Journal of Public Health and Development
Vol. 16 No. 2 May-August 2018

ORIGINAL ARTICLE

Determinants of the unmet need for family planning among married fecund women in Natmauk Township, Magway Region of Myanmar

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Received: *5 June 2018* ***Revised:*** *8 August 2018* ***Accepted:*** *12 August 2018*
Available online: *August 2018*

Abstract

Myint AH, Tiraphat S, and Chompikul J. Determinants of the unmet need for family planning among married fecund women in Natmauk Township, Magway Region of Myanmar. J Pub Health Dev. 2018;16(2):41-57

Family Planning plays an important role in improving maternal and child health by means of adequate spacing of child births and preventing unintended pregnancies. Reducing unmet need is crucial in fighting against the high levels of induced abortions, maternal and neonatal morbidity and mortality. A community based cross-sectional study was conducted from March 2018 to April 2018 in Natmauk township, Magway region of Myanmar. A total of 420 married women of reproductive age (18-49 years) were enrolled in this study and two-stage stratified sampling was used to draw a sample. The data were collected by face to face interview with a structured questionnaire.

Total percentage of unmet need for family planning in the study area was 18.1% and the percentage of contraceptive use was 71.7%. After using multiple logistic regression, older women aged more than 35 years (Adj OR=2.49, 95% CI=1.48-4.19), poor attitude towards family planning (Adj OR=1.79, 95% CI=1.02-3.14), women who got low social support from husband and friends (Adj OR=1.93, 95% CI=1.13-3.31) were more likely to have unmet need for family planning than their counterparts. The main reasons for not using contraception were fear of side effects and desire to get more children.

It is notable that the prevalence of unmet need for family planning was high especially among women within older age group, women with poor attitude towards family planning and women who got low social support from their husbands and friends. Local government and health authorities should implement comprehensive health programs which should be focused on the women as well as their husbands. Furthermore, providing counselling strategies for family planning while integrating participation of women and their husbands to improve the attitude towards family planning are need to be promoted.

Keywords: unmet need for family planning, fecund women, married women, Myanmar

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ปัจจัยกำหนดความต้องการที่ไม่สัมฤทธิ์สำหรับการคุมกำเนิดของสตรีที่สมรสในเมืองแนทมัก เขตแมกเวย์ ประเทศพม่า

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บทคัดย่อ

อัง โฟน มินท์ ศริยามน ติรพัฒน์ และจิราพร ชมพิกุล ปัจจัยกำหนดความต้องการที่ไม่สัมฤทธิ์สำหรับการคุมกำเนิดของสตรีที่สมรสในเมืองแนทมัก เขตแมกเวย์ ประเทศพม่า ว. สาธารณสุขและการพัฒนา 2561;16(2):41-57

การวางแผนครอบครัวมีบทบาทสำคัญในการพัฒนาสุขภาพของมารดาและเด็กโดยมีเป้าหมายในการกำหนดระยะห่างที่พอเหมาะสำหรับการคลอดบุตรและการป้องกันการตั้งครรภ์ที่ไม่ตั้งใจ การลดความต้องการที่ไม่สัมฤทธิ์สำหรับการคุมกำเนิด เป็นสิ่งสำคัญในการลดจำนวนการทำแท้ง การป่วยและการตายในมารดาและทารกแรกเกิด การศึกษาแบบภาคตัดขวางในชุมชนเมืองแนทมัก เขตแมกเวย์ ของประเทศพม่า ได้ดำเนินการเก็บข้อมูลในช่วงเดือนมีนาคม ถึงเมษายน พ.ศ. 2561 ในกลุ่มสตรีวัยเจริญพันธุ์ที่แต่งงานแล้วจำนวน 420 รายซึ่งมีอายุ18 - 49 ปี ซึ่งได้รับการคัดเลือกในการศึกษาครั้งนี้โดยการสุ่มตัวอย่างแบบมีชั้นภูมิสองขั้นตอน การเก็บรวบรวมข้อมูลใช้การสัมภาษณ์โดยใช้แบบสอบถามที่มีโครงสร้าง

