် ပါဝင်မည့်သူများကို ရွေးချယ်ခြင်း

သင်သည် နေပြည်တော်ပြည်ထောင်စုနယ်မြေတွင် နေထိုင်သော အသက် ၁၈ နှစ်ပြည့်ပြီးသူဖြစ်ပြီး သင်၏ဇနီးမှာ ကိုယ်ဝန် ၄ လ အောက်ရှိသော ကိုယ်ဝန်ဆောင်မိခင်ဖြစ်သောကြောင့် ဤသုတေသနတွင် ပါဝင်ရန် ဖိတ်ခေါ်အပ်ပါသည်။

မိမိဆန္ဒအလျောက် သုတေသနတွင်ပါဝင်ခြင်း

ဤသုတေသနတွင်ပါဝင်ခြင်းမှာ သင်၏လွတ်လပ်သောသဘောဆန္ဒအလျောက်သာ ဖြစ်သည်။ အကယ်၍ ပါဝင်ခြင်းမရှိပါလျှင် သင်၏ဇနီးကိုယ်ဝန်ဆောင်အတွက် နောင်ရရှိမည့်ကျန်းမာရေးစောင့်ရှောက်မှုအား မည်သို့ မျှထိခိုက်စေမည် မဟုတ်ပါ။

သုတေသနလုပ်ငန်းလုပ်ဆောင်ချက်အဆင့်ဆင့်

ဤသုတေသနဆောင်ရွက်ရာတွင် အဓိကအပိုင်း ၂ ပိုင်း ပါဝင်မည်ဖြစ်သည်။ ပထမတစ်ပိုင်းမှာ မျက်နှာချင်းဆိုင်မေးခွန်းမေးမြန်းခြင်းဖြစ်ပြီး ဒုတိယတစ်ပိုင်းမှာ ကိုယ်ဝန်ဆောင်မိခင် ကလေးမွေးဖွားမှုဆိုင်ရာ ကျန်းမာရေးစစ်ဆေးမှု အချက်အလက်

များကို လူနာမှတ်တမ်းများမှတစ်ဆင့် စာရင်းကောက်ယူခြင်းဖြစ်ပါသည်။ ပထမအပိုင်း အတွက် သင့်အား လူမှုရေး၊ စီးပွားရေးအခြေခံ အချက်အလက်များ၊ ကိုယ်ဝန်ဆောင်မိခင် ကျန်းမာရေး စောင့်ရှောက်မှုနှင့်ပက်သက်သော ဗဟုသုတနှင့် ခံယူချက်၊ ပတ်ဝန်းကျင်၏ တိုက်တွန်းလှုံ့ဆော်မှု၊ ကိုယ်ဝန်ဆောင်မိခင်ကျန်းမာရေးစောင့်ရှောက်မှု ရရှိနိုင်သောအခြေ အနေ၊ လက်လမ်းမှီမှုနှင့် အကုန်အကျခံနိုင်သောအခြေအနေ၊ ကိုယ်ဝန်ဆောင်မိခင် ကလေး မွေးဖွားရန် ကြိုတင်ပြင်ဆင်မှုတွင် အမျိုးသားများ ပူးပေါင်းပါဝင်ဆောင်ရွက်ခြင်း အစရှိသည့် အချက်အလက်များနှင့် သက်ဆိုင်သော မေးခွန်း များကိုမေးမြန်း သွားမည် ဖြစ်သည်။ မေးခွန်း မေးမြန်းခြင်းကို စနစ်တကျလေ့ကျင့် ထားသော သူများမှ မေးမြန်းမည် ဖြစ်ပြီး မေးခွန်းများ အားလုံး ဖြေဆိုရန် ခန့်မှန်းအားဖြင့် ၃၀ မိနစ်မျှ ကြာမြင့်မည် ဖြစ်ပါသည်။

ဒုတိယပိုင်းအတွက် ကျန်းမာရေးဌာန (သို့) တာဝန်ကျသားဖွားဆရာမ ၏ အကူအညီဖြင့်လူနာမှတ်တမ်း (သို့) မွေးဖွားစာရင်းများ မှတစ်ဆင့် ကိုယ်ဝန်ဆောင်မိခင် ကလေးမွေးဖွားခြင်းနှင့် ပတ်သက်သော သတင်းအချက်အလက်များကို လေ့လာစစ်ဆေး ကာ အန္တရာယ်ကင်းသော ကလေးမီးဖွားမှု အကြောင်းအရာကို လေ့လာမည်ဖြစ်ပါသည်။ သင်၏ကလေးမွေးဖွားရန် ကြိုတင်ပြင်ဆင်မှုတွင် သင်မည်မျှပူးပေါင်းပါဝင် ဆောင်ရွက် ခြင်းရှိ/ မရှိအစရှိသည့် အချက်အလက်များကိုလည်း သင့်ဇနီးအားမေးမြန်းမည် ဖြစ်ပါ သည်။ မေးခွန်းမေးမြန်းခြင်းကို စနစ်တကျလေ့ကျင့်ထားသောသူများမှ မေးမြန်းမည်ဖြစ် ဖြစ်ပါသည်။

ကြာမြင့်ချိန်

ဤသုတေသနသည် (၆) လကြာမြင့်မည် ဖြစ်သည်။ ၎င်းအချိန်အတွင်း ပါဝင်သူများသည် ကိုယ်ဝန်ဆောင် ကျန်းမာရေး စောင့်ရှောက်မှုပေးသော ရပ်ကွက်/ရွာရှိ ဆေးခန်းသို့ လာရောက်၍ ခန့်မှန်းခြေ ၂ နာရီခန့်ကြာမြင့်မည့် ကျန်းမာရေး အသိပညာပေးပွဲများနှင့် ဆွေးနွေးပွဲများကို ၆ ရက်တက်ရောက်ရပါမည်။ တစ်လလျှင် (၂) ရက်နှင့် သုတေသန (၆) လတွင် (၁၂) ကြိမ်တက်ရောက်ရန်လိုအပ်ပါသည်။ (၆) လကြာလျှင် သုတေသနပြီးဆုံးမည် ဖြစ်ပါသည်။

ထိခိုက်နိုင်မှုနှင့် ကိုယ်စိတ်အနှောင့်အယှက်ဖြစ်စေခြင်းများ

ဤသုတေသနတွင်ပါဝင်ကာ ဝင်ရောက်ဆွေးနွေး ဖြေဆိုသူအနေဖြင့် မေးခွန်းများအား သီးသန့်ဖြေဆိုချိန်တွင် သက်တောင့်သက်သာမရှိမှု အနည်းငယ်ခံစား ရနိုင်ပါသည်။ ဤသုတေသန ဖြေဆိုချိန်တွင် ပါဝင်သူအနေဖြင့် စိတ်ကျေနပ်မှုမရှိပါက သုတေသနတွင် ဆက်လက်မပါဝင်ပဲ နေနိုင်ပါသည်။

အကျိုးကျေးဇူးများ

ဤသုတေသနမှရရှိလာမည့် ရလဒ်အဖြေများတွေ့ရှိမှုများသည် သင့်အား တိုက်ရိုက်အကျိုးပြုလိမ့်မည်မဟုတ်ပါ။ သို့သော် သုတေသနမှရရှိလာသောအဖြေများသည် ကိုယ်ဝန်ဆောင်မိခင် ကျန်းမာ ရေးစောင့်ရှောက်မှု စီမံချက် အောင်မြင်မှုရရှိရန် လုပ်ဆောင်ရမည့် လိုအပ်ချက်များကို ပြသပေးပါသည်။ ထိုအဖြေများသည် အနာဂတ်တွင် သင်နေထိုင်ရာဒေသနှင့် မြန်မာပြည်တစ်ဝန်းတွင်လုပ်ဆောင်နေသော မိခင်နှင့်ကလေး ကျန်းမာရေး

စောင့်ရှောက်မှု စီမံချက်အောင်မြင်အောင် အကောင်အထည်ဖော်ရန် များစွာ အထောက် အကူပြုမည် ဖြစ်ပါသည်။

ကျေးဇူးတုံ့ပြန်မှု

သုတေသနလုပ်ငန်းတွင် သင်အချိန်ပေးပါဝင်ဖြေကြားမှုကို အသိအမှတ်ပြုပါသည်။ သင်ပူးပေါင်း ပါဝင်မှုအတွက် ငွေသား (သို့မဟုတ်) ပစ္စည်းများကို ကျေးဇူးတုံ့ပြန်သည့် အနေဖြင့် ပေးမည်မဟုတ်ပါ။

အချက်အလက်များကို လျှို့ဝှက်ထားရှိမှု

ဤသုတေသနစီမံချက်မှ ရရှိသော သတင်းအချက်အလက်များကို လျှို့ဝှက်ထား မည်။ သင်နှင့်ပက်သက်သော အချက်အလက်များကို သုတေသနပြုလုပ်သူများမှလွဲ၍ မည်သူတစ်ဦးတစ်ယောက်မှ ကြည့်ပိုင်ခွင့်မရှိပါ။ သင်၏ နာမည်အစား နံပါတ်စနစ်ဖြင့် အချက်အလက်များကို သိမ်းဆည်းထားမည်။ သုတေသနပြုလုပ်သူများသာလျှင် သင်၏ နံပါတ်ကိုသိရှိပြီး သေချာစွာသော့ခတ် သိမ်းဆည်းထားမည် ဖြစ်သည်။

သုတေသနရလာဒ်များကိုဖြန့်ဝေမှု

ဤသုတေသနမှရရှိလာမည့် ရလဒ်များကို အများပြည်သူလေ့လာနိုင်စေရန် မဖြန့်ဝေမီ သင်နှင့် သက်ဆိုင် ရာ အဖွဲ့အစည်းများကို အသိပေးမည်ဖြစ်ပါသည်။ အကယ်၍ ဤသုတေသနကို အခြားစိတ်ဝင်စား သောသူများရှိပါက လေ့လာနိုင်ရန်အတွက် လေ့လာတွေ့ရှိချက်များအား သုတေသနစာတမ်း ထုတ်ဝေ ခြင်းတွင် အသုံးပြုမည် ဖြစ်ပါသည်။

ပါဝင်မည့်သူများ၏ ရပိုင်ခွင့်များ

ဤသုတေသနမှ သင်အချိန်မရွေး နှုတ်ထွက်နိုင်ပါသည်။ ဆုံးရှုံးနစ်နာခြင်း တစ်စုံတစ်ရာ ပေးဆောင်ရခြင်းမရှိပါ။ အကယ်၍ သင့်ဇနီးကျန်းမာရေးကို ထိခိုက်နိုင်မည့် အခြေအနေအသစ် များ ရှိလာပါကလည်း သုတေသနပြုလုပ်သူမှ သင့်အား သတင်းပေး သွားမည် ဖြစ်ပါသည်။ ထို့အပြင် လုံခြုံစိတ်ချရမှု နှင့် ဘေးကင်းယုံကြည်ရမှုတို့လည်း ရှိမည် ဖြစ်ပါသည်။

ဆက်သွယ်နိုင်မည့်ပုဂ္ဂိုလ်များ

အကယ်၍ သင်၌မေးစရာမေးခွန်းများရှိပါက အချိန်မရွေးမေးမြန်းနိုင်ပါသည်။ မေးစရာရှိလျှင် ဒေါက်တာ မေချမ်းဦး၊ ပြည်သူ့ကျန်းမာရေးကောလိပ်၊ ချူလာလောင်ကွန်း တက္ကသိုလ်၊ ဘွဲ့လွန်သင်တန်း ကျောင်းသူ၊ ထိုင်းနိုင်ငံ၊ လိပ်စာ - အမှတ်၂၉/၉၈၊ အမှတ် (၂) ရပ်ကွက်၊ နွယ်သာကီလမ်း၊ ရွှေပြည်သာမြို့နယ် ရန်ကုန်တိုင်းဒေသကြီး၊ တယ်လီဖုန်း +၉၅ ၉၇၈၄၉၇၆၂၉ သို့ဆက်သွယ် နိုင်ပါသည်။

ဤအဆိုပြုချက်သည် လူပုဂ္ဂိုလ်များအပေါ် သုတေသနစမ်းသပ်မှုဆိုင်ရာ ကျင့်ဝတ်ကော်မတီ ဆေးသုတေသနဦးစီးဌာန၏ ဆန်းစစ်ဘောတူအတည်ပြုချက်ရပြီးဖြစ်သည်။ အကယ်၍သင် သည် ကော်မတီနှင့် ပက်သက် သိလိုသည်များရှိပါက အတွင်းရေးမှူး (ကော်မတီ)၊ ဆေးသုတေ သနဦးစီးဌာန၊ အမှတ် (၅)၊ ဇီဝကလမ်း၊ ဒဂုံမြို့နယ်၊ ရန်ကုန်၊ ဖုန်း ၃၇၅၄၄၇၊ လိုင်းခွဲ ၁၁၈သို့ ရုံးချိန်အတွင်း ဆက်သွယ်နိုင်ပါသည်။

အပိုင်း (၂) သဘောတူညီချက်

ကျွန်ုပ်သည် "မြန်မာနိုင်ငံ၊ နေပြည်တော်ပြည်ထောင်စုနယ်မြေတွင်နေထိုင်သော ကိုယ်ဝန်ဆောင်မိခင်များ၏ ကျန်းမာရေးစောင့်ရှောက်မှုနှင့် မွေးဖွားရန်ကြိုတင်ပြင်ဆင်မှု ကိစ္စရပ်များတွင် အိမ်ထောင်သည်အမျိုးသားများ၏ ပါဝင်ဆောင်ရွက်မှု အခန်းကဏ္ဍနှင့် သက်ဆိုင်သည့် အကြောင်းအရာများအားလေ့လာခြင်း" သုတေသနစီမံချက်တွင် ပါဝင်ရန် ဖိတ်ခေါ်ခြင်း ခံရ ပါသည်။

သုတေသနပြုလုပ်သူတို့သည် "မြန်မာနိုင်ငံ၊ နေပြည်တော်ပြည်ထောင်စု နယ်မြေတွင် နေထိုင်သော ကိုယ်ဝန်ဆောင်မိခင်များ၏ ကျန်းမာရေးစောင့်ရှောက်မှုနှင့် မွေးဖွားရန်ကြိုတင်ပြင်ဆင်မှု ကိစ္စရပ် များတွင် အိမ်ထောင်သည်အမျိုးသားများ၏ ပါဝင်ဆောင်ရွက်မှု အခန်းကဏ္ဍနှင့် သက်ဆိုင်သည့် အကြောင်းအရာ များအားလေ့လာခြင်း" သုတေသနပြုလုပ်မည်ဖြစ်ကြောင်း သိရှိနားလည်ပြီး ဖြစ်ပါသည်။ ကျွန်ုပ်တွင်မည်သည့် အန္တရာယ်မှ မရှိကြောင်းလည်း သိရှိနားလည်ပြီး ဖြစ်ပါသည်။ သုတေသနပြုလုပ်သူနှင့် ဆက်သွယ်ရန် လိပ်စာ၊ ဖုန်းနံပါတ်များကိုလည်း သိရှိပြီးဖြစ်ပါသည်။

ကျွန်ုပ်သည်ရှေ့မှ အချက်အလက်များကို ဖတ်ရှုပြီးဖြစ်ပါသည်။ (သို့မဟုတ်) ကျွန်ုပ်အား ဖတ်ပြပြီးဖြစ်ပါသည်။ ကျွန်ုပ်တွင် မေးခွန်းမေးပိုင်ခွင့်နှင့် ထိုမေးခွန်းများကို ကျွန်ုပ်ကျေနပ်သည်အထိ ဖြေကြားပြီး ဖြစ်ပါသည်။ ကျွန်ုပ်သည် သုတေသနတွင် မိမိဆန္ဒအလျောက်ပါဝင်ရန်သဘောတူပါသည်။ ဤသုတေသန လုပ်ငန်းများမှ အချိန်မရွေး နှုတ်ထွက်ခွင့်ရှိပြီး ယင်းသို့နှုတ်ထွက်ကြောင်း ကျွန်ုပ်အပေါ် မည်သို့မျှထိခိုက်ခြင်း မရှိကြောင်း နားလည်ပြီးဖြစ်ပါသည်။