ร้อยละ18.1 ของผู้เข้าร่วมการวิจัยมีความต้องการที่ไม่สัมฤทธิ์สำหรับการคุมกำเนิด และร้อยละ 71.7 มีการคุมกำเนิด การวิเคราะห์ข้อมูลด้วยโลจิสติกพหุคูณ พบว่า สตรีที่ มีอายุมากกว่า 35 ปี (Adj OR=2.49, 95% CI=1.48-4.19) มีทัศนคติที่ไม่ดีต่อการวางแผนครอบครัว (Adj OR = 1.79, 95% CI=1.02-3.14) และได้รับการสนับสนุนทางสังคมจากสามีและเพื่อนในระดับต่ำ (Adj OR = 1.93, 95% CI=1.13-3.31) มีแนวโน้มสูงที่จะมีความต้องการที่ไม่สัมฤทธิ์สำหรับการคุมกำเนิด เหตุผลหลักในการไม่คุมกำเนิดคือความกลัวผลข้างเคียงและความปรารถนาที่จะมีบุตรเพิ่มขึ้น

เนื่องจากร้อยละของความต้องการที่ไม่สัมฤทธิ์สำหรับการคุมกำเนิดในพื้นที่การศึกษามีค่าสูง การลดความต้องการที่ไม่สัมฤทธิ์สำหรับการคุมกำเนิดจึงเป็นเรื่องที่ต้องคำนึงถึงเป็นพิเศษโดยเฉพาะอย่างยิ่งในสตรีที่มีอายุมาก สตรีที่มีทัศนคติที่ไม่ดีต่อการวางแผนครอบครัวและสตรีที่ได้รับการสนับสนุนทางสังคมจากสามีและเพื่อนในระดับต่ำ รัฐบาลท้องถิ่นและเจ้าหน้าที่สาธารณสุขควรดำเนินโครงการด้านสุขภาพที่ครอบคลุมทั้งกลุ่มสตรีและสามี นอกจากนั้นการให้คำปรึกษาในการวางแผนครอบครัวโดยให้สตรีกับสามีมีส่วนร่วมเพื่อปรับทัศนคติในการวางแผนครอบครัวเป็นสิ่งที่ควรส่งเสริมให้มีดำเนินการ

คำสำคัญ: ความต้องการที่ไม่สัมฤทธิ์สำหรับการคุมกำเนิด สตรีวัยเจริญพันธุ์ สตรีที่สมรส ประเทศพม่า

Introduction

Family Planning(FP) plays an important role in controlling of population growth, poverty and improving maternal and child health by means of adequate spacing of child births and thereby preventing unintended pregnancies. FP can affect maternal deaths by two ways, firstly by lowering the birth rate of mothers which can reduce the risk of maternal death and secondly by reducing the chance of getting unwanted pregnancies which can be probably followed by inducing abortions and resulting in the risk for maternal deaths. Unwanted pregnancy as a result of unmet need is a global health problem which is very important for reproductive health policies as it can produce various implications for the mother, the child, the family and the society as a whole[1-2].

Globally, contraceptive prevalence has been risen slightly, from 54% in 1990 to 57.4% in 2015. In Asia, contraceptive prevalence among women with reproductive age (15-49 years) has been increased slightly from 60.9% to 61.8% between 2008 and 2015[1]. According to the United Nation(UN)-World Contraceptive Use 2017 data, contraceptive prevalence rate (CPR) of Myanmar in the year 2015 was 52.2% which is relatively lower than other ASEAN countries such as Thailand 79.3%, Vietnam 75.7%, Singapore 62%, Indonesia 61.1%, Cambodia 56.3% and Philippines 55.1[3].

World Health Organization (WHO) defines unmet need for family planning as "women who are fecund and sexually active but are not using any method of contraception and report not wanting of any more children or wanting to delay the next child at least two years[1]. Around the world, about 214 millions of women with reproductive age in developing countries desire to avoid pregnancy but they are not using any methods of contraception. Although the level of unmet need for FP around the world has been declined from 15.4 percent to 12.3 percent during last two decades, it remains too high in developing regions of the world especially in Africa and Asia. In Africa, the total unmet need for modern contraception rate is 24.3 percent and in Asia the level of unmet need still high with the rate of 10.2 percent in average[4]. The total unmet need for FP in Myanmar is 16% which is very high in comparing with the neighboring country Thailand which has only 3% of unmet need[5].

Demographic and Health Surveys (DHS) in developing countries showed that the main reasons for unmet need of contraception is because of the fear of side effects[6]. Millennium Development Goals (MDG) 4 and 5 aimed to reduce the maternal and child mortality by improving the access to reproductive health universally[7-9]. And also in proposed Sustainable Development Goals 3 (SDG 2030), it is clearly clarified to reduce maternal mortality (SDG 3.1) and to ensure universal access to reproductive health services by promoting family planning services[10-11]. Therefore, it is very crucial to counteract the unmet need for family planning which has become the key global health priority around the world.

In 2016, DHS of Myanmar showed that among 15 states and regions, Yangon and Mandalay Regions had the highest contraception prevalence rate and Chin and Rakhine States had the lowest contraceptive usage[5]. Among 15 states and regions of Myanmar, Magway Region had the third highest maternal mortality rate after Chin State and Ayeyarwady Region[12]. According to Myanmar DHS 2016, Magway Region is one of the highest prevalence rate of unmet

need for FP among women with reproductive age group (15-49 year) which was about 23% comparing to other states and regions in Myanmar. Not only for maternal mortality rate (MMR), as well for infant mortality rate (IMR), Magway is also the second highest (IMR 72.86 per 1,000 live birth) comparing to other states and regions[5,13]. There are five districts in Magway Region (Magway, Minbu, Thayet, Pakokku and Gangaw). Natmauk township is one of the townships under Magway District with the total population of 240,149 (male 114,774 and female 125,375) which is the second highest population among six other townships under Magway District. According to the township health profile 2016, Natmauk township had maternal mortality rate of 161 per 100,000 live births which was one of the highest townships in Magway District[13].

Although several number of studies about FP services have been done in Myanmar, there was limited number of studies focused on the unmet need for FP among married women in the country. For these reasons, the main objectives of this study were to find out the magnitude and associated factors of unmet need for FP in this high risk area. The result of this study will notify the health authorities and implementers to design for effective health program planning from the gaps and needs of FP in grass root level of the community.

Methods

Study design

The study design was community based cross-sectional analytic study. It was conducted among currently married fecund women with reproductive aged (MWRA) 18-49 years in Natmauk Township, Magway District, Magway Region of Myanmar.

Study setting

According to the township health profile (2016) of the study area, Natmauk township has 7 wards in the urban area and 234 villages in the rural area. Total number of population in Natmauk township was 240,149 which had 14,760 in urban area and 225,389 in rural area. The total number of MWRA in the study area was 69,905. Samples were drawn from both urban and rural areas by using two-stage stratified sampling. On stage I, 5 wards were randomly selected from urban area and 5 villages were randomly selected from the rural area of the study township. On the stage II, the selection was done on the basic of household, each alternative house was selected and chosen a MWRA by using a random numbers table. If there was no MWRA in the selected house, the interviewer skipped that house and selected another respondent from another alternative house. If there were more than one married woman in a selected household, only one woman who met the inclusion criteria of the study was selected randomly. The number of MWRA from each selected ward or village was proportionate to the size of the population of respective wards/villages. The total number of respondents for this study was 420 which included 210 respondents from both urban and rural area. Data collection was carried out by using standard structured questionnaires which were asked to the respondents by face to face interviewing method. All of the data collection procedures were done by 20 basic health staffs from the township health department together

with the principle investigator. All the completed questionnaires were verified and validated by the principle investigator together with field supervisor.

Operational definition of unmet need

Unmet need for family planning can be defined as "Currently married women who are fecund and sexually active but they are not using any modern method of contraception, and report that they are not wanting any more children (limiting) or wanting to delay the next child at least two years (Spacing)". (Adopted from WHO definition)

Measurements

The questionnaire was sub divided into 6 parts. They were (1) Socio-demographic factors, (2) Knowledge towards contraceptive methods, (3) Attitude towards contraceptive methods, (4) Enabling factors, (5) Reinforcing factors and (6) Analysis of Met and Unmet Need of the Family Planning Service.

Predisposing factors for the unmet need for family planning included knowledge and attitude towards contraceptive methods in this study. The answers for knowledge about family planning was subdivided into three categories such as "yes", "no" and "don't know". The respondent who answered the correct answer got "1" point and "0" for the participant whose answer was wrong or "don't know". There were altogether 9 questions which included 4 correct statements and 5 incorrect statements to assess the key essential knowledge about different types of contraceptive methods. According to the Benjamin Bloom's cut off point, the total score of knowledge was classified into three categories as good (score >80%), fair (score 60%-80%) and poor (score <60%)[14-15]. For attitude towards family planning, there were altogether 16 questions which contained 7 positive statements and 9 negative statements. The answer was divided into three points Likert scale such as agree, uncertain and disagree. The score was provided as "3" for agree, "2" for uncertain and "1" for disagree responses for the positive statements and the scoring was reversed for the negative statements. The median of the total score was used to categorize into two groups, good and poor attitude. The questionnaires for both knowledge and attitude were adopted from the previous studies in Myanmar, Kenya and India[16-19]. Cronbach's Alpha Coefficient for knowledge part was 0.782 and for attitude part was 0.875.