ပါဝင်သူ အမည် ----------

ပါဝင်သူ လက်မှတ် ----------

နေ့စွဲ ----------

(ရက် ၊ လ ၊ နှစ်)

အကယ်၍စာမတတ်သူဖြစ်လျှင်

ကျွန်ုပ်၏ရှေ့မှောက်၌ သုတေသနတွင်ပါဝင်မည့်သူများအား သဘောတူညီချက်ကို တိတိကျကျ ရှင်းရှင်းလင်းလင်း ဖတ်ပြပြီးဖြစ်သည်။ နားမလည်သည်များကို မေးပိုင်ခွင့် ရှိသည်။ ထိုသူသည် ဆန္ဒအလျောက် သဘောတူညီချက်ကို လွတ်လွတ်လပ်လပ် ပေးခြင်း ဖြစ်ကြောင်း ထောက်ခံအတည်ပြု အပ်ပါသည်။

သက်သေအမည် ----------

ပါဝင်သူ၏လက်ဗွေ

သက်သေလက်မှတ် ----------

နေ့စွဲ ----------

(ရက်၊ လ၊ နှစ်)

ကျွန်ုပ်၏ရှေ့မှောက်၌ သုတေသနတွင်ပါဝင်မည့်သူများအား သဘောတူညီချက် ကို တိတိကျကျ ရှင်းရှင်းလင်းလင်း ဖတ်ပြပြီးဖြစ်သည်။ နားမလည်သည်များကို မေးပိုင်ခွင့်

ရှိသည်။ ထိုသူသည် ဆန္ဒအလျောက် သဘောတူညီချက်ကို လွတ်လွတ်လပ်လပ် ပေးခြင်း ဖြစ်ကြောင်း ထောက်ခံအတည်ပြု အပ်ပါသည်။

သုတေသီ၏အမည် ----------

သုတေသီလက်မှတ် ----------

နေ့စွဲ ----------

(ရက်၊ လ၊ နှစ်)

ဤသဘောတူခွင့်ပြုလွှာ မိတ္တူတစ်စောင်ကို သုတေသနတွင် ပါဝင်မည့်သူအား ပေးအပ်ပြီး ဖြစ်သည်။

(သုတေသီ / သုတေသီလက်ထောက်)

Information sheet and inform consent form for wives (English)

Ethics Review Committee
Department of Medical Research
Ministry of Health and Sports
Republic of the Union of Myanmar
Informed Consent form (For participants' wives)

This informed consent form is for ≥ 18 years old wives whose husbands are participating in this study and residing in the study area prior to the data collection and who are requesting to participate in research, titled "Effectiveness of 'Men in Maternity Health (MiM)' intervention to improve husband involvement in Birth preparedness and Complication readiness for safe motherhood in Nay Pyi Taw, Myanmar: A Quasi Experimental Study".

Name of Principal Investigator	: Dr. May Chan Oo
Name of Organization	: PhD Candidate, Collage of Public Health Sciences, Chulalongkorn University
Name of funding organization	: Graduate School Thesis Grant, Graduate School, Chulalongkorn University
Title of the Study	: Effectiveness of 'Men in Maternity Health (MiM)' intervention to improve husband involvement in Birth preparedness and Complication readiness for safe motherhood in Nay Pyi Taw, Myanmar: A Quasi Experimental Study

PART I: Information Sheet

Introduction

I am May Chan Oo, currently studying Ph.D. (International Program) at the College of Public Health Science, Chulalongkorn University in Thailand. I am doing research on "Effectiveness of 'Men in Maternity Health (MiM)' intervention to improve husband involvement in Birth preparedness and Complication readiness for

safe motherhood in Nay Pyi Taw, Myanmar: A Quasi Experimental Study". I am going to give you information and invite you to be part of this research. Before you decide to participate, you can talk to anyone you feel comfortable with about the research.

There may be some words that you do not understand. Please ask me to stop as we go through the information and I will take time to explain. If you have questions later, you can ask them of me, the interviewer or the staff.

Purpose of the research

The research aims to determine the effectiveness of Men in Maternity Health (MiM) education intervention to improve husband involvement in birth preparedness and complication readiness for safe motherhood in Naypyitaw, Myanmar.

Type of research intervention

In 'Men in Maternity Health (MiM) education intervention, the activity plan are sending invitation letter, giving maternal health education and discussion about maternal health care with husbands of pregnant women.

Participant Selection

You are being invited to take part in this research because your husbands are participating in this study who had 18 years old or more and living in the study area prior to the data collection.

Voluntary Participation

Your participation in this research is entirely voluntary. It is your choice whether to participate or not. You may change your mind during the process and stop participating even if you agreed earlier.

Procedures

It will be included two parts for data collection. The first one is face to face interview by using interviewer structured questionnaires and the second one is collection of delivery information from birth certificate register book and checklist to

access actual husband involvement among pregnant mother. For the first part, your husband will be asked.

For the second part, checklist will also be used for you to assess your husband actual involvement in birth preparedness and complication readiness which will be taken around 10 minutes per each individual. Your delivery history such as place of delivery and birth attendance result will be followed up from birth certificate register book or assign midwife to access institutional delivery.

Duration

The research takes place about 6 months. In total, your husband will be asked to join health education session and discussion sessions for 12 times in 6 months (twice a month). At the end of six months, the research will be finished.

Risks and Discomforts

There will be no or little risk by participating in this research. You may feel uncomfortable while answering the questions but as the questionnaire will be asked privately and it is less likely to happen. However, if you feel uncomfortable any time during interview, you can stop answering and quit your participation.

Benefits

Participating in this research will not directly benefit to you but it is likely to help us find the answer to the research question. But your participation will be the very beneficial to show need for further improvement in achieving safe motherhood. So the result of this study will be useful to improve the future maternal health care programme in your area and other regions of Myanmar.

Incentives

You will not be provided any incentive to take part in the research.

Confidentiality

We will not be sharing information about you to anyone outside of the research team. The information that we collect from this research project will be kept private. Any information about you will have a number on it instead of your name. Only the researchers will know what your number is.

Sharing the Results

The knowledge that we got from doing this study will be shared with you and local health authorities before it is made widely available to the public. We will publish the results so that other interested people may learn from this study. Anyhow the confidential information will not be shared.

Right to Refuse or Withdraw

You can withdraw from the study anytime without losing or paying anything. You will be informed any new information that may affect your wife's health by the researcher. You will also be provided the confidentiality and privacy.

Who to Contact

If you have any questions, you can ask now or later. If you wish to ask questions later, you may contact any of the following: Dr May Chan Oo, No.29/98, No.2 ward, Nwe Thar Gi Street, Shwe Pyi Tha Township, Yangon. Tel: +95-9-784976279, Email: maechanoo@gmail.com

This proposal has been reviewed and approved by the Ethics Review Committee, Department of Medical Research which is a committee whose task is to make sure that research participants are protected from harm. If you wish to find out more about the Committee, contact the secretary of the committee at the Department of Medical Research, No 5 Ziwaka Road, Dagon PO, Yangon, phone 375457- ext: 118.

Part II: Certificate of Consent

I have been invited to participate in research about "Effectiveness of 'Men in Maternity Health (MiM)' intervention to improve husband involvement in Birth preparedness and Complication readiness for safe motherhood in Nay Pyi Taw, Myanmar: A Quasi Experimental Study". I have been informed clearly about this study. I understand that being ≥ 18 years old pregnant mother whose husbands are participating in this study and residing in the study area prior to the data collection, I am eligible to participate in this study. I have been informed that the risks are minimal. I am aware that there may be no benefit to me personally. I consent voluntarily to be a participant in this

study and understand that I have the right to withdraw from the research at any time without in any way affecting my future.

Name of participant _____

Signature of participant_____

Date_____

Day/month/year

If illiterate

I have witnessed the accurate reading of the consent form to the potential participant, and the individual has had the opportunity to ask questions. I confirm that the individual has given consent freely.

Name of witness_____ and thumb print

Signature of witness _____

Date _____

Day/month/year

I have accurately read or witnessed the accurate reading of the consent form to the potential participant, and the individual has had the opportunity to ask questions. I confirm that the individual has given consent freely.

Name of Researcher_____

Signature of Researcher _____

Date _____

Day/month/year

A copy of this Informed Consent Form has been provided to participant _____(initialed by the researcher/assistant)

Information sheet and inform consent form for wives (Myanmar)

လူပုဂ္ဂိုလ်များအပေါ် သုတေသနစမ်းသပ်မှုဆိုင်ရာကျင့်ဝတ်ကော်မတီ

ဆေးသုတေသနဦးစီးဌာန

ကျန်းမာရေးနှင့်အားကစားဝန်ကြီးဌာန

ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်

စမ်းသပ်ခံပုဂ္ဂိုလ်၏ သဘောတူခွင့်ပြုလွှာ (အမျိုးသမီး)

ဤသဘောတူခွင့်ပြုလွှာသည် မြန်မာနိုင်ငံနေပြည်တော်ပြည်ထောင်စုနယ်မြေတွင် နေထိုင်သော ကိုယ်ဝန်ဆောင်မိခင်များ၏ ကျန်းမာရေးစောင့်ရှောက်မှု နှင့် မွေးဖွားရန် ကြိုတင်ပြင်ဆင်မှု ကိစ္စရပ်များတွင် အိမ်ထောင်သည် အမျိုးသားများ၏ ပါဝင်ဆောင်ရွက်မှု အခန်းကဏ္ဍနှင့် သက်ဆိုင်သည့် အကြောင်းအရာများအား လေ့လာသော သုတေသန စီမံချက်တွင် ပါဝင်ရန် ဖိတ်ခေါ်အပ်ပါသည်။

အဓိကသုတေသီအမည် : ဒေါက်တာ မေချမ်းဦး

အဖွဲ့အစည်းအမည် : ပါရဂူကျောင်းသူ၊ ပြည်သူ့ကျန်းမာရေးကောလိပ်၊ ချူလာလောင်ကွန်းတက္ကသိုလ်

သုတေသနခေါင်းစဉ် :မြန်မာနိုင်ငံနေပြည်တော်ပြည်ထောင်စုနယ်မြေတွင်နေထိုင်သော ကိုယ်ဝန်ဆောင်မိခင်များ၏ ကျန်းမာရေးစောင့်ရှောက်မှုနှင့် မွေးဖွားရန် ကြိုတင်ပြင်ဆင်မှု ကိစ္စရပ်များတွင် အိမ်ထောင်သည်အမျိုးသားများ၏ ပါဝင်ဆောင်ရွက်မှု အခန်းကဏ္ဍနှင့် သက်ဆိုင်သည့် အကြောင်းအရာများအား လေ့လာခြင်း။

အပိုင်း(၁) သုတေသနနှင့် ပက်သက်သည့် အကြောင်းအရာများ မိတ်ဆက်ခြင်း

ကျွန်မဒေါက်တာမေချမ်းဦးသည် ထိုင်းနိုင်ငံ၊ ချူလာလောင်ကွန်းတက္ကသိုလ်၊ ပြည်သူ့ကျန်းမာရေးကောလိပ်တွင် ပညာသင်ကြားနေသောကျောင်းသူတစ်ဦးဖြစ်ပါသည်။ ကျွန်မသည် "မြန်မာနိုင်ငံ၊ နေပြည်တော်ပြည်ထောင်စုနယ်မြေတွင်နေထိုင်သော ကိုယ်ဝန်ဆောင်မိခင်များ၏ ကျန်းမာရေးစောင့်ရှောက်မှု နှင့် မွေးဖွားရန်ကြိုတင်ပြင်ဆင်မှု ကိစ္စရပ်များတွင် အိမ်ထောင်သည် အမျိုးသားများ၏ ပါဝင်ဆောင်ရွက်မှု အခန်းကဏ္ဍနှင့် သက်ဆိုင်သည့် အကြောင်းအရာများအား လေ့လာခြင်း" သုတေသနစာတမ်းအား ပြုလုပ်မည်ဖြစ်ပါသည်။ သင့်ကို ကျွန်ုပ်၏ သုတေသနတွင် ပါဝင်ရန်ဖိတ်ခေါ်အပ်ပါသည်။ နားမလည်သောစကားရပ်များရှိပါက ကျွန်ုပ် (သို့မဟုတ်) သုတေသနတွင် ပါဝင်သူတစ်ဦးဦးအား အချိန်မရွေး မေးမြန်းနိုင်ပါသည်။

သုတေသန၏ ရည်ရွယ်ချက်

မြန်မာနိုင်ငံ၊ နေပြည်တော်ပြည်ထောင်စုနယ်မြေတွင် နေထိုင်သော ကိုယ်ဝန်ဆောင်မိခင်များ၏ ကျန်းမာရေးစောင့်ရှောက်မှုနှင့် မွေးဖွားရန်ကြိုတင်ပြင်ဆင်မှုကိစ္စရပ်များတွင် အိမ်ထောင်သည်အမျိုးသားများ၏ ပါဝင်ဆောင်ရွက်မှု အခန်းကဏ္ဍနှင့် သက်ဆိုင်သော အကြောင်းအရာများအား လေ့လာဖော်ထုတ်ရန် ရည်ရွယ်ပါသည်။

သုတေသနဆောင်ရွက်ပုံအမျိုးအစား

ဤသုတေသနတွင် အိမ်ထောင်သည်အမျိုးသားများနှင့် ကိုယ်ဝန်ဆောင်မိခင် ကျန်းမာရေးစောင့်ရှောက်မှု ပညာပေးအခန်းကဏ္ဍပါဝင်မည်ဖြစ်သည်။ ယင်းတွင်ပါဝင်မည့် သင်၏ခင်ပွန်းသည်အား ဖိတ်စာများဖြန့်ဝေခြင်း၊ ကိုယ်ဝန်ဆောင်မိခင်ကျန်းမာရေး

စောင့်ရှောက်မှု၊ ကြိုတင်ပြင်ဆင်မှုပညာပေးခြင်း နှင့် ဆွေးနွေးခြင်း အစီအစဉ်များ ပါဝင်မည်ဖြစ်သည်။

သုတေသနတွင် ပါဝင်မည့်သူများကို ရွေးချယ်ခြင်း

သင်သည် နေပြည်တော်တွင်နေထိုင်သော အသက် ၁၈ နှစ်ပြည့်ပြီးသူ မိခင်တစ်ဦး ဖြစ်ပြီး သင်၏ခင်ပွန်းသည်မှာ ယခုပြုလုပ်သောသုတေသနတွင် ပါဝင်သောသူ တစ်ယောက်ဖြစ်သောကြောင့် ဤသုတေသနတွင် ပါဝင်ရန် ဖိတ်ခေါ်အပ်ပါသည်။

မိမိဆန္ဒအလျောက် သုတေသနတွင်ပါဝင်ခြင်း

ဤသုတေသနတွင်ပါဝင်ခြင်းမှာ သင်၏လွတ်လပ်သော သဘောဆန္ဒအလျောက် သာဖြစ်သည်။ အကယ်၍ ပါဝင်ခြင်းမရှိပါလျှင် သင်နှင့်ကလေးအတွက် နောင်ရရှိမည့် ကျန်းမာရေးစောင့်ရှောက်မှုအား မည်သို့မျှ ထိခိုက် စေမည် မဟုတ်ပါ။