In this study, enabling factors considered of availability, accessibility and affordability of the family planning services are measured by means of 9 questions which include cost, the distance between service center and home, transport, sources of family planning services, the type of services that can be available, and waiting time to get the desire service. For reinforcing factors, social support from husband and friends, support from healthcare providers and support from media were included in this study. The answers were categorized into two parts, "yes" and "no" and the scoring was given "1" for "yes" and "0" for "no" for each question. By using median of the total score, the scoring was also classified into two categories as good and poor support. The questionnaires were adopted from previous studies in Myanmar and modified with the conceptual framework of this study[16, 18, 20-21]. The result of Cronbach's Alpha

Coefficient for social support part was 0.905.

For the study outcome, unmet need for family planning among MWRA, there were altogether 9 questions. Different types of questionnaire designs were used to get the total unmet need for family planning which include "yes-no" questions, multiple choice questions and open questions. These questionnaires were derived from previous similar studies in African countries[22-26].

Statistical analysis

Descriptive statistics was used to determine median, quartile deviation, percentage, minimum and maximum values of the variables. Chi-Square test and multiple logistic regressions were used to examine the association between independent variables and unmet need for family planning. Level of significance was set at 0.05.

Ethical consideration

Ethical approval for the study was certified by the Ethic Review Committee of Mahidol University (Certificate of Approval Number: 2018/039.2702). Permission and approval from the township health department and local authorities was obtained before the start of collecting data in randomly selected wards and villages in the study area.

Results

Prevalence of unmet need

According to the operational definition of the outcome of this study, total unmet need of family planning among currently married women was 18.1%. Regarding on family planning practice, more than two third of the respondent (71.7%) were currently using family planning practice. Among the current users, majority of the respondents used injection (depo) which constituted 62.5 % of the users which was followed by oral pill (14.5%). Among current users, more than half of the respondents used family planning to limit birth (51.2%) and only 48.8% of the respondents used family planning practice in order to space birth.

Among non-users, the main reasons for not using contraception was the respondents wanted more children which constituted about 36.1%. More than a quarter of the respondents (28.6%) answered that they did not use any kind of modern contraceptive methods because of the fear of side effects.

Among non-users, majority of the respondents (80.7%) were non pregnant women. Of those who were currently pregnant, more than one fifth of the respondents (21.7%) answered that they did not want their current pregnancy. It can be noted that majority of the respondents who were not currently pregnant did not want to have pregnant in the future which was 38.5%. More than a quarter of respondents (26%) who were not currently pregnant and not using any kind of contraception answered that they wanted to get pregnant within two years in the future and 12.5% of this category showed that they wanted to get pregnant only after two years. Among non-users who were not currently pregnant, 22.9% of the respondents answered that they were not sure about their future pregnancy desire. (Table 1 and Figure 1).

Table 1 Distribution of respondents by unmet need for family planning

Variables	Number	Percent
Current use of contraception (n = 420)		
Yes	301	71.7
No	119	28.3
Currently using method (n = 301)		
Oral pills	44	14.5
Injection(depo)	188	62.5
Implant	30	10.0
Other methods	39	13.0
Among users (n = 301)		
Reasons for using contraception		
Space birth	147	48.8
Limit birth	154	51.2
Among non-users (n = 119)		
Reasons for not using contraception		
Want more children	43	36.1
Fear of side effect	34	28.6
Postpartum amenorrhea	12	10.1
Other reasons	30	25.2
Among non-users (n = 119)		
Pregnant women	23	19.3
Non-pregnant women	96	80.7
Among pregnant women (n = 23)		
Desires about current pregnancy		
Wanted	18	78.3
Unwanted (Category I)	5	21.7
Among non-pregnant women (n = 96)		
Desires to get pregnant in future		
Want within 2 years	25	26.0
Want at least after two years (Category II)	12	12.5
Want no more pregnancy (Category III)	37	38.5
Not Sure (Category IV)	22	22.9
Total unmet need for family planning (n = 420) (Category I + II + III + IV)	76	18.1

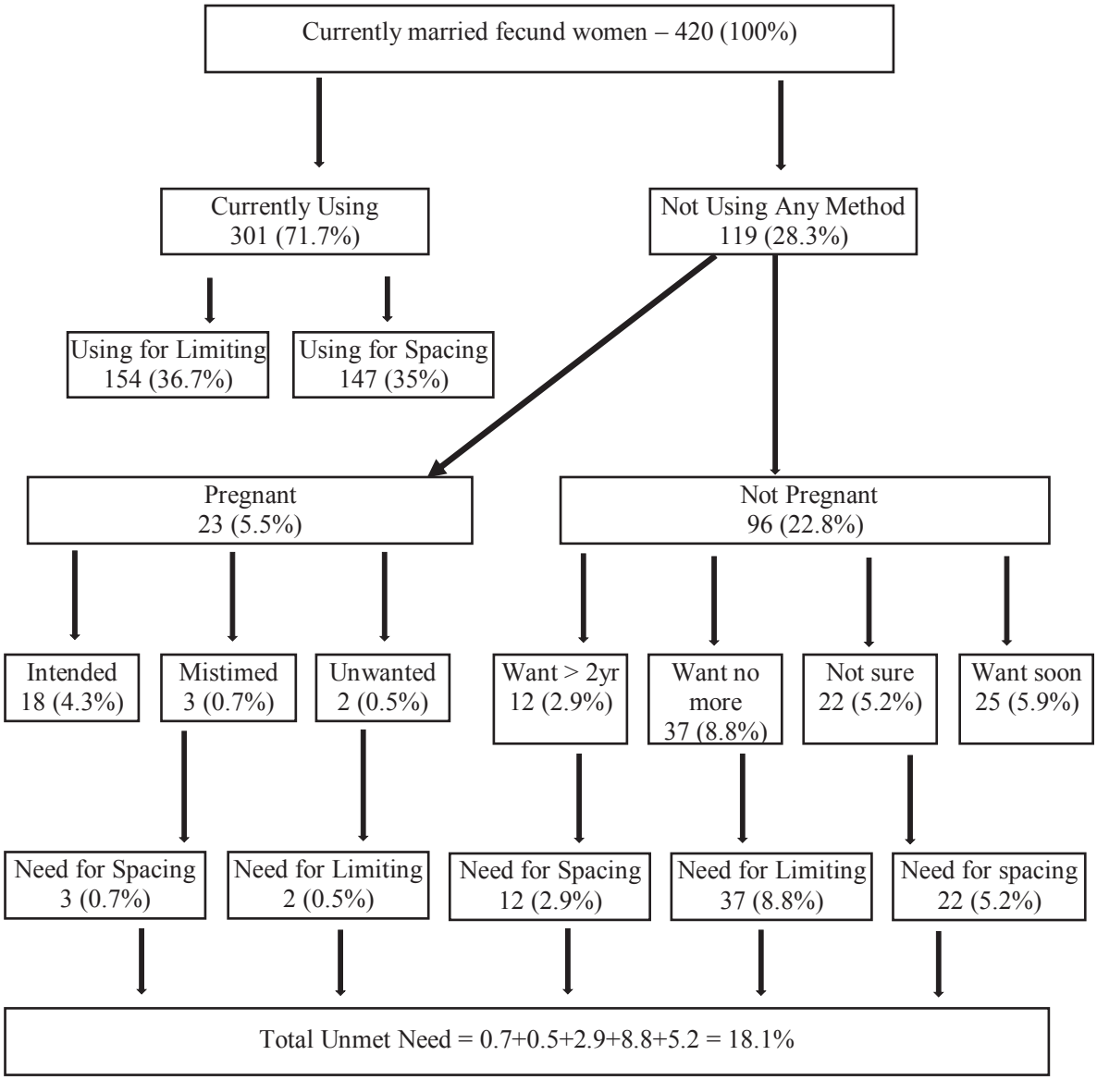

Figure 1 Unmet need for family planning in Natmauk Township, Magway, Myanmar, 2018

Note: The total numbers (420) was denominator for all the percentages.