သုတေသနလုပ်ငန်းလုပ်ဆောင်ချက်အဆင့်ဆင့်

ဤသုတေသနဆောင်ရွက်ရာတွင် အဓိကအပိုင်း ၂ ပိုင်း ပါဝင်မည်ဖြစ်သည်။ ပထမတစ်ပိုင်းမှာ အမျိုးသားများအား မျက်နှာချင်းဆိုင်မေးခွန်းမေးမြန်းခြင်းဖြစ်ပြီး ဒုတိယတစ်ပိုင်းမှာ ကိုယ်ဝန်ဆောင်မိခင်ကလေးမွေးဖွားမှုဆိုင်ရာ အချက်အလက်များကို လူနာမှတ်တမ်း (သို့) မွေးဖွားစာရင်းများ မှတစ်ဆင့် စာရင်းကောက်ယူခြင်းနှင့် အမျိုးသမီးများအား မေးမြန်းခြင်းဖြစ်ပါသည်။ ပထမအပိုင်းအတွက် မေးခွန်းများကို သင်၏ခင်ပွန်းအား မေးမြန်း သွားမည်ဖြစ်သည်။

ဒုတိယပိုင်းအတွက် ကျန်းမာရေးဌာန (သို့) တာဝန်ကျသားဖွားဆရာမ ၏ အကူအညီဖြင့်လူနာမှတ်တမ်း (သို့) မွေးဖွားစာရင်းများ မှတစ်ဆင့် ကိုယ်ဝန်ဆောင်မိခင် ကလေးမွေးဖွားခြင်းနှင့် ပတ်သက်သော သတင်းအချက်အလက်များကို လေ့လာစစ်ဆေး ကာ အန္တရာယ်ကင်းသော ကလေးမီးဖွားမှု အကြောင်းအရာကို လေ့လာမည်ဖြစ်ပါသည်။ သင်၏ကလေးမွေးဖွားရန် ကြိုတင်ပြင်ဆင်မှုတွင် သင်၏ခင်ပွန်းသည် မည်မျှပူးပေါင်းပါဝင် ဆောင်ရွက်ခြင်းရှိ/မရှိအစရှိသည့် အချက်အလက်များကိုလည်း သင့်အားမေးမြန်းမည် ဖြစ်ပါသည်။ မေးခွန်းမေးမြန်းခြင်းကို စနစ်တကျလေ့ကျင့်ထားသောသူများမှ မေးမြန်းမည် ဖြစ်ဖြစ်ပါသည်။ သင်မေးခွန်းများအားလုံး ဖြေဆိုရန် ခန့်မှန်းအားဖြင့် ၁၀ မိနစ်မျှ ကြာမြင့်မည် ဖြစ်သည်။

ကြာမြင့်ချိန်

ဤသုတေသနသည် (၆) လကြာမြင့်မည်ဖြစ်သည်။ ၎င်းအချိန်အတွင်း ပါဝင်သူ သင်၏ ခင်ပွန်းသည် ကိုယ်ဝန်ဆောင်ကျန်းမာရေးစောင့်ရှောက်မှုပေးသော ရပ်ကွက်/ရွာရှိ ကျန်းမာရေးဌာနတွင် ကျင်းပသည့် ကျန်းမာရေးအသိပညာပေးပွဲ နှင့်ဆွေးနွေးပွဲများကို တစ်လလျှင် (၂) ကြိမ်နှင့် သုတေသနကာလ (၆) လအတွင်း (၁၂) ကြိမ်တက်ရောက်ရမည် ဖြစ်သည်။ ၆ လကြာလျှင် သုတေသန ပြီးဆုံးမည် ဖြစ်ပါသည်။

ထိခိုက်နိုင်မှုနှင့် ကိုယ်စိတ်အနှောင့်အယှက်ဖြစ်စေခြင်းများ

ဤသုတေသနတွင်ပါဝင်ကာ ဝင်ရောက်ဆွေးနွေး ဖြေဆိုသူအနေဖြင့် မေးခွန်းများ အား သီးသန့်ဖြေဆိုချိန်တွင် သက်တောင့်သက်သာမရှိမှု အနည်းငယ် ခံစားရနိုင်ပါသည်။ ဤသုတေသနဖြေဆိုချိန်တွင် ပါဝင်သူအနေဖြင့် စိတ်ကျနပ်မှုမရှိပါက သုတေသနတွင် ဆက်လက်မပါဝင်ပဲ နေနိုင်ပါသည်။

အကျိုးကျေးဇူးများ

ဤသုတေသနမှရရှိလာမည့် ရလဒ်အဖြေများ၊ တွေ့ရှိမှုများသည် သင့်အား တိုက်ရိုက်အကျိုးပြုလိမ့်မည်မဟုတ်ပါ။ သို့သော် သုတေသနမှရရှိလာသောအဖြေများသည် ကိုယ်ဝန်ဆောင်မိခင်ကျန်းမာရေးစောင့်ရှောက်မှုစီမံချက် အောင်မြင်မှုရရှိရန် လုပ်ဆောင်ရ မည့် လိုအပ်ချက်များကို ပြသပေးပါသည်။ ထိုအဖြေများသည် အနာဂတ်တွင် သင်နေထိုင်ရာ ဒေသနှင့် မြန်မာပြည်တစ်ဝန်းတွင် လုပ်ဆောင်နေသော မိခင်နှင့်ကလေး ကျန်းမာရေး စောင့်ရှောက်မှု စီမံချက်အောင်မြင်အောင် အကောင်အထည် ဖော်ရန်များစွာ အထောက်အကူ ပြုမည် ဖြစ်ပါသည်။

ကျေးဇူးတုံ့ပြန်မှု

သုတေသနလုပ်ငန်းတွင် သင်အချိန်ပေးပါဝင်ဖြေကြားမှုကို အသိအမှတ်ပြုပါသည်။ သင်ပူးပေါင်း ပါဝင်မှုအတွက် ငွေသား (သို့မဟုတ်) ပစ္စည်းများကို ကျေးဇူးတုံ့ပြန်သည့် အနေဖြင့် ပေးမည်မဟုတ်ပါ။

အချက်အလက်များကို လျှို့ဝှက်ထားရှိမှု

ဤသုတေသနစီမံချက်မှရရှိသော သတင်းအချက်အလက်များကို လျှို့ဝှက်ထားမည်။ သင်နှင့်ပက်သက်သော အချက်အလက်များကို သုတေသနပြုလုပ်သူများမှလွဲ၍ မည်သူတစ်ဦးတစ်ယောက်မှ ကြည့်ပိုင်ခွင့်မရှိပါ။ သင်၏နာမည်အစား နံပါတ်စနစ်ဖြင့် အချက်အလက်များကို သိမ်းဆည်းထားမည်။ သုတေသနပြုလုပ်သူများသာလျှင် သင်၏နံပါတ်ကိုသိရှိပြီး သေချာစွာသော့ခတ် သိမ်းဆည်းထားမည် ဖြစ်သည်။

သုတေသနရလာဒ်များကိုဖြန့်ဝေမှု

ဤသုတေသနမှရရှိလာမည့် ရလဒ်များကို အများပြည်သူလေ့လာနိုင်စေရန် မဖြန့်ဝေမီ သင်နှင့် သက်ဆိုင်ရာ အဖွဲ့အစည်းများကို အသိပေးမည်ဖြစ်ပါသည်။ အကယ်၍ ဤသုတေသနကို အခြားစိတ်ဝင်စားသောသူများရှိပါက လေ့လာနိုင်ရန်အတွက် လေ့လာတွေ့ရှိချက်များအား သုတေသနစာတမ်း ထုတ်ဝေခြင်းတွင် အသုံးပြုမည် ဖြစ်ပါသည်။

မိမိဆန္ဒအလျောက် သုတေသနတွင်ပါဝင်ခြင်း

ဤသုတေသနမှ သင်အချိန်မရွေး နုတ်ထွက်နိုင်ပါသည်။ ထိုသို့ နုတ်ထွက်ခြင်းကြောင့် ဆုံးရှုံးနစ်နာခြင်း တစ်စုံတစ်ရာမရှိပါ။ အကယ်၍ သင်နှင့်သင့်ကလေးကျန်းမာရေးကို ထိခိုက်နိုင်မည့် အခြေအနေများရှိလာပါကလည်း သုတေသနပြုလုပ်သူမှ သင့်အား သတင်းပေးသွားမည် ဖြစ်ပါသည်။ ထို့အပြင် လုံခြုံစိတ်ချရမှု နှင့် ဘေးကင်းယုံကြည်ရမှုတို့လည်း ရှိမည် ဖြစ်ပါသည်။

ဆက်သွယ်နိုင်မည့်ပုဂ္ဂိုလ်များ

အကယ်၍ သင့်၌မေးစရာမေးခွန်းများရှိပါက အချိန်မရွေးမေးမြန်းနိုင်ပါသည်။ မေးစရာရှိလျှင် ဒေါက်တာမေချမ်းဦး၊ ဘွဲ့လွန်သင်တန်းကျောင်းသူ၊ ပြည်သူ့ကျန်းမာရေး ကောလိပ်၊ ချူလာလောင်ကွန်းတက္ကသိုလ်၊ ထိုင်းနိုင်ငံ၊ မြန်မာနိုင်ငံလိပ်စာ - အမှတ်၂၉/၉၈၊ အမှတ်၂ ရပ်ကွက်၊ နွယ်သာကီလမ်း၊ ရွှေပြည်သာမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး၊ တယ်လီဖုန်း +၉၅ ၉၇၈၄၉၇၆၂၇၉ သို့ ဆက်သွယ်နိုင်ပါသည်။

ဤအဆိုပြုချက်သည် လူပုဂ္ဂိုလ်များအပေါ် သုတေသနစမ်းသပ်မှုဆိုင်ရာကျင့်ဝတ် ကော်မတီ၊ ဆေးသုတေသနဦးစီးဌာန၏ ဆန်းစစ်ဘောတူအတည်ပြုချက်ရပြီး ဖြစ်သည်။ အကယ်၍သင်သည် ကော်မတီနှင့်ပတ်သက်၍ သိလိုသည်များရှိပါက အတွင်းရေးမှူး (ကော်မတီ)၊ ဆေးသုတေသနဦးစီးဌာန၊ အမှတ် (၅) ၊ ဇီဝကလမ်း၊ ဒဂုံမြို့နယ်၊ ရန်ကုန်၊ ဖုန်း ၃၇၅၄၇၇၊ လိုင်းခွဲ ၁၁၈သို့ ရုံးချိန်အတွင်း ဆက်သွယ်နိုင်ပါသည်။

အပိုင်း (၂) သဘောတူညီချက်

ကျွန်ုပ်သည်"မြန်မာနိုင်ငံ၊ နေပြည်တော်ပြည်ထောင်စုနယ်မြေတွင် နေထိုင်သော ကိုယ်ဝန်ဆောင်မိခင်များ၏ ကျန်းမာရေးစောင့်ရှောက်မှုနှင့် မွေးဖွားရန်ကြိုတင်ပြင်ဆင်မှု ကိစ္စရပ်များတွင် အိမ်ထောင်သည် အမျိုးသားများ၏ ပါဝင်ဆောင်ရွက်မှု အခန်းကဏ္ဍနှင့် သက်ဆိုင်သည့် အကြောင်းအရာများအားလေ့လာခြင်း" သုတေသနစီမံချက်တွင် ပါဝင်ရန် ဖိတ်ခေါ်ခြင်းခံရပါသည်။

သုတေသနပြုလုပ်သူတို့သည် "မြန်မာနိုင်ငံ၊ နေပြည်တော်ပြည်ထောင်စုနယ်မြေတွင် နေထိုင်သော ကိုယ်ဝန်ဆောင်မိခင်များ၏ ကျန်းမာရေးစောင့်ရှောက်မှုနှင့် မွေးဖွားရန်

ကြိုတင်ပြင်ဆင်မှုကိစ္စရပ်များတွင် အိမ်ထောင်သည်အမျိုးသားများ၏ ပါဝင်ဆောင်ရွက်မှု အခန်းကဏ္ဍနှင့် သက်ဆိုင်သည့် အကြောင်းအရာများအား လေ့လာခြင်း” သုတေသန ပြုလုပ်မည် ဖြစ်ကြောင်း သိရှိနားလည်ပြီး ဖြစ်ပါသည်။ ကျွန်ုပ်တွင်မည်သည့် အန္တရာယ်မှ မရှိကြောင်းလည်း သိရှိနားလည်ပြီး ဖြစ်ပါသည်။ သုတေသနပြုလုပ်သူနှင့် ဆက်သွယ်ရန် လိပ်စာ၊ ဖုန်းနံပါတ်များကိုလည်း သိရှိပြီးဖြစ်ပါသည်။

ကျွန်ုပ်သည် ရှေ့မှအချက်အလက်များကို ဖတ်ရှုပြီးဖြစ်ပါသည်။ (သို့မဟုတ်) ကျွန်ုပ်အား ဖတ်ပြပြီးဖြစ်ပါသည်။ ကျွန်ုပ်တွင် မေးခွန်းမေးပိုင်ခွင့်နှင့် ထိုမေးခွန်းများကို ကျွန်ုပ်ကျေနပ်သည် အထိ ဖြေကြားပြီးဖြစ်သည်။ ကျွန်ုပ်သည် သုတေသနတွင် မိမိဆန္ဒအလျောက်ပါဝင်ရန် သဘောတူပါသည်။ ဤသုတေသနလုပ်ငန်းများမှ အချိန်မရွေး နုတ်ထွက်ခွင့်ရှိပြီး ယင်းသို့ နုတ်ထွက်ခြင်းကြောင့် ကျွန်ုပ်အပေါ် မည်သို့မျှ ထိခိုက်ခြင်း မရှိကြောင်း နားလည်ပြီးဖြစ်ပါသည်။

ပါဝင်သူ အမည် ----------

ပါဝင်သူ လက်မှတ် ----------

နေ့စွဲ ----------

(ရက် ၊ လ ၊ နှစ်)

အကယ်၍စာမတတ်သူဖြစ်လျှင်

ကျွန်ုပ်၏ရှေ့မှောက်၌ သုတေသနတွင်ပါဝင်မည့်သူများအား သဘောတူညီချက်ကို တိတိကျကျ ရှင်းရှင်းလင်းလင်း ဖတ်ပြပြီးဖြစ်သည်။ နားမလည်သည်များကို မေးပိုင်ခွင့်ရှိသည်။ ထိုသူသည် ဆန္ဒအလျောက် သဘောတူညီချက်ကို လွတ်လွတ်လပ်လပ် ပေးခြင်းဖြစ်ကြောင်း ထောက်ခံအတည်ပြုအပ်ပါသည်။

သက်သေအမည် ----------

ပါဝင်သူ၏လက်ဗွေ 

သက်သေလက်မှတ် ----------

နေ့စွဲ ----------

(ရက်၊ လ၊ နှစ်)

ကျွန်ုပ်၏ရှေ့မှောက်၌ သုတေသနတွင်ပါဝင်မည့်သူများအား သဘောတူညီချက်ကို တိတိကျကျ ရှင်းရှင်းလင်းလင်း ဖတ်ပြပြီးဖြစ်သည်။ နားမလည်သည်များကို မေးပိုင်ခွင့်ရှိသည်။ ထိုသူသည် ဆန္ဒအလျောက် သဘောတူညီချက်ကို လွတ်လွတ်လပ်လပ်ပေးခြင်းဖြစ်ကြောင်း ထောက်ခံအတည်ပြုအပ်ပါသည်။

သုတေသီ၏အမည် ----------

သုတေသီလက်မှတ် ----------

နေ့စွဲ ----------

(ရက်၊ လ၊ နှစ်)

ဤသဘောတူခွင့်ပြုလွှာ မိတ္တူတစ်စောင်ကို သုတေသနတွင် ပါဝင်မည့်သူအား ပေးအပ်ပြီးဖြစ်သည်။

(သုတေသီ / သုတေသီလက်ထောက်)

APPENDIX B

Questionnaire (ENGLISH)

No. interview ID		
Township Name		
Village/Ward Name		
Date of interview		
Time of interview	Start	End

Part I: Predisposing factors

Section A: Socio-demographic characteristics and wife's characteristics

Please mark √ in ( ) or fill in the blanks for explanation the truth

	Questions	For Researcher
1	Respondent's age ---------- years (completed years)	
2	Education (_) 2.1. Illiterate or no formal education (_) 2.2. Primary school level (_) 2.3. Middle school level (_) 2.4. High school level (_) 2.5. University /College level ( ) 2.6. Others (specify) ----------	
3	Ethnicity 3.1. ----------	
4	Religion (_) 4.1. Buddhism (_) 4.2. Christian (_) 4.3. Hindu (_) 4.4. Muslim (_) 4.5. Others (specify) ----------	
5	Marital Status (_) 5.1. Monogamous ( ) 5.2. Polygamous	
6	Occupation (_) 6.1. Government staff ( ) 6.2. Private employee (_) 6.3. Self-employee (_) 6.4. Manual worker (_) 6.5. Unemployed /Dependent (_) 6.6. Others (specify) ----------	
7	Wife's age 7.1. ---------- years (completed years)	

	Questions	For Researcher
8	Wife's education (_) 8.1. Illiterate or no formal education (_) 8.2. Primary school level (_) 8.3. Middle school level (_) 8.4. High school level (_) 8.5. University / College level (_) 8.6. Others (specify) ----------	
9	Wife's occupation (_) 9.1. Government staff (_) 9.2. Private employee (_) 9.3. Self-employee (_) 9.4. Manual worker (_) 9.5. Unemployed /Dependent housewife (_) 9.6. Others (specify) ----------	
10	How many family members in your home? (_) 10.1. ---------- persons 10.1. How many family members are dependent? (_) 10.1.1. ---------- persons	
11	Are you currently living with your mother/mother in law? (_) 11.1. No (_) 11.2. Yes	
12	Wealth Index 12.1. Is your home in an urban or rural area? (_) 12.1.1. Urban (_) 12.1.2. Rural 12.2. Does your house hold own the housing unit? (_) 12.2.1. No (_) 12.2.2. Yes 12.3. Main source of lighting in your household (_) 12.3.1. Electricity (_) 12.3.2. Kerosene (_) 12.3.3. Battery (_) 12.3.4. Other ---------- 12.4. Main source of drinking water in your household (_) 12.4.1. Tube well, borehole (_) 12.4.2. Protected well/ Spring (_) 12.4.3. Pool/ Pond/ Lake (_) 12.4.4. Bottled water/ Water from vending machine (_) 12.4.5. Other ---------- 12.5. Is tap water the main source of nondrinking your household? (_) 12.5.1. No (_) 12.5.2. Yes	

	Questions	For Researcher
12	12.6. Main type of cooking fuel used in your household (_) 12.6.1. Electricity (_) 12.6.3. Charcoal (_) 12.6.2. Firewood (_) 12.6.4. Other ---------- 12.7. Does your household have toilet? (_) 12.7.1. No (_) 12.7.2. Yes 12.8. Main construction material of the housing roof (_) 12.8.1. Dhani/ Theke/ In Leaf (_) 12.8.2. Corrugated sheet (_) 12.8.3. Other ---------- 12.9. Main construction material of the housing walls (_) 12.9.1. Wood (_) 12.9.2. Tile/ Brick/ Concrete (_) 12.9.3. Other ---------- 12.10. Main construction material of the housing floor (_) 12.10.1. Bamboo (_) 12.10.2. Wood (_) 12.10.3. Tile/ Brick/ Concrete (_) 12.10.4. Other ---------- 12.11. Does your household have a television? (_) 12.11.1. No (_) 12.11.2. Yes 12.12. Does your household have internet at home? (_) 12.12.1. No (_) 12.12.2. Yes 12.13. Does your household have a motorcycle/ moped/ tuk tuk? (_) 12.13.1. No (_) 12.13.2. Yes 12.14. Does your household have a bicycle? (_) 12.14.1. No (_) 12.14.1. Yes	

Part II: Enabling factors
A. Availability and accessibility to maternal health care facility

Please mark √ in ( ) or fill in the blanks for explanation the truth

	Questions	For Researcher
13	Have you ever got information about maternal health care? (If no, go to no.16) (_) 13.1. No (_) 13.2. Yes	
14	How often did you get information about maternal health care per month? 14.1. ----------	
15	From where did you get information about the place to take care for maternal health? (can answer more than one) (_) 15.1. Radio (_) 15.4. Newspaper (_) 15.2. Television (_) 15.5. Magazines/ Journals (_) 15.3. Pamphlet (_) 15.6. Others (specify) ----------	
16	From whom did you get information about the place to take care for maternal health? (more than one) (_) 16.1. Family members (_) 16.2. Friends (_) 16.3. Neighbors (_) 16.4. Health care providers (_) 16.5. Others (specify) ----------	
17	Is there any maternal health care service for taking care of your wife's pregnancy in your ward/ village? (_) 17.1. No (_) 17.2. Yes	
18	Is there anyone who encourages you to go to maternal health care facility for taking care of your wife's pregnancy? (_) 18.1. No (_) 18.2.Yes If Yes, 18.3. Who are they? (_) 18.3.1. Family members (_) 18.3.2. Friends (_) 18.3.3. Neighbors (_) 18.3.4. Health care providers (_) 18.3.4. Health care providers (_) 18.3.5. Others (specify) ----------	

	Questions	For Researcher
19	How far is your home from maternal health facility to take care for pregnancy? 19.1. ---------- Kms or miles 19.2. Do you think it is far? (_) 19.2.1. No (_) 19.2.2. Yes	
20	What is the route of transportation to maternal health facility? (_) 20.1. By foot (_) 20.4. By bus (_) 20.2. Trishaw/ Bicycle (_) 20.5. By own car (_) 20.3. Motorcycle (_) 20.6. Others (specify) ---------- If more than one route, 20.7. ----------	
21	How long does it take to reach this maternal health facility to take care for pregnancy? (_) 21.1. ---------- minutes or (_) 21.2. ---------- hours 21.3. Do you think it takes much time? (_) 21.3.1. No (_) 21.3.2. Yes	
22	How long does it take to wait and get treatment for pregnancy care? (Service use time) 22.1. ---------- minutes or 22.2. ---------- hours 22.3. Do you think it take much time? (_) 22.3.1. No (_) 22.3.2. Yes	
23	How much will you cost for transportation from your home to that maternal health facility? 23.1. ----------	
24	How much will you cost for service fees? 24.1. ----------	
25	Is that transportation fees cost expensive for you? (_) 25.1. No (_) 25.2. Yes	
26	Is that service fees cost expensive for you? (_) 26.1. No (_) 26.2. Yes	

Part III. Need factors: Plan/Unplanned pregnancy, current gestational age of pregnancy and present of suspected danger symptoms

Please mark √ in ( ) or fill in the blanks for explanation the truth

	Questions	For Researcher
27	Did your couple use contraception before this pregnancy? (if no, go to No.30) ( ) 27.1. No ( ) 27.2. Yes	
28	How long did you use? 28.1. ----------	
29	Did you stop using contraception to get this pregnancy? ( ) 29.1. No ( ) 29.2. Yes	
30	Did your couple plan well to get this pregnancy? ( ) 30.1. No ( ) 30.2. Yes	
31	Wife's current pregnancy gestational age : 31.1. ---------- weeks/---------- months	
32	Do you suspect any pregnancy danger symptoms regarding with your wife's pregnancy? (if no, goes to part IV question no 36) ( ) 32.1. No ( ) 32.2. Yes	
33	What symptom/ symptoms do you suspect? (Can answer more than one) 33.1. ----------	
34	For how long does your wife suffer those symptoms during pregnancy? 34.1. ---------- Days / ---------- weeks	
35	How severe are the symptoms your wife suffer? ( ) 35.1. Mild ( ) 35.2. Moderate ( ) 35.3. Severe	

Part IV. Husbands' knowledge and attitude on maternal health care and their involvement in birth preparedness and complication readiness

a. Knowledge on maternal care and danger signs

Please mark √ in ( ) or fill in the blanks for explanation the truth

	Questions	For Researcher
36	Does a pregnant woman need antenatal care? (if no, go to No.40) (_) 36.1. No (_) 36.2. Yes	
37	From whom pregnant woman should receive antenatal care? 37.1. Traditional birth attendance (_) 37.1.1. No (_) 37.1.2. Yes 37.2. Drug Seller (_) 37.2.1. No (_) 37.2.2. Yes 37.3. HA/LHV (_) 37.3.1. No (_) 37.3.2. Yes 37.4. Midwife (_) 37.4.1. No (_) 37.4.2. Yes 37.5. Obstetric and gynecologists/ Doctors (_) 37.5.1. No (_) 37.5.2. Yes 37.6. Quack (_) 37.6.1. No (_) 37.6.2. Yes	
38	How many times pregnant woman should receive AN care? (at least) 38.1. ----------	
39	Which antenatal care services are provided to pregnant women during ANC visit? 39.1. Anti-Tetanus injection (_) 39.1.1. No (_) 39.1.2. Yes 39.2. Iron tablets (_) 39.2.1. No (_) 39.2.2. Yes 39.3. Contraception pills (_) 39.3.1. No (_) 39.3.2. Yes 39.4. Abdominal examination (_) 39.4.1. No (_) 39.4.2. Yes 39.5. Blood pressure measurement (_) 39.5.1. No (_) 39.5.2. Yes 39.6. Regular Chest X ray (_) 39.6.1. No (_) 39.6.2. Yes 39.7. Deworming (_) 39.7.1. No (_) 39.7.2. Yes 39.8. Dental examination (_) 39.8.1. No (_) 39.8.2. Yes	

	Questions	For Researcher
40	Do you know the danger signs during pregnancy? (if no, go to No.42) (_) 40.1. No (_) 40.2. Yes	
41	What are danger signs during pregnancy? 41.1. Fever (_) 41.1.1 No ( ) 41.1.2. Yes 41.2. Convulsions (_) 41.2.1. No (_) 41.2.1. Yes 41.3. Stretch marks (_) 41.3.1. No (_) 41.3.2. Yes 41.4. Difficulty breathing (_) 41.4.1. No (_) 41.4.2. Yes 41.5. Severe abdominal pain (_) 41.5.1. No (_) 41.5.2. Yes 41.6. Itching (_) 41.6.1. No (_) 41.6.2. Yes 41.7. Blurred vision (_) 41.7.1. No (_) 41.7.2. Yes 41.8. Excessive vaginal bleeding (_) 41.8.1. No (_) 41.8.2. Yes 41.9. Constipation (_) 41.9.1. No (_) 41.9.2. Yes 41.10. Swelling of hands and feet (_) 41.10.1. No (_) 41.10.2. Yes	
42	Do you know the danger signs during delivery? (if no, go to No.44) (_) 42.1. No (_) 42.2. Yes	
43	What are the danger signs during delivery? 43.1. Fever (_) 43.1.1. No (_) 43.1.2. Yes 43.2. Convulsions (_) 43.2.1. No (_) 43.2.1. Yes 43.3. Maternal distress (_) 43.3.1. No (_) 43.3.1. Yes 43.4. Urination (_) 43.4.1. No (_) 43.4.2. Yes 43.5. Delay in placenta delivery (_) 43.5.1. No (_) 43.5.2. Yes 43.6. Breast tenderness (_) 43.6.1. No (_) 43.6.2. Yes 43.7. Prolong labor (_) 43.7.1. No (_) 43.7.2. Yes 43.8. Excessive vaginal bleeding (_) 43.8.1. No (_) 43.8.2. Yes	

44	Do you know types of pregnant mothers who must deliver at the hospital? (if no, go to No.46) (_) 44.1. No (_) 44.2. Yes	
45	What are these? 45.1. Maternal age under 18 (_) 45.1.1. No (_) 45.1.2. Yes 45.2. Maternal age under 35 (_) 45.2.1. No (_) 45.2.2. Yes 45.3. Malposition/size of fetus (_) 45.3.1. No (_) 45.3.2. Yes 45.4. Single pregnancy (_) 45.4.1. No (_) 45.4.2. Yes 45.5. Multiple pregnancy (_) 45.5.1. No (_) 45.5.2. Yes 45.6. Hypertension (_) 45.6.1. No (_) 45.6.2. Yes 45.7. Long stature (>4Ft 10 In) (_) 45.7.1. No (_) 45.7.2. Yes 45.8. Gravida 1 (_) 45.8.1. No (_) 45.8.2. Yes	
46	Do you know the danger signs during postpartum period? (If no, skip No.47 and go to part B) (_) 46.1. No (_) 46.2. Yes	
47	What are the danger signs during postpartum period? 47.1. Foul smelling discharge (_) 47.1.1. No (_) 47.1.2. Yes 47.2. Breast enlargement (_) 47.2.1. No (_) 47.2.2. Yes 47.3. Difficulty breathing (_) 47.3.1. No (_) 47.3.2. Yes 47.4. Convulsions (_) 47.4.1. No (_) 47.4.2. Yes 47.5. Excessive vaginal bleeding (_) 47.5.1. No (_) 47.5.2. Yes 47.6. Leaking colostrum (_) 47.6.1. No (_) 47.6.2. Yes	

B. Attitude on maternal care and BR/CR

Please mark √ in ( ) or fill in the blanks for explanation the truth

Questions						For Researcher
No	Statement	SA	A	D	SD	
48	Husbands should participate in receiving antenatal care of his wife.	48.1 ( )	48.2 ( )	48.3 ( )	48.4 ( )	
49	Husbands should arrange his wife to receive antenatal care.	49.1 ( )	49.2 ( )	49.3 ( )	49.4 ( )	
50	The cost of taking antenatal care is expensive	50.1 ( )	50.2 ( )	50.3 ( )	50.4 ( )	
51	Husbands do not need to know the danger signs during pregnancy and childbirth.	51.1 ( )	51.2 ( )	51.3 ( )	51.4 ( )	
52	Husbands are mainly responsible for correct decision making in emergency situation during pregnancy and delivery.	52.1 ( )	52.2 ( )	52.3 ( )	52.4 ( )	
53	Husbands are responsible for financial support during pregnancy and childbirth.	53.1 ( )	53.2 ( )	53.3 ( )	53.4 ( )	
54	It is not necessary for a husband to accompany his wife when she is giving birth.	54.1 ( )	54.2 ( )	54.3 ( )	54.4 ( )	
55	Giving birth is mostly a woman's matter so husbands have no little to contribute.	55.1 ( )	55.2 ( )	55.3 ( )	55.4 ( )	
56	Husband should plan ahead of time for his wife where she will give birth to her baby.	56.1 ( )	56.2 ( )	56.3 ( )	56.4 ( )	
57	Husband should arrange his wife to take delivery in health facility place.	57.1 ( )	57.2 ( )	57.3 ( )	57.4 ( )	
58	Husband should plan ahead of time for his wife how she will get to the place where she will give birth.	58.1 ( )	58.2 ( )	58.3 ( )	58.4 ( )	
59	Husband do not need to identify blood donor before delivery.	59.1 ( )	59.2 ( )	59.3 ( )	59.4 ( )	

SA= Strongly Agree, A=Agree, D=Disagree, SD=Strongly Disagree

C. Involvement in Birth Preparedness and Complication Readiness

Please mark √ in ( ) or fill in the blanks for explanation the truth

	Questions	For Researcher
60	When your wife is pregnant, do you plan where she will deliver the child? ( ) 60.1. No ( ) 60.2. Yes	
61	When your wife is pregnant, do you arrange a skilled birth attendant for delivery? ( ) 61.1. No ( ) 61.2. Yes	
62	When your wife is pregnant, do you arrange or save the money for delivery? ( ) 62.1. No ( ) 62.2. Yes	
63	When your wife is pregnant, do you think about or plan what type of transportation your wife will use to get to the place of delivery? ( ) 63.1. No ( ) 63.2. Yes	
64	When your wife is pregnant, do you plan for a potential blood donor in case for emergency? ( ) 64.1. No ( ) 64.2. Yes	