Distribution of the respondents by study factors

There were altogether 420 respondents participated in this study. The median age of the respondents in this study was 32 ranged from 19 to 49. Most of the participants were Buddhists which constituted about 99% and the rest was 1% as Christians. For education, about one third of the respondents finished primary education (34.8%) which was followed by secondary, higher and university education and above with the percentage of 20.7, 20 and 16.4 respectively. Only 8.1% of the respondents were illiterate or had no formal education. It can be seen that the majority of the respondents were housewives or dependents which constituted 29.5 % of the total participants and only

a few respondents worked in private service (0.7%). More than two third of the respondents explained that their total income of the family was between 150,000 to 290,000 Myanmar Kyat (~ 100 to 200 US$) followed by more than 300,000 Myanmar Kyat which was 19.5%. The majority of the respondents had one or two children which was 69.8% (36.7% and 33.1%). (Table 2)

Table 2 Distribution of respondents by socio-demographic factors

Socio-demographic factors	Number	Percent
Age groups (years)		
Normal (≤ 35)	273	65.0
Risk (> 35)	147	35.0
Median=32, QD=5, Min=19, Max=49		
Religion		
Buddhist	416	99.0
Christian	4	1.0
Highest education		
No Education	34	8.1
Primary education	146	34.8
Secondary education	87	20.7
Higher education	84	20.0
University education and above	69	16.4
Employment status		
Government service	27	6.4
Private service	3	0.7
Own business	106	25.2
Daily worker	39	9.3
Agriculture	121	28.8
Housewife/Dependent	124	29.5
Total income		
< 150,000	66	15.7
150,000-299,999	272	64.8
≥ 300,000	82	19.5
Median=200,000, QD=25,000, Min=50,000, Max=1,000,000		
Total number of living children		
0	21	5.0
1	154	36.7
2	139	33.1
3	62	14.8
> 3	44	10.5

In term of the level of knowledge about family planning, the majority of the participants (59%) had fair knowledge about family planning, 22.9% of the respondents had poor knowledge and only 18.3% of the total participants had good level of knowledge regarding family planning. Regarding attitude towards family planning, more than half of the respondents (51.7%) had poor attitude towards family planning while 48.3 % of the total participants showed good attitude about family planning. Regarding the cost of desire family planning method, 88.8% of the total respondents had to pay less than 3000 Kyat. Two third of the respondents (65.5%) went to the service provider by foot which was followed by using motor-bike/bicycle (29%). Regarding the reinforcing factors towards family planning practice, Table 3 described that majority of the respondents got low social support from their husband and friends (56.7%) and healthcare provider (64.3%). More than half of the respondents (54.3%) got knowledge about family planning from media such as television, movies, radio, billboards, posters, newspaper, internet and social media. (Table 3)

Table 3 Distribution of respondents by predisposing, enabling and reinforcing factors

Factors	Number	Percent
Knowledge about FP		
Good (>7)	77	18.3
Fair (5-7)	248	59.0
Poor (<5)	95	22.6
Attitude towards FP		
good (> 40)	203	48.3
poor (≤ 40)	217	51.7
(Median=40, QD=4, Min=25,Max=48)		
Cost for FP methods		
≤ 3000 Kyat	373	88.8
> 3000 Kyat	47	11.2
Types of transportation		
By foot	275	65.5
Motorbike/Others	145	34.5
Average waiting time to get services		
≤ 5 minutes	225	53.6
> 5 minutes	195	46.4
Husband and friend supports		
low (≤ 9)	238	56.7
high (> 9)	182	43.3
(Median=9, QD=2.5, Min=0, Max=12)		

Table 3 Distribution of respondents by predisposing, enabling and reinforcing factors (Conts.)

Factors	Number	Percent
Healthcare provider support		
low (≤ 5)	270	64.3
high (> 5)	150	35.7
(Median=5, QD=0.5, Min=0, Max=6)		
Supports from media		
Yes	228	54.3
No	192	45.7

By using univariate analysis, the results of this study showed that unmet need for family planning was significantly associated with age group of the women, educational level of the respondents, total number of living children, knowledge about family planning, attitude towards family planning, cost for family planning method, average waiting time to get services, social supports from husband and friend, support from healthcare provider and media supports. Other variables such as type of respondents(urban/rural), married age, religion, education level, employment status, total income of the family, desire number of children, husband desire on total number children, sex preference on children, expensiveness of the family planning services, distance to the service provider and comfortable to go to the family planning services were not significantly associated with unmet need for family (Table 4).