Thanks for your participation.
Signature of interviewer

Modified Part III questionnaire and section C questionnaire from part IV for 2nd posttest

Part III. Need factors: Plan/Unplanned pregnancy, current gestational age of pregnancy and present of suspected danger symptoms

Please mark √ in ( ) or fill in the blanks for explanation the truth

	Questions	For Researcher
27	Did your couple use contraception before this pregnancy? (If no, go to no.30) ( ) 27.1. No ( ) 27.2. Yes	
28	How long did you use? 28.1. ----------	
29	Did you stop using contraception to get this pregnancy? ( ) 29.1. No ( ) 29.2. Yes	
30	Did your couple plan well to get this pregnancy? ( ) 30.1. No ( ) 30.2. Yes	
31	What gestational age of pregnancy did your wife delivery take place? 31.1. ---------- weeks/---------- months	
32	Did you suspect any pregnancy danger symptoms regarding with your wife's pregnancy? (If no, goes to Part IV question no 36) ( ) 32.1. No ( ) 32.2. Yes	
33	What symptom/symptoms did you suspect? (Can answer more than one) 33.1. ----------	
34	For how long did your wife suffer those symptoms during pregnancy? 34.1. ---------- Days / ---------- weeks	
35	How severe was/were the symptoms your wife suffers? ( ) 35.1. Mild ( ) 35.2. Moderate ( ) 35.3. Severe	

Part IV. Husbands' knowledge and attitude on maternal health care, birth preparedness and complication readiness and husband involvement in birth preparedness and complication readiness

C. Involvement in Birth Preparedness and Complication Readiness

Please mark √ in ( ) or fill in the blanks for explanation the truth

	Questions	For Researcher
60	When your wife was pregnant, did you plan where she delivers the child? ( ) 60.1. No ( ) 60.2. Yes If yes, 60.3. Did your wife actually deliver at that place? ( ) 60.3.1. No ( ) 60.3.2. Yes	
61	When your wife was pregnant, did you arrange a skilled birth attendant for delivery? ( ) 61.1. No ( ) 61.2. Yes	
62	When your wife was pregnant, did you arrange or save the money for delivery? ( ) 62.1. No ( ) 62.2. Yes	
63	When your wife was pregnant, did you plan the type of transportation your wife uses to get to the place of delivery? ( ) 62.1. No ( ) 62.2. Yes If yes, 63.3. Did she use that type of transportation as you planned? ( ) 63.3.1. No ( ) 63.3.2. Yes	
64	When your wife was pregnant, did you plan for a potential blood donor in case for emergency? ( ) 64.1. No ( ) 64.2. Yes	

Questionnaire (MYANMAR)

မြန်မာနိုင်ငံနေပြည်တော်ပြည်ထောင်စုနယ်မြေတွင် နေထိုင်သော ကိုယ်ဝန်ဆောင်မိခင်များ ၏ ကျန်းမာရေးစောင့်ရှောက်မှု နှင့် မွေးဖွားရန် ကြိုတင်ပြင်ဆင်မှု ကိစ္စရပ်များတွင် အိမ်ထောင်သည် အမျိုးသားများ၏ ပါဝင်ဆောင်ရွက်မှု အခန်းကဏ္ဍနှင့် သက်ဆိုင်သော အကြောင်းအရာများအား လေ့လာသော သုတေသန

No. interview ID		
မြို့နယ် အမည်		
ရွာ (သို့) ရပ်ကွက် အမည်		
ရက်စွဲ		
မေးခွန်းကြာချိန်	စတင်သည့်အချိန်	ပြီးဆုံးသည့်အချိန်

မေးခွန်းများကိုမေးခွင့်ပြုပါခင်ဗျာ / ရှင့်။

အပိုင်း (၁) မူလပင်ကို အချက်အလက်များ

(က) လူနေမှုနှင့်စီးပွားရေးဆိုင်ရာဝိသေသလက္ခဏာများ

ကျေးဇူးပြု၍ သက်ဆိုင်ရာ ( ) တွင် √ အမှန်ခြစ် (သို့မဟုတ်) ကွက်လပ်များတွင် မှန်ကန်စွာဖြည့်ပါ။

	သုတေသန မေးခွန်း:	သုတေသန ပြုလုပ်သူ
၁	ဖြေဆိုသူ၏အသက် (ပြည့်ခဲ့ပြီးသောအသက်) ---------- နှစ်	
၂	ပညာအရည်အချင်း: ၂.၁ ( ) စာမတတ် / ရေးတတ်ဖတ်တတ် ၂.၂ ( ) မူလတန်း: ၂.၃ ( ) အလယ်တန်း: ၂.၄ ( ) အထက်တန်း: ၂.၅ ( ) ကောလိပ်၊ တက္ကသိုလ်ဘွဲ့ရ ၂.၆ ( ) အခြား: (ဖော်ပြပါ) ---------- ---------	
၃	လူမျိုး: ---------- -------	

	သုတေသန မေးခွန်း:	သုတေသန ပြုလုပ်သူ
၄	ကိုးကွယ်ယုံကြည်မှု ၄.၁ ( ) ဗုဒ္ဓဘာသာ ၄.၄ ( ) မွတ်စလင် ၄.၂ ( ) ခရစ်ယာန် ၄.၅ ( ) အခြား: (ဖော်ပြပါ) ---- ---------- ၄.၃ ( ) ဟိန္ဒူ	
၅	သင်၏အိမ်ထောင် အမျိုးအစား: ၅.၁ ( ) တစ်လင်တစ်မယား: ၅.၂ ( ) မယား: တစ်ယောက်ထက်ပို	
၆	သင်၏လက်ရှိအလုပ်အကိုင် ၆.၁ ( ) အစိုးရဝန်ထမ်း: ၆.၂ ( ) ကိုယ်ပိုင်လုပ်ငန်း: ၆.၃ ( ) အလုပ်လက်မဲ့/ မှီခို ၆.၄ ( ) ကုမ္ပဏီဝန်ထမ်း: ၆.၅ ( ) နေစား: ၆.၆ ( ) အခြား: (ဖော်ပြပါ) ----------	
၇	ဖနီးသည်၏အသက် (ပြည့်ခဲ့ပြီးသောအသက်) ---------- နှစ်	
၈	ဖနီးသည်၏ပညာအရည်အချင်း: ၈.၁ ( ) စာမတတ် / ရေးတတ်ဖတ်တတ် ၈.၂ ( ) မူလတန်း: ၈.၃ ( ) အလယ်တန်း: ၈.၄ ( ) အထက်တန်း: ၈.၅ ( ) ကောလိပ်၊ တက္ကသိုလ်ဘွဲ့ရ ၈.၆ ( ) အခြား: (ဖော်ပြပါ) ----------	
၉	ဖနီးသည်၏လက်ရှိအလုပ်အကိုင် ၉.၁ ( ) အစိုးရ ဝန်ထမ်း: ၉.၂ ( ) ကိုယ်ပိုင် လုပ်ငန်း: ၉.၃ ( ) အလုပ်လက်မဲ့/ မှီခို၉.၄ ( ) ကုမဏီဝန်ထမ်း: ၉.၅ ( ) နေစား: ၉.၆ ( ) အခြား: (ဖော်ပြပါ) ----------	
၁၀	အိမ်တွင်မိသားစုဦးရောဘယ်နှစ်ယောက်ရှိပါသလဲ။ ---------- ယောက် ၁၀.၁။ အိမ်တွင် မှီခိုဦးရေ ဘယ်နှစ်ယောက်ရှိပါသလဲ။ ---------- ယောက်	

	သုတေသန မေးခွန်း:	သုတေသန ပြုလုပ်သူ
၁၁	သင်ယခုလက်ရှိ သင်၏ အမေ (သို့) ယောကျ်မ နှင့်အတူ နေထိုင်ပါသလား။ ( ) ၁၁.၁။ မနေထိုင်ပါ ( ) ၁၁.၂။ နေထိုင်ပါသည်	
၁၂	ပိုင်ဆိုင်မှု ဆိုင်ရာ ဖော်ပြချက် ၁၂.၁ သင် မြို့ပြတွင် နေထိုင်ပါသလား။ ကျေးလက်တွင် နေထိုင်ပါသလား။ ၁၂.၁.၁ ( ) မြို့ပြ ၁၂.၁.၂ ( ) ကျေးလက် ၁၂.၂။ သင့်တွင် အိမ်ပိုင်ဆိုင်မှု ရှိပါသလား။ ၁၂.၂.၁ ( ) ရှိ ၁၂.၂.၂ ( ) မရှိ ၁၂.၃။ သင့်အိမ်ထောင်စုတွင် အလင်းရောင်အတွက် မည်သည့်မီးအမျိုးအစားကို အဓိကအသုံးပြု ပါသလဲ။ ၁၂.၃.၁ ( ) လျှပ်စစ်မီး: ၁၂.၃.၃ ( ) ရေနံဆီမီး: ၁၂.၃.၂ ( ) ဘက္ထရီမီး: ၁၂.၃.၄ ( ) အခြား: (ဖော်ပြပါ) --- -------- ၁၂.၄။ သင့်အိမ်ထောင်စုတွင် သောက်ရေကို မည်သည့်အရင်းအမြစ်မှ အဓိက ရရှိပါ သလဲ ။ ၁၂.၄.၁ ( ) အဝီစိတွင်း: ၁၂.၄.၂ ( ) ရေတွင်း: (အုတ်စီ) ၁၂.၄.၃ ( ) ရေကန် ၁၂.၄.၄ ( ) ရေသန့်စက်/ ရေသန့်ဘူး: ၁၂.၄.၅ ( ) အခြား: (ဖော်ပြပါ) ---------- ၁၂.၅။ သင့်အိမ်ထောင်စုတွင် ရေပိုက်လိုင်းမှရရှိသောရေကို သုံးရေအဖြစ် အဓိကအသုံးပြုပါသလား။ ၁၂.၅.၁ ( ) ပြု ၁၂.၅.၂ ( ) မပြု ၁၂.၆။ အစားအစာချက်ပြုတ်စားသောက်ရန်အတွက် မည်သည့်လောင်စာကို အဓိက အသုံးပြုပါသလဲ။ ၁၂.၆.၁ ( ) လျှပ်စစ်မီး: ၁၂.၆.၂ ( ) မီးသွေး/ လောင်စာတောင့် ၁၂.၆.၃ ( ) သစ်သား/ ထင်း: ၁၂.၆.၄ ( ) အခြား: (ဖော်ပြပါ) ----------	

	သုတေသန မေးခွန်း:	သုတေသန ပြုလုပ်သူ
၁၂	၁၂.၇။ သင့်အိမ်ထောင်စုတွင်အိမ်သာရှိပါသလား။ ၁၂.၇.၁ ( ) ရှိ ၁၂.၇.၂ ( ) မရှိ ၁၂.၈။ နေအိမ်အဆောက်အအုံတွင် အဓိက အသုံးပြုသည့် အမိုးအမျိုးအစား: ၁၂.၈.၁ ( ) ဓနို/သက်ကယ်/အင်ဖက် ၁၂.၈.၂ ( ) သွပ် ၁၂.၈.၃ ( ) အခြား: (ဖော်ပြပါ) ----------	
	၁၂.၉။ နေအိမ်အဆောက်အအုံတွင် အဓိက အသုံးပြုသည့် အကာအမျိုးအစား: ၁၂.၉.၁ ( ) သစ်သား ၁၂.၉.၂ ( ) အုတ်ကြွပ်/အုတ်/ကွန်ကရစ် ၁၂.၁၀။ နေအိမ်အဆောက်အအုံတွင် အဓိက အသုံးပြုသည့် အခင်းအမျိုးအစား: ၁၂.၁၀.၁ ( ) ဝါး ၁၂.၁၀.၂ ( ) သစ်သား ၁၂.၁၀.၃ ( ) အုတ်ကြွပ်/အုတ်/ကွန်ကရစ် ၁၂.၁၁။ သင့်အိမ်ထောင်စုတွင် ရုပ်မြင်သံကြား ရှိပါသလား။ ၁၂.၁၁.၁ ( ) ရှိ ၁၂.၁၁.၂ ( ) မရှိ ၁၂.၁၂။ သင့်အိမ်ထောင်စုတွင် အင်တာနက် တပ်ဆင်ထားခြင်း ရှိပါသလား။ ၁၂.၁၂.၁ ( ) ရှိ ၁၂.၁၂.၂ ( ) မရှိ ၁၂.၁၃။ သင့်အိမ်ထောင်စုတွင် မော်တော်ဆိုင်ကယ်/ လျှပ်စစ်စက်ဘီး/ သုံးဘီးကား ရှိပါသလား။ ၁၂.၁၃.၁ ( ) ရှိ ၁၂.၁၃.၂ ( ) မရှိ ၁၂.၁၄။ သင့်အိမ်ထောင်စုတွင် စက်ဘီးရှိပါ သလား။ ၁၂.၁၄.၁ ( ) ရှိ ၁၂.၁၄.၂ ( ) မရှိ	

အပိုင်း (၂) ထောက်ကူနေသော အချက်အလက်များ

ကိုယ်ဝန်ဆောင်မိခင် ကျန်းမာရေးစောင့်ရှောက်မှု ရရှိနိုင်သော အခြေအနေနှင့် လက်လှမ်းမှီမှု အခြေအနေ

ကျေးဇူးပြု၍ သက်ဆိုင်ရာ ( ) တွင် √ အမှန်ခြစ် (သို့မဟုတ်) ကွက်လပ်များတွင် မှန်ကန်စွာဖြည့်ပါ။

	သုတေသန မေးခွန်း:	သုတေသန ပြုလုပ်သူ
၁၃	သင်ကိုယ်ဝန်ဆောင်မိခင်ကျန်းမာရေးစောင့်ရှောက်မှုနှင့်ပတ်သက်သော သတင်းအချက်အလက်များကို ကြားဖူးပါသလား။ ၁၃.၁ ( ) မကြားဘူးပါ ၁၃.၂ ( ) ကြားဖူးပါတယ် (မကြားဖူးလျှင်မေးခွန်း၁၄၊၁၅၊၁၆ ကိုကျော်ပါ)	
၁၄	တစ်လအတွင်းဘယ်နှစ်ကြိမ်လောက်ကြားရပါသလဲ။ ၁၄.၁----------	
၁၅	သင်ဘယ်နေရာမှ ကိုယ်ဝန်ဆောင်မိခင်ကျန်းမာရေးစောင့်ရှောက်မှုနှင့် ပတ်သက်သော သတင်းအချက် အလက်များကို ရရှိပါသလဲ။ (တစ်ခုထက်ပို၍ဖြေနိုင်) ၁၅.၁ ( ) ရေဒီယို ၁၅.၄ ( ) သတင်းစာ ၁၅.၂ ( ) တီဗီ ၁၅.၅ ( ) မဂ္ဂဇင်း / ဂျာနယ် ၁၅.၃ ( ) လက်ကမ်းစာစောင် ၁၅.၆ ( ) အခြား (ဖော်ပြပါ) -----------	
၁၆	သင်မည်သူဆီမှကိုယ်ဝန်ဆောင်မိခင်ကျန်းမာရေးစောင့်ရှောက်မှုနှင့်ပတ်သက်သော သတင်းအချက်များကို ရရှိပါသလဲ။ (တစ်ခုထက်ပို၍ဖြေနိုင်) ၁၆.၁ ( ) မိသားစုဝင် ၁၆.၄ ( ) အိမ်နီးနားချင်း: ၁၆.၂ ( ) သူငယ်ချင်း: ၁၆.၅ ( ) အခြား: (ဖော်ပြပါ) ---------- ၁၆.၃ ( ) ကျန်းမာရေးဝန်ထမ်း:	
၁၇	သင်နေထိုင်သောမြို့နယ်/ရပ်ကွက်/ရွာတွင် ကိုယ်ဝန်ဆောင်မိခင်ကျန်းမာရေးစောင့်ရှောက်မှုရှိပါသလား။ ၁၇.၁ ( ) မရှိပါ ၁၇.၂ ( )ရှိပါသည်	
၁၈	သင့်၏ဇနီးကို ကျန်းမာရေးဌာနသို့သွားရောက် ၍ ကိုယ်ဝန်ဆောင်မိခင် ကျန်းမာရေးစောင့်ရှောက်မှု ခံယူရန်တိုက်တွန်းသူရှိပါသလား။ ၁၈.၁ ( ) မရှိပါ ၁၈.၂ ( ) ရှိပါသည် ရှိပါက ၁၈.၃။ မည်သူနည်း။ ၁၈.၃.၁ ( ) မိသားစုဝင် ၁၈.၃.၄ ( ) ကျန်းမာရေးဝန်ထမ်း: ၁၈.၃.၂ ( ) သူငယ်ချင်း: ၁၈.၃.၅ ( ) အခြား: (ဖော်ပြပါ) --- ---------- ၁၈.၃.၃ ( ) အိမ်နီးနားချင်း:	

	သုတေသန မေးခွန်း:	သုတေသန ပြုလုပ်သူ
၁၉	ကိုယ်ဝန်ဆောင်မိခင်ကျန်းမာရေးစောင့်ရှောက်မှုဌာနနှင့်သင့်အိမ်ဘယ်လောက် ကွာဝေးပါသလဲ။ ၁၉.၁ ---------- မိုင် (သို့မဟုတ်) ကီလိုမီတာ ၁၉.၂။ သင့်အိမ်နှင့် အလှမ်းဝေးသည်ဟု ထင်ပါသလား။ ၁၉.၂.၁ ( ) ထင်ပါသည် ၁၉.၂.၂ ( ) မထင်ပါ	
၂၀	ကိုယ်ဝန်ဆောင်မိခင်ကျန်းမာရေးစောင့်ရှောက်မှု ဌာနသို့မည်သို့သွားရပါသလဲ။ ၂၀.၁ ( ) လမ်းလျှောက် ၂၀.၄ ( ) လိုင်းကား: ၂၀.၂ ( ) ဆိုက်ကား၊ စက်ဘီး: ၂၀.၅ ( ) ကိုယ်ပိုင်ကား: ၂၀.၃ ( ) ဆိုင်ကယ် ၂၀.၆ ( ) အခြား: (ဖော်ပြပါ) --- ----------	
၂၁	သင့်အိမ်မှ ကိုယ်ဝန်ဆောင်မိခင်ကျန်းမာရေးစောင့်ရှောက်မှုဌာနသို့ ရောက်ရှိရန်အချိန်မည်မျှ ကြာသနည်း။ ၂၁.၁ _____ မိနစ် (သို့မဟုတ်) ၂၁.၂ _____ နာရီ ၂၁.၃။ သွားရောက်ကုသရန်အချိန်ကြာသည်ဟုထင်ပါသလား။ ၂၁.၃.၁ ( ) မထင်ပါ ၂၁.၃.၂ ( ) ထင်ပါသည်	
၂၂	ကိုယ်ဝန်ဆောင်မိခင်ကျန်းမာရေး စောင့်ရှောက်မှု ဌာနတွင် ကုသမှုခံယူရန် စောင့်ဆိုင်းချိန်နှင့် စစ်ဆေးချိန် မည်မျှကြာသနည်း။ ၂၂.၁ _____ မိနစ် (သို့မဟုတ်) ၂၂.၂ _____ နာရီ ၂၂.၃။ စောင့်ဆိုင်းစစ်ဆေးချိန် ကြာမြင့်သည်ဟု သင်ထင်မြင်ယူဆပါသလား။ ၂၂.၃.၁ ( ) မထင်ပါ ၂၂.၃.၂ ( ) ထင်ပါသည်	
၂၃	ကိုယ်ဝန်ဆောင်မိခင်ကျန်းမာရေးစောင့်ရှောက်မှု ဌာနသို့ တစ်ခေါက်သွားပြီးလျှင် အသွားအပြန် ခရီးစရိတ် ဘယ်လောက်ကုန်ကျပါသလဲ။ ၂၃.၁ ခန့်မှန်းကုန်ကျငွေ _____ ကျပ်	
၂၄	ကိုယ်ဝန်ဆောင်မိခင်ကျန်းမာရေးစောင့်ရှောက်မှု ဌာနသို့ တစ်ခေါက်သွားပြီးလျှင် ကုသမှုစရိတ် ဘယ်လောက် ကုန်ကျပါသလဲ။ ၂၄.၁ ခန့်မှန်းကုန်ကျငွေ _____ ကျပ်	
၂၅	၎င်းကုန်ကျငွေသည်သင့်အတွက်အကုန်အကျများခြင်းဖြစ်ပါသလား။ ၂၅.၁ ( ) မဖြစ်ပါ ၂၅.၂ ( ) ဖြစ်ပါသည်	
၂၆	၎င်းကုန်ကျငွေသည်သင့်မိသားစုအတွက်ဝန်ထုပ်ဝန်ပိုးဖြစ်ပါသလား။ ၂၆.၁ ( ) မဖြစ်ပါ ၂၆.၂ ( ) ဖြစ်ပါသည်	

အပိုင်း (၃) ကိုယ်ဝန်ဆောင်မိခင်ကျန်းမာရေးစောင့်ရှောက်မှုခံယူရန် လိုအပ်သော အချက်များ

ကျေးဇူးပြု၍ သက်ဆိုင်ရာ ( ) တွင် √ အမှန်ခြစ် (သို့မဟုတ်) ကွက်လပ်များတွင် မှန်ကန်စွာဖြည့်ပါ။

	သုတေသန မေးခွန်း	သုတေသန ပြုလုပ်သူ
၂၇	ယခုကိုယ်ဝန်မရခင် သင်ကိုယ်တိုင် (သို့) သင်၏ဇနီးမှ သန္ဓေတားပစ္စည်း/ဆေးသုံးစွဲခဲ့ပါသလား။ (သုံးစွဲမှု မရှိလျှင် မေးခွန်းနံပါတ် ၃၀ သို့သွားပါ) ၂၇.၁ ( ) မသုံးစွဲပါ ၂၇.၂ ( ) သုံးစွဲပါသည်	
၂၈	အချိန် ဘယ်လောက်ကြာအောင် သုံးစွဲခဲ့ပါသနည်း။ ၂၈.၁ ----------	
၂၉	ယခုကိုယ်ဝန်ရရှိရန်အတွက် သန္ဓေတား ပစ္စည်း/ဆေးသုံးစွဲမှုကို ကြိုတင်စီစဉ်၍ ရပ်တန့် ထားခဲ့ပါ သလား။ ၂၉.၁ ( ) ကြိုတင်စီစဉ်၍ မရပ်တန့်ပါ ၂၉.၂ ( ) ကြိုတင်စီစဉ်၍ ရပ်တန့်ပါသည်	
၃၀	ယခု ကိုယ်ဝန်ရရှိရန် အတွက် ကြိုတင်စီစဉ်၍ယူခဲ့ပါသလား။ ၃၀.၁ ( ) ကြိုတင် မစီစဉ်ခဲ့ပါ ၃၀.၂ ( ) ကြိုတင် စီစဉ်ခဲ့ပါသည်	
၃၁	သင်၏ ဇနီးမှာ ကိုယ်ဝန် ဘယ်နှစ်ပတ်/လ ရှိနေပါသနည်း။ ၃၁.၁_____ ပတ် / _____ လ	
၃၂	သင်၏ဇနီး လက်ရှိ ကိုယ်ဝန်ဆောင်ချိန်အတွင်း ကိုယ်ဝန်နှင့် ပက်သက်သည့် အနာဂတ်ရယ်ရှိသော သံသယလက္ခဏာများကို သတိထားမိပါသလား။ (သတိမထားမိလျှင် အပိုင်း ၄ မေးခွန်းနံပါတ် ၃၆သို့သွားပါ) ၃၂.၁ ( ) သတိမထားမိပါ ၃၂.၂ ( ) သတိထားမိပါသည်	
၃၃	မည်သည့်ရောဂါ လက္ခဏာများကို သတိထားမိပါသနည်း။ ၃၃.၁ ----------	
၃၄	ထိုရောဂါလက္ခဏာများကိုခံစားနေရသည်မှာ အချိန်မည်မျှကြာပြီလဲ။ ၃၄.၁ _____ ရက် / _____ ပတ်	
၃၅	ဘယ်လောက်ပြင်းပြင်းထန်ထန် ခံစားနေရပါသနည်း။ ၃၅.၁ ( ) အနည်းငယ် ၃၅.၂ ( ) အသင့်အတင့် ၃၅.၃ ( ) ပြင်းပြင်းထန်ထန်	

အပိုင်း (၄) အိမ်ထောင်သည်အမျိုးသားများ၏ ကိုယ်ဝန်ဆောင်မိခင်ကျန်းမာရေး စောင့်ရှောက်မှု ဗဟုသုတ၊ သဘောထားနှင့် မွေးဖွားရန် ကြိုတင်ပြင်ဆင်မှု

(က) အိမ်ထောင်သည်အမျိုးသားများ၏ ကိုယ်ဝန်ဆောင်ကျန်းမာရေးစောင့်ရှောက်မှု ဗဟုသုတ

ကျေးဇူးပြု၍ သက်ဆိုင်ရာ ( ) တွင် √ အမှန်ခြစ် (သို့မဟုတ်) ကွက်လပ်များတွင် မှန်ကန်စွာဖြည့်ပါ။

	သုတေသန မေးခွန်း:	သုတေသန ပြုလုပ်သူ
၃၆	ကိုယ်ဝန်ဆောင်များအတွက် ကျန်းမာရေး စောင့်ရှောက်မှု လိုအပ်သည်ဟု ထင်ပါသလား။ (မထင်လျှင် မေးခွန်းနံပါတ် ၄၀ သို့သွားပါ) ၃၆.၁ ( ) မထင်ပါ ၃၆.၂ ( ) ထင်ပါသည်	
၃၇	မည်သူ တစ်ဦးတစ်ယောက်ထံမှ ကိုယ်ဝန်ဆောင် ကျန်းမာရေး စောင့်ရှောက်မှု ခံယူသင့်ပါသနည်း။ ၃၇.၁ သားဖွား: /အရန်သားဖွားဆရာမ ၃၇.၁.၁ ( ) မှန် ၃၇.၁.၂ ( ) မှား ၃၇.၂ အရပ်လက်သည် ၃၇.၂.၁ ( ) မှန် ၃၇.၂.၂ ( ) မှား ၃၇.၃ တိုင်းရင်းဆေး: ဆရာ/ဆရာမ ၃၇.၃.၁ ( ) မှန် ၃၇.၃.၂ ( ) မှား ၃၇.၄ ကျန်းမာရေးမှူး: /ကျန်းမာရေးဆရာမ ၃၇.၄.၁ ( ) မှန် ၃၇.၄.၂ ( ) မှား ၃၇.၅ ဆရာဝန်/သားဖွားနှင့်မီးယပ်အထူးကု ၃၇.၅.၁ ( ) မှန် ၃၇.၅.၂ ( ) မှား ၃၇.၆ အပ်ပုန်း: ၃၇.၆.၁ ( ) မှန် ၃၇.၆.၂ ( ) မှား	
၃၈	ကိုယ်ဝန်ဆောင်ကျန်းမာရေး စောင့်ရှောက်မှုအနည်းဆုံး ဘယ်နှစ်ကြိမ်ခံယူသင့် ပါသနည်း။ ၃၈.၁ ----------	
၃၉	ကိုယ်ဝန်ဆောင်ကျန်းမာရေး စောင့်ရှောက်မှုတွင် မည်သည့်စောင့်ရှောက်မှုများ ပါဝင်သနည်း။ (တစ်ခုထက်ပို၍ ဖြေနိုင်) ၃၉.၁ မေးခိုင်ကာကွယ်ဆေးထိုးခြင်း: ၃၉.၁.၁ ( ) မှန် ၃၉.၁.၂ ( ) မှား ၃၉.၂ သံဓာတ်ပါသောအားဆေးတိုက်ခြင်း: ၃၉.၂.၁ ( ) မှန် ၃၉.၂.၂ ( ) မှား ၃၉.၃ သန္ဓေတာဆေးတိုက်ခြင်း: ၃၉.၃.၁ ( ) မှန် ၃၉.၃.၂ ( ) မှား ၃၉.၄ ကိုယ်ဝန် စမ်းသပ်စစ်ဆေးခြင်း: ၃၉.၄.၁ ( ) မှန် ၃၉.၄.၂ ( ) မှား ၃၉.၅ သွေးပေါင်ချိန် တိုင်းခြင်း: ၃၉.၅.၁ ( ) မှန် ၃၉.၅.၂ ( ) မှား ၃၉.၆ ပုံမှန် ရင်ဘတ်ဓာတ်မှန်ရိုက်ခြင်း: ၃၉.၆.၁ ( ) မှန် ၃၉.၆.၂ ( ) မှား ၃၉.၇ သန်ချခြင်း: ၃၉.၇.၁ ( ) မှန် ၃၉.၇.၂ ( ) မှား ၃၉.၈ သွားကျန်းမာရေး စစ်ဆေးခြင်း: ၃၉.၈.၁ ( ) မှန် ၃၉.၈.၂ ( ) မှား	

သုတေသန မေးခွန်း:				သုတေသန ပြုလုပ်သူ
၄၀	ကိုယ်ဝန်ဆောင်ချိန်အတွင်း ဖြစ်ပွားတတ်သည့် ပြင်းထန်သောကျန်းမာရေး ပြဿနာများကို သိပါသလား။ (မသိလျှင်မေးခွန်းနံပါတ် ၄၂ သို့သွားပါ) ၄၀.၁ ( ) မသိပါ ၄၀.၂ ( ) သိပါသည်			
၄၁	ကိုယ်ဝန်ဆောင်ချိန်အတွင်း ဖြစ်ပွားတတ်သည့် ကျန်းမာရေးပြဿနာ၊ အန္တရာယ်လက္ခဏာများမှာ ၄၀.၁ ဖျားခြင်း: ၄၀.၁.၁ ( ) မှန် ၄၀.၁.၂ ( ) မှား ၄၀.၂ တက်ခြင်း: ၄၀.၂.၁ ( ) မှန် ၄၀.၂.၂ ( ) မှား ၄၀.၃ ဗိုက်ကြောပြတ်ခြင်း: ၄၀.၃.၁ ( ) မှန် ၄၀.၃.၂ ( ) မှား ၄၀.၄ အသက်ရှူခက်ခဲခြင်း: ၄၀.၄.၁ ( ) မှန် ၄၀.၄.၂ ( ) မှား ၄၀.၅ ပြင်းထန်စွာ ဗိုက်အောင့်ခြင်း: ၄၀.၅.၁ ( ) မှန် ၄၀.၅.၂ ( ) မှား ၄၀.၆ အရေပြားယားယံခြင်း: ၄၀.၆.၁ ( ) မှန် ၄၀.၆.၂ ( ) မှား ၄၀.၇ အမြင်ဝေဝါးခြင်း: ၄၀.၇.၁ ( ) မှန် ၄၀.၇.၂ ( ) မှား ၄၀.၈ သွေးအလွန်အမင်း ဆင်းခြင်း: ၄၀.၈.၁ ( ) မှန် ၄၀.၈.၂ ( ) မှား ၄၀.၉ ဝမ်းချုပ်ခြင်း: ၄၀.၉.၁ ( ) မှန် ၄၀.၉.၂ ( ) မှား ၄၀.၁၀ ခြေလက်များ ဖောရောင်ခြင်း: ၄၀.၁၀.၁ ( ) မှန် ၄၀.၁၀.၂ ( ) မှား			
၄၂	မွေးဖွားချိန်တွင် ဖြစ်ပွားတတ်သော ကျန်းမာရေးပြဿနာများကို သိပါသလား။ (မသိလျှင် မေးခွန်းနံပါတ် ၄၄သို့သွားပါ) ၄၂.၁ ( ) မသိပါ ၄၂.၂ ( ) သိပါသည်			
၄၃	မွေးဖွားချိန်တွင် ဖြစ်ပွားတတ်သော ကျန်းမာရေး ပြဿနာ အန္တရာယ်လက္ခဏာများမှာ ၄၃.၁ ဖျားခြင်း: ၄၃.၁.၁ ( ) မှန် ၄၃.၁.၂ ( ) မှား ၄၃.၂ တက်ခြင်း: ၄၃.၂.၁ ( ) မှန် ၄၃.၂.၂ ( ) မှား ၄၃.၃ အလွန်အမင်း မောပန်းခြင်း: ၄၃.၃.၁ ( ) မှန် ၄၃.၃.၂ ( ) မှား ၄၃.၄ ဆီးသွားခြင်း: ၄၃.၄.၁ ( ) မှန် ၄၃.၄.၂ ( ) မှား ၄၃.၅ အချင်းကွာ နောက်ကျခြင်း: ၄၃.၅.၁ ( ) မှန် ၄၃.၅.၂ ( ) မှား ၄၃.၆ ရင်သားနာကျင်ခြင်း: ၄၃.၆.၁ ( ) မှန် ၄၃.၆.၂ ( ) မှား ၄၃.၇ မွေးချိန်ကြာခြင်း: ၄၃.၇.၁ ( ) မှန် ၄၃.၇.၂ ( ) မှား ၄၃.၈ သွေးအလွန်အမင်း ဆင်းခြင်း: ၄၃.၈.၁ ( ) မှန် ၄၃.၈.၂ ( ) မှား			
၄၄	မည်သို့သော ကိုယ်ဝန်ဆောင် မိခင်များသည် ဆေးရုံတွင် မဖြစ်မနေ မွေးဖွားရမည် ကိုသိပါသလား။ (မသိလျှင် မေးခွန်းနံပါတ် ၄၆ သို့သွားပါ) ၄၄.၁ ( ) မသိပါ ၄၄.၂ ( ) သိပါသည်			