Determinants of the unmet need

By using multiple logistic regression with Backward Wald method, determinants of the unmet need for family planning were performed to demonstrate adjusted odd ratios (Adj OR) with 95% confidence interval(CI) for association between associated variable and unmet need for family planning by controlling the effects of other variables simultaneously. Women with older age (risk age group), low attitude towards family fanning and low social support from husband and friends were significantly associated with unmet need for family planning among married fecund women in Natmauk township, Magway Region of Myanmar. (Table 5)

Discussion

The result of this study described that unmet need for family planning among married fecund women was 18.1%. It was slightly lower than the Magway regional data (23%) according to the Myanmar demographic and health survey 2015-16[5]. The difference between regional data and this study might be due to the differences in sample size and sample population. This study was conducted only in one of the townships of Magway region among the married fecund women. The regional data was diluted by poor family planning practice of many other places of the Magway region especially very remote areas which had difficulties in transportation and availability of family planning services. Another possible reason might be due to the health promoting

Table 4 Association between each independent variable and unmet need for family planning

Variables	n	Unmet need		Crude OR	95% CI	P-value
		Yes(%)	No(%)			
Age groups						**< .001**
Normal (≤ 35 years)	273	12.8	87.2	1		
Risk (> 35 years)	147	27.9	72.1	2.63	(1.59 – 4.36)	**< .001**
Education levels						**.001**
No education	34	41.2	58.8	4.17	(1.84 - 9.45)	**.001**
Primary/secondary	233	17.2	82.8	1.23	(0.70 - 2.17)	**.466**
Higher/university	153	14.4	85.6	1		
Total number of living children						**.010**
≤ 2	175	15.3	84.7	1		
> 2	245	26.4	73.6	1.99	(1.17 – 3.39)	**.011**
Knowledge about FP						**.041**
Good	77	10.4	89.6	1		
Fair	248	17.7	82.3	1.86	(0.84 - 4.15)	**.129**
Poor	95	25.3	74.7	2.92	(1.23 - 6.93)	**.015**
Attitude towards FP						**.003**
Good	203	12.3	87.7	1		
Poor	217	23.5	76.5	2.19	(1.30 - 3.69)	**.003**
Types of transportation						**.003**
By foot	275	22.2	77.8	2.47	(1.39 – 4.53)	**.003**
Motorbike/Others	145	10.3	89.7	1		
Cost for FP methods						**.027**
≤ 3000 Kyat	373	19.6	80.4	3.57	(1.08 -11.82)	**.037**
> 3000 Kyat	47	6.4	93.6	1		
Average waiting time						**.018**
≤ 5 min	225	22.2	77.8	1.86	(1.11 - 3.12)	**.019**
> 5 min	195	13.3	86.7	1		
Husband and friend supports						**< .001**
Low	238	28.9	71.1	1.80	(1.53 -4.28)	**< .001**
High	182	13.7	86.3	1		
Healthcare provider support						**.016**
Low	270	21.5	78.5	2.00	(1.13 - 3.55)	**.017**
High	150	12.0	88.0	1		
Media supports						**.019**
Yes	228	14.0	86.0	1		
No	192	22.9	77.1	1.82	(1.1 - 3.01)	**.019**

Table 5 Determinants of the unmet need for family planning

Variables	Adj OR	95% C.I. for Adj. OR		P value
		Lower	Upper	
Age groups				
Normal	1			
Risk	2.49	1.48	4.19	**.001**
Attitude towards FP				
Good	1			
Poor	1.79	1.02	3.14	**.044**
Husband and friend supports				
High	1			
Low	1.93	1.13	3.31	**.017**
Knowledge about FP				
Good	1			
Fair	1.42	.619	3.27	.406
Poor	1.95	.775	4.91	.156

activities for family planning by implementing organization (both government and non-government) in the study township. These organizations were providing family planning services by doing mobile clinic, health education or promoting activities, counseling sessions and other behavior change communication interventions in both rural and urban areas of the study township. Therefore, the prevalence of unmet need for family planning in Natmauk township was slightly lower than the Magway regional data. Regarding the back ground characteristics of the respondents, age was significantly associated with unmet need for family planning. The respondents in older age group (above 35 years) were 2.49 times (Adj OR=2.49, 95% CI=1.48-4.19) more likely to have unmet need for family planning than the respondents in the younger age group (≤ 35 years). The reason for this might be that older women thought that they had less possibility to get pregnancy due to reduce sexual activity and lower fecundity as they grew older. Another reason might be younger women were more likely to practice family planning because they preferred to work more and wanted to delay their pregnancy. This result was similar to the result of a research from Ethiopia in 2014[27]. However, the result was different with other similar researches from Kenya in the year 2009 by Nyauchi and Omedi and a study from India by Vishnu Prasad. In these studies, the researchers mentioned that there was higher prevalence of unmet need of family planning among the younger age group[17, 19].