	သုတေသန မေးခွန်း:	သုတေသန ပြုလုပ်သူ
၄၅	သိလျှင် ဖော်ပြပါ။ (တစ်ခုထက်ပို၍ ဖြေနိုင်)	
	၄၅.၁ အသက် ၁၈ အောက် ကိုယ်ဝန်ဆောင်မိခင်	
	၄၅.၁.၁ ( ) မှန် ၄၅.၁.၂ ( ) မှား	
	၄၅.၂ အသက်၃၅ နှစ်အောက်ကိုယ်ဝန်ဆောင်မိခင်	
	၄၅.၂.၁ ( ) မှန် ၄၅.၂.၂ ( ) မှား	
	၄၅.၃ သန္ဓေသား အနေအထား မမှန်ခြင်း	
	၄၅.၃.၁ ( ) မှန် ၄၅.၃.၂ ( ) မှား	
	၄၅.၄ သန္ဓေသား တစ်ဦးတည်းသောကိုယ်ဝန်	
	၄၅.၄.၁ ( ) မှန် ၄၅.၄.၂ ( ) မှား	
	၄၅.၅ အမွှာကိုယ်ဝန်	
	၄၅.၅.၁ ( ) မှန် ၄၅.၅.၂ ( ) မှား	
	၄၅.၆ သွေးတိုးရောဂါရှိသော ကိုယ်ဝန်ဆောင်	
	၄၅.၆.၁ ( ) မှန် ၄၅.၆.၂ ( ) မှား	
	၄၅.၇ အရပ်ရှည်သော ကိုယ်ဝန်ဆောင် (၅ ပေနှင့်အထက်)	
	၄၅.၇.၁ ( ) မှန် ၄၅.၇.၂ ( ) မှား	
	၄၅.၈ သားဥ ကိုယ်ဝန်	
	၄၅.၈.၁ ( ) မှန် ၄၅.၈.၂ ( ) မှား ( )	
၄၆	မွေးဖွားပြီးချိန်တွင် ဖြစ်ပွားတတ်သော ကျန်းမာရေး ပြဿနာများကို သိပါသလား။ (မသိလျှင် အပိုင်: (၁) မေးခွန်းနံပါတ် ၄၈ သို့သွားပါ)	
	၄၆.၁ ( ) မသိပါ ၄၆.၂ ( ) သိပါသည်	
၄၇	မွေးဖွားပြီးချိန်တွင် ဖြစ်ပွားတတ်သော ကျန်းမာရေး ပြဿနာ အန္တရာယ် လက္ခဏာများမှာ	
	၄၇.၁ အနံ့ဆိုးအရည်များဆင်းခြင်း	
	၄၇.၁.၁ ( ) မှန် ၄၇.၁.၂ ( ) မှား	
	၄၇.၂ ရင်သားများ ကြီးလာခြင်း	
	၄၇.၂.၁ ( ) မှန် ၄၇.၂.၂ ( ) မှား	
	၄၇.၃ အသက်ရှူရခက်ခဲခြင်း	
	၄၇.၃.၁ ( ) မှန် ၄၇.၃.၂ ( ) မှား	
	၄၇.၄ တက်ခြင်း	
	၄၇.၄.၁ ( ) မှန် ၄၇.၄.၂ ( ) မှား	
	၄၇.၅ သွေးအလွန်အမင်းဆင်းခြင်း	
	၄၇.၅.၁ ( ) မှန် ၄၇.၅.၂ ( ) မှား	
	၄၇.၆ နို့ရည်ကြည်များထွက်ခြင်း	
	၄၇.၆.၁ ( ) မှန် ၄၇.၆.၂ ( ) မှား	

(ခ) အိမ်ထောင်သည်အမျိုးသားများ၏ ကိုယ်ဝန်ဆောင်ကျန်းမာရေး စောင့်ရှောက်မှု သဘောထား

သုတေသန မေးခွန်း						သုတေသန ပြုလုပ်သူ
စဉ်	အကြောင်းအရာ	အလွန် သဘော တူ	သဘော တူ	သဘော မတူ	လုံးဝ သဘော မတူ	
၄၈	အမျိုးသားများသည် မိမိဇနီး၏ ကိုယ်ဝန်ဆောင်ကျန်းမာရေးစောင့်ရှောက်မှု တွင်ပါဝင် ကူညီသင့်သည်။					
၄၉	အမျိုးသားများသည် မိမိဇနီး ကိုယ်ဝန်ဆောင် ကျန်းမာရေး စောင့်ရှောက်မှုခံယူရန် စီစဉ်ပေးသင့်သည်။					
၅၀	ကိုယ်ဝန်ဆောင်ကျန်းမာရေးစောင့်ရှောက်မှုခံ ယူခြင်းအတွက်ငွေကုန်ကြေးကျများသည်။					
၅၁	အမျိုးသားများသည်ကိုယ်ဝန်ဆောင်ချိန်နှင့် ကလေးမွေးဖွားချိန်တွင် ဖြစ်ပွားတတ် သော အန္တရာယ်လက္ခဏာများကို သိရှိရန် မလိုအပ်ပါ။					
၅၂	အမျိုးသားများသည်ကိုယ်ဝန်ဆောင်ချိန်နှင့် ကလေးမွေးဖွားချိန်တွင်အရေးပေါ် အခြေအနေ၌ မှန်ကန်စွာဆုံးဖြတ်ချက်ချ နိုင်ရန် အဓိကတာဝန်ရှိသောသူ ဖြစ်သည်။					
၅၃	အမျိုးသားများသည်ကိုယ်ဝန်ဆောင်ချိန်နှင့် ကလေးမွေးဖွားချိန်တွင်ကုန်ကျမှုများ အတွက် ငွေကြေးထောက်ပံ့ရန် တာဝန်ရှိသောသူဖြစ်သည်။					
၅၄	အမျိုးသားများသည် မိမိဇနီးကလေးမွေးဖွားချိန်တွင် လိုက်ပါ စောင့်ရှောက်ပေးရန် မလိုအပ်ပါ။					
၅၅	ကလေးမွေးဖွားခြင်းသည် အမျိုးသမီးများ၏ ကိစ္စဖြစ်သဖြင့် အမျိုးသားများနှင့် မသက်ဆိုင်ပါ။					
၅၆	အမျိုးသားများသည် မိမိဇနီးသည် ကလေးမွေးဖွားရာ နေရာကို အချိန်ပေး၍ ကြိုတင်စီစဉ်ထားသင့်သည်။					
၅၇	အမျိုးသားများသည် မိမိဇနီး ကျန်းမာရေး စောင့်ရှောက်မှုရှိရာ နေရာတွင် ကလေးမွေးဖွားနိုင်ရန် စီစဉ်ပေးသင့်သည်။					
၅၈	အမျိုးသားများသည် မိမိဇနီး ကလေး မွေးဖွားမည့် ကျန်းမာရေး စောင့်ရှောက် ရာနေရာသို့ သွားရောက်မည့် နည်းလမ်း ကို ကြိုတင်စီစဉ်ထားသင့် သည်။					
၅၉	အမျိုးသားများသည် မိမိဇနီးကလေး မမွေးဖွားမီ အရေးပေါ် အသုံးပြုရန် အတွက်သွေးအလှူရှင် ကြိုရှာထားရန် မလိုအပ်ပါ။					

(ဂ) မွေးဖွားရန်ကြိုတင်ပြင်ဆင်မှုတွင် အိမ်ထောင်သည်အမျိုးသားများ ပူးပေါင်းပါဝင်ဆောင်ရွက်ခြင်း

ကျေးဇူးပြု၍ သက်ဆိုင်ရာ ( ) တွင် √ အမှန်ခြစ် (သို့မဟုတ်) ကွက်လပ်များတွင် မှန်ကန်စွာဖြည့်ပါ။

	သုတေသန မေးခွန်း:	သုတေသန ပြုလုပ်သူ
၆၀	သင်၏ဇနီးသည် ကိုယ်ဝန်ဆောင်စဉ်အတွင်း မွေးဖွားရန်နေရာကို ကြိုတင်စီစဉ်ထားပါသလား။ ( ) မစီစဉ်ထားပါ ( ) စီစဉ်ထားပါသည် စီစဉ်ခဲ့လျှင် ၆၀.၁။ စီစဉ်ခဲ့သော နေရာ၌ မွေးဖွားခဲ့ပါသလား။ ( ) မမွေးဖွားခဲ့ပါ ( ) မွေးဖွားခဲ့ပါသည်	
၆၁	သင်၏ဇနီးသည် ကိုယ်ဝန်ဆောင်စဉ်အတွင်း မွေးဖွားရန်အတွက် ကျန်းမာရေးဝန်ထမ်း ဆရာ/ဆရာမ ကို ကြိုတင်အပ်နှံထားပါသလား။ ( ) မအပ်နှံထားပါ ( ) အပ်နှံထားပါသည်	
၆၂	သင်၏ဇနီးသည် ကိုယ်ဝန်ဆောင်စဉ်အတွင်း မွေးဖွားရန်အတွက် ကြိုတင်ငွေစုဆောင်းဖူးပါသလား။ ( ) မစုဆောင်းထားပါ ( ) စုဆောင်းထားပါသည်	
၆၃	သင်၏ဇနီးသည် ကိုယ်ဝန်ဆောင်စဉ်အတွင်း မွေးဖွားမည့်နေရာသို့ သွားလာရေးအတွက် ကြိုတင်ပြင်ဆင် ထားပါသလား။ ( ) မပြင်ဆင်ထားခဲ့ပါ ( ) ပြင်ဆင်ထားခဲပါသည် ပြင်ဆင်ခဲ့လျှင် ၆၃.၁။ ပြင်ဆင်ခဲ့သည့်အတိုင်း သွားခဲ့ပါသလား။ ( ) မသွားခဲ့ပါ ( ) သွားခဲ့ပါသည်	
၆၄	သင်၏ဇနီးသည် ကိုယ်ဝန်ဆောင်စဉ်အတွင်း အရေးပေါ်အခြေအနေ ကြုံကြိုက်လာခဲ့လျှင် အသုံးပြုရန် သွေးအလှူရှင် ကြိုတင်ရှာထားပါသလား။ ( ) မရှာထားခဲပါ ( ) ရှာထားခဲ့ပါသည်	

ကူညီပြီးဖြေဆိုပေးတာကျေးဇူးတင်ပါတယ်ခင်ဗျ/ ရှင့်။ ။

မေးခွန်းမေးမြန်းသူ၏ လက်မှတ်

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Modified Part III questionnaire and section C questionnaire from part IV for 2nd posttest

(မြန်မာဘာသာပြန်ဆိုချက်)

အပိုင်း (၃) ကိုယ်ဝန်ဆောင်မိခင်ကျန်းမာရေးစောင့်ရှောက်မှုခံယူရန်
လိုအပ်သောအချက်များ

ကျေးဇူးပြု၍ သက်ဆိုင်ရာ ( ) တွင် √ အမှန်ခြစ် (သို့မဟုတ်) ကွက်လပ်များတွင်
မှန်ကန်စွာဖြည့်ပါ။

	သုတေသန မေးခွန်း:	သုတေသန ပြုလုပ်သူ
၂၇	ယခုကိုယ်ဝန်မရခင် သင်ကိုယ်တိုင် (သို့) သင်၏ဇနီးမှ သန္ဓေတားပစ္စည်း/ဆေးသုံးစွဲခဲ့ပါသလား။ (သုံးစွဲမှု မရှိလျှင် မေးခွန်းနံပါတ် ၃၀ သို့သွားပါ) ၂၇.၁ ( ) မသုံးစွဲခဲ့ပါ ၂၇.၂ ( ) သုံးစွဲခဲ့ပါသည်	
၂၈	အချိန် ဘယ်လောက်ကြာအောင် သုံးစွဲခဲ့ပါသနည်း။ ၂၈.၁ ----------	
၂၉	ယခုကိုယ်ဝန်ရရှိရန်အတွက် သန္ဓေတား ပစ္စည်း/ဆေးသုံးစွဲမှုကို ကြိုတင်စီစဉ်၍ ရပ်တန့်ထားခဲ့ပါသလား။ ၂၉.၁ ( ) ကြိုတင်စီစဉ်၍ မရပ်တန့်ခဲ့ပါ ၂၉.၂ ( ) ကြိုတင်စီစဉ်၍ ရပ်တန့်ခဲ့ပါသည်	
၃၀	ယခု ကိုယ်ဝန်ရရှိရန် အတွက် ကြိုတင်စီစဉ်၍ယူခဲ့ပါသလား။ ၃၀.၁ ( ) ကြိုတင်မစီစဉ်ခဲ့ပါ ၃၀.၂ ( ) ကြိုတင်စီစဉ်ခဲ့ပါသည်	
၃၁	သင်၏ဇနီး ကိုယ်ဝန်ဆောင် ဘယ်နှစ်ပါတ်/လ တွင်ကလေး မွေးဖွားခဲ့ပါသလဲ။ ၃၁.၁ _____ ပတ် / _____ လ	
၃၂	သင်၏ဇနီး လက်ရှိ ကိုယ်ဝန်ဆောင်ချိန်အတွင်း ကိုယ်ဝန်နှင့် ပက်သက်သည့် အန္တရာယ်ရှိသော သံသယ လက္ခဏာများကို သတိထားမိခဲ့ပါသလား။ (သတိမထားမိလျှင် အပိုင်း ၄ မေးခွန်းနံပါတ် ၃၆သို့သွားပါ) ၃၂.၁ ( ) သတိမထားမိခဲ့ပါ ၃၂.၂ ( ) သတိထားမိခဲ့ပါသည်	
၃၃	မည်သည့်ရောဂါ လက္ခဏာများကို သတိထားမိခဲ့ပါသနည်း။ ၃၃.၁ ----------	
၃၄	အချိန်မည်မျှ ကြာအောင် ခံစားခဲ့ရပါသနည်း။ ၃၄.၁ _____ ရက် / _____ ပတ်	
၃၅	ဘယ်လောက်ပြင်းပြင်းထန်ထန် ခံစားခဲ့ရပါသနည်း။ ၃၅.၁ ( ) အနည်းငယ် ၃၅.၂ ( ) အသင့်အတင့် ၃၅.၃ ( ) ပြင်းပြင်းထန်ထန်	

အပိုင်း (၄)

(ဂ) မွေးဖွားရန်ကြိုတင်ပြင်ဆင်မှုတွင် အိမ်ထောင်သည်အမျိုးသားများ ပူးပေါင်းပါဝင်ဆောင်ရွက်ခြင်း

ကျေးဇူးပြု၍ သက်ဆိုင်ရာ ( ) တွင် √ အမှန်ခြစ် (သို့မဟုတ်) ကွက်လပ်များတွင် မှန်ကန်စွာဖြည့်ပါ။

	သုတေသန မေးခွန်း:	သုတေသန ပြုလုပ်သူ
၆၀	သင်၏ဖနီးသည် ကိုယ်ဝန်ဆောင်စဉ်အတွင်း မွေးဖွားရန်နေရာကို ကြိုတင်စီစဉ်ထားပါသလား။ ( ) မစီစဉ်ထားပါ ( ) စီစဉ်ထားပါသည် စီစဉ်ခဲ့လျှင် ၆၀.၁။ စီစဉ်ခဲ့သော နေရာ၌ မွေးဖွားခဲ့ပါသလား။ ( ) မမွေးဖွားခဲ့ပါ ( ) မွေးဖွားခဲ့ပါသည်	
၆၁	သင်၏ဖနီးသည် ကိုယ်ဝန်ဆောင်စဉ်အတွင်း မွေးဖွားရန်အတွက် ကျန်းမာရေးဝန်ထမ်း ဆရာ/ဆရာမ ကို ကြိုတင်အပ်နှံထားပါသလား။ ( ) မအပ်နှံထားပါ ( ) အပ်နှံထားပါသည်	
၆၂	သင်၏ဖနီးသည် ကိုယ်ဝန်ဆောင်စဉ်အတွင်း မွေးဖွားရန်အတွက် ကြိုတင်ငွေစုဆောင်းဖူးပါသလား။ ( ) မစုဆောင်းထားပါ ( ) စုဆောင်းထားပါသည်	
၆၃	သင်၏ဖနီးသည် ကိုယ်ဝန်ဆောင်စဉ်အတွင်း မွေးဖွားမည့်နေရာသို့ သွားလာရေးအတွက် ကြိုတင်ပြင်ဆင် ထားပါသလား။ ( ) မပြင်ဆင်ထားခဲ့ပါ ( ) ပြင်ဆင်ထားခဲ့ပါသည် ပြင်ဆင်ခဲ့လျှင် ၆၃.၁။ ပြင်ဆင်ခဲ့သည့်အတိုင်း သွားခဲ့ပါသလား။ ( ) မသွားခဲ့ပါ ( ) သွားခဲ့ပါသည်	
၆၄	သင်၏ဖနီးသည် ကိုယ်ဝန်ဆောင်စဉ်အတွင်း အရေးပေါ်အခြေအနေ ကြုံကြိုက်လာခဲ့လျှင် အသုံးပြုရန် သွေးအလှူရှင် ကြိုတင်ရှာထားပါသလား။ ( ) မရှာထားခဲ့ပါ ( ) ရှာထားခဲ့ပါသည်	

APPENDIX C

Checklist for participants' wives assessing their husband involvement in BP/CR (English)

No	Items	Answers	
		Yes	No
1	Did your husband accompany to you when you went to antenatal visit?		
2	Did your husband share maternal health information and knowledge with you during pregnancy?		
3	Did your husband make decision regarding with your maternal health care during pregnancy?		
4	Did your husband arrange or save money for delivery during pregnancy?		
5	Did you husband accompany when you went to health facility for delivery?		
6	Did your husband plan the type of transportation when you use to get to the place of delivery during pregnancy?		
7	Did your husband plan where you deliver the baby during pregnancy?		
8	Did your husband arrange a skilled birth attendant for delivery during your pregnancy?		
9	Did your husband plan for a potential blood donor in case for emergency for you during your pregnancy?		
10	Did your husband help you in household chores during your pregnancy?		

Checklist for participants' wives assessing their husband involvement in BP/CR (Myanmar)

ကလေးမွေးဖွားရန် ကြိုတင်ပြင်ဆင်မှုတွင်ခင်ပွန်းသည်များပူးပေါင်းပါဝင်ဆောင်ရွက်ခြင်း ဆန်းစစ် မေးခွန်းလွှာ

စဉ်	အကြောင်းအရာ	အဖြေ	
		ဟုတ်ပါသည်	မဟုတ်ပါ
၁။	သင်၏ကိုယ်ဝန်သွားပြရာတွင် သင့်ခင်ပွန်းကအတူတကွလိုက်ပါပေး ပါသလား။		
၂။	သင်ကိုယ်ဝန်ဆောင်နေစဉ်အတွင်း သင့်ခင်ပွန်းက ကိုယ်ဝန်ဆောင် ကျန်းမာရေးဗဟုသုတနှင့် အချက်အလက်များကို မျှဝေပေးပါသလား။		
၃။	သင်ကိုယ်ဝန်ဆောင်စဉ်အတွင်း ကိုယ်ဝန်ဆောင်ကျန်းမာရေး စောင့်ရှောက်မှုခံယူခြင်းကိစ္စများတွင် သင့်ခင်ပွန်းကပါဝင်ကူညီ ဆုံးဖြတ် ပေးပါသလား။		
၄။	သင်ကိုယ်ဝန်ဆောင်နေစဉ်အတွင်း မွေးဖွားရန်လိုအပ်သော ပိုက်ဆံကို သင့်ခင်ပွန်းကကြိုတင်စုဆောင်းပေးပါသလား။		
၅။	သင်မီဖွားရန် ကျန်းမာရေးဌာနသို့သွားရှိန်တွင် သင့်ခင်ပွန်းက အတူတကွ လိုက်ပါပေးပါသလား။		
၆။	သင်ကိုယ်ဝန်ဆောင်စဉ်အတွင်းမွေးဖွားမည့်နေရာသို့ သွားလာ ရေးအတွက်သင့်ခင်ပွန်းကကြိုတင်ပြင်ဆင်ပေးပါ သလား။		
၇။	သင်ကိုယ်ဝန်ဆောင်စဉ်အတွင်း မီးဖွားရန်နေရာကို သင့်ခင်ပွန်း ကကူညီ၍ကြိုတင်စီစဉ်ပေးပါသလား။		
၈။	သင်ကိုယ်ဝန်ဆောင်စဉ်အတွင်း မီးဖွားရန်အတွက် ကျန်းမာရေး ဝန်ထမ်းဆရာ၊ဆရာမကို ကြိုတင်အပ်နှံရာတွင် သင့်ခင်ပွန်းက ကူညီ ပေးပါသလား။		
၉။	သင်ကိုယ်ဝန်ဆောင်စဉ်အတွင်းအရေးပေါ်အခြေအနေကြုံကြိုက် လာလျှင်အသုံးပြုရန် သွေးအလှူရှင်ကိုသင့်ခင်ပွန်းက ကြိုတင် ရှာထား ပေးပါသလား။		
၁၀။	သင်ကိုယ်ဝန်ဆောင်စဉ်အတွင်း သင့်ခင်ပွန်းက အိမ်မှကိစ္စများ တွင် ကူညီဆောင်ရွက်ပေးပါသလား။		

APPENDIX D

Birth Certificate Register Book (English)

Please mark √ in ( ) or fill in the blanks for explanation the truth

1	Date of Delivery	
2	Place of Delivery	
3	Birth attendant for delivery	
4	Method of delivery	

Birth Certificate Register Book (Myanmar)

သုတေသန မေးခွန်း		သုတေသန ပြုလုပ်သူ
၁။	ကလေးမွေးဖွားသည့်ရက် ……	
၂။	ကလေးမွေးဖွားသည့်နေရာ (ဆေးရုံ၊ ဆေးခန်း၊ အိမ်၊ သားဖွားခန်း၊ စသည်) ……	
၃။	ကလေးမွေးဖွားပေးသည့်သူ (ဆရာဝန်၊ သားဖွားဆရာမ၊ လက်သည်စသည်) ……..	
၄။	ဘယ်လိုမွေးဖွားခဲ့ပါသလဲ။ ……	

APPENDIX E

Wealth Index Calculation

For Q1 (1=-0.025530808557484) (2=0.345544778502443)

- For Q2 (1=0.371659018974553) (2=-0.102020130983158) (3=0.00219786488820126) (4=-0.0839642312507093)
- For Q3 (1=0.0259880009672461) (2=-0.00141626285317562) (3=-0.162272142711908) (4=0.417222311375859) (5=0.0259880009672461)
- For Q4 (1=0.131993214614489) (2=-0.00951544838130225)
- For Q5 (1=0.636284380209355) (2=-0.0673020128779394) (3=0.392233966046171) (4=-0.0673020128779394)
- For Q6 (1=-0.318405128511842) (2=0.0745454722181857
- For Q7 (1=-0.267632087520993) (2=0.207029538060123) (3=-0.0248301579333771)
- For Q8 (1=0.155846115392707) (2=0.401412657571093) (3=-0.0984432979631162)
- For Q9 (1=-0.196904057438958) (2=0.0578959186202151) (3=0.38406545483466) (4=-0.0020308798728003)
- For Q10 (1=0.133887716987529) (2=-0.0864678317972501)
- For Q11 (1=0.373700371807049) (2=-0.00758553700058694)
- For Q12 (1=0.118485721307809) (2=-0.0716352645001091)
- For Q13 (1=0.0818349475261608) (2=-0.0378962952521668)

Then, calculate sum of rural scores by formula,

RuralScore=Q1_RUR+Q2_RUR+Q3_RUR+Q4_RUR+Q5_RUR+Q6_RUR+Q7_RUR+Q8_RUR+Q9_RUR+Q10_RUR+Q11_RUR+Q12_RUR+Q13_RUR.

Scoring of urban area will be done using coding number according standardize scoring in Myanmar Equity Tool according to Myanmar Census as follow;

- For Q1 (1=-0.0152788703241126) (2=0.0296774684424243)

For Q2 (1=0.0789746818944892) (2=-0.19171597556422) (3=-0.479537125127508) (4=-0.19171597556422)

- For Q3 (1=-0.14079901746662) (2=-0.149666156807015) (3=-0.259416772722511) (4=0.131957854071569) (5=0.131957854071569)

- For Q4 (1=0.109241041668876) (2=-0.0410550098868406)

- For Q5 (1=0.184809665613407) (2=-0.25301708026281) (3=-0.0889954352927103) (4=0.184809665613407)

- For Q6 (1=-0.329594996854224) (2=0.00866449197525057)

- For Q7 (1=-0.396154255213975) (2=0.0654648072132339) (3=-0.0983750328408838)

- For Q8 (1=-0.012430185299896) (2=0.259325350455836) (3=-0.197027166368122)

- For Q9 (1=-0.269884615846232) (2=-0.107747189261285) (3=0.239437731703686) (4=-0.0107852850572689)

- For Q10 (1=0.0536242051754263) (2=-0.167856787521704)

- For Q11 (1=0.172320630482368) (2=-0.0353871864701528)

- For Q12 (1=0.0313760310021862) (2=-0.02194414211602)

- For Q13 (1=-0.000331694578401517) (2=0.000293193695119422)

Then, calculate sum of urban scores by formula,

UrbanScore=Q1_URB+Q2_URB+Q3_URB+Q4_URB+Q5_URB+Q6_URB+Q7_URB+Q8_URB+Q9_URB+Q10_URB+Q11_URB+Q12_URB+Q13_URB.

After that, national scores of each respondent will be calculated based on the urban and rural scores.

National Score = 0.7935311+0.8882363*Urban Score.

National Score = -0.3091079+0.7449525*Rural Score.

APPENDIX F

Time schedule

No.	Procedure	Time Frame (Month) March 2018 – July 2019																
		3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7
1	Submission for proposal exam	■																
2	Proposal exam	■																
3	Ethical Consideration		■	■	■	■	■	■										
4	Phase I - Formation of research team				■	■	■	■										
5	Phase I - Development of instruments				■	■	■	■										
6	Phase I - Selection of research participants							■										
7	Phase II – Baseline data collection								■									
8	Phase III - Implementation of intervention								■	■	■	■	■	■				
9	Phase IV- Immediate and 2nd time data collection													■	■			
10	Checking the registry of birth at the local authority													■	■			
11	Data Analysis								■	■				■	■			
12	Report writing															■		
13	Thesis draft submission															■	■	
14	1st research article accepted														■			
15	2nd research article submitted																■	
16	Thesis final exam																	■

APPENDIX G

Intervention Tool and Activity photos

(1) Intervention Tool photos

(2) Activity photos

Compiling the list of eligible husbands with the help of assigned area midwives

Data collection training

Data collection at assembling place

Primary researcher gave ‘MiM’ education

Data collection at participants’ home (Participants who did not come to assembling place)

Group discussion session

	
Group discussion session	Checking birth certificate register

APPENDIX H

Intervention Tool and Activity photos

The Government of the Republic of the Union of Myanmar
Ministry of Health and Sports
Department of Medical Research
No. 5, Ziwaka Road, Dagon Township, Yangon 11191
Tel : 95-1-375447, 95-1-375457, 95-1-375459 Fax : 95-1-251514

ERC Number: 2018-106
Approval Number: Ethics/DMR/2018/133
Date of Approval: 5 October, 2018 (valid up to 4 October, 2019)

Project Title: **Effectiveness of 'Men in Maternity Health (MiM)' intervention to improve husband involvement in Birth preparedness and Complication readiness for safe motherhood in Nay Pyi Taw, Myanmar: A Quasi Experimental Study**

Principal Investigator: **Dr. May Chan Oo**
PhD Candidate, Chulalongkorn University

Items Approved:
1. Full Proposal Version 2 Dated 18 September, 2018
2. Study area(s) – Lewe Township, Takkone Township
3. Informed consent forms Version 2 Dated 18 September, 2018
4. Investigators' CV Dated 18 September, 2018

The Ethics Review Committee on Medical Research Involving Human Subjects, Department of Medical Research, Ministry of Health and Sports approves to conduct the proposed research project as it is in full compliance with the Declaration of Helsinki, Council for International Organizations of Medical Sciences guidelines and International Conference on Harmonisation in Good Clinical Practice guidelines.

The principal investigator should be aware that there might be site monitoring visits at any time from ERC team during project implementation and should provide full cooperation to the team.

Prof. Pe Thet Khin
Chairperson
Ethics Review Committee
Department of Medical Research

IORG Number: IORG0007357 FWA Number: FWA00018816 IRB Number: IRB00008835

VITA

NAME	May Chan Oo
DATE OF BIRTH	13 June 1989
PLACE OF BIRTH	Yangon
INSTITUTIONS ATTENDED	University of Medicine (II) Yangon, Myanmar (2005-2012) Mahidol University (2014-2015) College of Public Health Sciences, Chulalongkorn University
HOME ADDRESS	No. 29/98, No (2) ward, Nwe Thar Gi street, Shwe Pyi Thar, Yangon
PUBLICATION	Chan OO, M., Aung, S. S., & Panza, A. (2019). Are Husbands Involving in Birth Preparedness and Complication Readiness for their Wives' Pregnancies?: A Cross-Sectional Study in Nay Pyi Taw, Myanmar. International Healthcare Research Journal, 3(1), 23-31. https://doi.org/10.26440/IHRJ/0301.04.521070