The attitude towards family planning is a back bone of changing the behavior of women. More than half of the respondents in this study had low attitude towards family planning. The result stated that women with low attitude towards family planning were nearly 2 times (Adj OR=1.79, 95% CI=1.02-3.14) more likely to have unmet need for family planning than their counter parts. This result was in the same line

with a study from Myanmar by the researcher Lwin which stated that women with positive attitude had practiced family planning method 3.7 times more than those with negative attitude[20]. Another study from Myanmar by a researcher Kyaw Thu Latt et.al claimed that attitude of the women was positively associated with contraceptive usage[16]. Not only the attitude of women but also their partner's attitude was also an influential factor upon unmet need for FP[22, 25]. Even if a woman has good knowledge about family planning, she will not use contraception because of her wrong perception upon family planning.

The result of this study showed that women with low social support from their husband and friends were nearly 2 times (Adj OR=1.93, 95% CI=1.13-3.31) more likely to have unmet need for family planning than their counterparts. This finding was directly in line with previous finding from Cameroon which indicated that social support from husband was crucial to reduce unmet need for family planning among women.[24]. Another study in Cambodia revealed that discussion with husband could increase the use of contraceptive among married women[28]. Wulifan, Joseph K., et al also explained that women whose did not get the approval to use contraception from their husband were more likely to have experience of unmet need for family planning according to their study in rural Burkina Faso[26]. Not only the husband support but also the support from the friends could influent upon the use of contraception for women. This state was evidenced by the study of "Adolescent Clinic Visits for Contraception: Support from Mothers, Male Partners and Friends" by Harper et.al who suggested that friends, partners and mothers were very supportive for the decision making of contraception usage[29].

There was some limitations of the study. According to the culture of Myanmar, this study excluded the women in-union (woman who lives together with her partner without lawful act) from the study population. The result from this study might not be generalized with overall population of the Magway Region as only one township of the Magway Region was selected for the measurement of the prevalence of unmet need for family planning among married reproductive age fecund women. Another limitation of this study was a cross sectional study, therefore, true cost and effect could not be detected.

Conclusion and recommendations

According to the results of our study, we can conclude that prevalence of unmet need for family planning in Natmauk township was still high (18.1%) and women have more unmet need for limiting (9.3%) than for spacing (8.8%). Three major factors such as women with older age group, low attitude towards family planning and low social support from husband and friends were associated high level of unmet need in the study township. The main reasons for not using contraception among married women were fear of side effects and desired to get more children.

Local government and health authorities should implement comprehensive health programs including family planning campaigns, health education sessions, and capacity building activities for service providers (health educators and counselors). Improvement of counselling strategies while integrating participation of women in sensitizing campaigns on family planning programs are need to be conducted. According to the results of this study, local health implementers

should promote emergency contraceptive pills in order to reduce unmet need level in the study area. The raising awareness and promoting knowledge among married women will also support to change the attitude of women on family planning practice. In order to improve male involvement in family planning practicing in the study area, health programs should be focused not only to the women as well to their husbands. Government and local health authorities should organize "Mothers Group" under the supervision of community health volunteer which will be able to improve the awareness of family planning practices among the married women in the community level.

Similar studies should be conducted to identify the factors associated with unmet need for family planning in the other states and regions of Myanmar where there is high level of maternal and infant mortality. This study recommends that further studies should be conducted to evaluate the supply and delivery of FP services while evaluating unmet need for FP in both urban and rural areas of Myanmar. In order to investigate the factors associated with social support to women and their perception for fear of side effects of family planning among married fecund women in high risk areas of Myanmar, a further study is recommended.

Acknowledgements

The authors are grateful to all participants in this study for their kind cooperation. The authors thank the ASEAN Institute for Health Development for the partial scholarship.

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