

## TRENDS AND DETERMINANTS OF UNMET NEED FOR CONTRACEPTION AMONG MARRIED FEMALE YOUTH IN NEPAL

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### ABSTRACT

The unmet need for contraception continues to be high among married female youth in Nepal even though the accessibility of contraceptive methods and people's consciousness has been enhanced significantly. This study intends to identify the trends of unmet need for contraception for 15 years and its determinants. Because the trends of unmet need for contraception and its influencing factors among female youth are not exclusively studied in Nepal. The main data sources for the study are Nepal Demographic and Health Surveys (NDHS) 2001, 2006, 2011 and 2016. The sample sizes from the NDHSs are 2,573 in 2001; 2,389 in 2006; 2,552 in 2011; and 2,287 in 2016. Logistic regression analysis is applied to examine the factors that affect the unmet needs. During 15 years, the unmet need for contraception has decreased marginally in Nepal but is quite high (32%) among married female youth especially adolescents. There is only a nominal percentage (2.1) point decline from 34.1 in 2001 to 32.2 percent in 2016. Socio-demographic factors such as married female youth's age, age of cohabitation, total living children, spousal separation, youths' education, their husbands' occupation, and wealth status are the evident determinants of the unmet need for contraception among female youth in Nepal. The nation's family planning program has to be made to communicate effectively the needs of various specific groups: youth couples who are living together, educated, Muslims, poor, and living in rural areas where unmet need is high.

**Keywords:** Unmet need - Contraception - Female Youth - NDHS- Regression - Nepal

### INTRODUCTION

The unmet need for contraception is defined as the percentage of female youth who are not pregnant and not postpartum amenorrhic and

are recognized as fertile and willing to delay their subsequent birth for two or more years or end childbirth at all but are not using any family planning methods, or current pregnancy, as well as last birth in the latest two years, was inappropriate time or undesirable (Ministry of Health [Nepal], New ERA & ICF 2017).

The unmet need for contraception is an appropriate indicator for ensuring improvement in attaining universal access to sexual and reproductive healthcare services, including contraception (Lamichhane 2017). Almost all Asian countries have practiced a declining birth rate because of the extensive usage of contraceptives. On the other hand, because of population momentum- a result of the growing number of adolescents and youth in that area, the total populations of these countries are likely to increase for the next couple of years (UN 2017).

By providing access to rights-based family planning services and dropping the unmet need for contraceptives, the Nepal government is committed to supporting women and couples to attain the preferred number of children and have at least two years of spacing of childbearing (MoHP 2015). For addressing the rights-based contraceptive services, Nepal is dedicated and motivated to strengthen policies and strategies associated with family planning within the new federal setting, mobilize resources, expand the supporting environment to engage efficiently with supportive partners, encourage public-private partnerships, and involve non-health sectors ((MoH 2019/20).

By arranging those strategies, the government of Nepal set goals to raise demand satisfied for modern contraceptives, reduce the unmet need and increase the contraceptive prevalence rate, particularly young females. That would permit the country to reach a replacement level of fertility by 2021 (MoHP 2015). The situation of a country that has observed remarkable improvements in contraceptive service utilization, however, CPR that has not been increased in recent times and the unmet need for contraception remains too high for adolescents aged 15-19 (35%) and for youth aged 20-24 years (32.6%) in 2016, particularly among currently married female youth (MoH *et al.* 2017).

The most recent estimates indicate that 77 percent of married or having in a union reproductive-aged women have to be met their contraceptives need with a modern contraceptive device leave-taking

closely 208 million females by unmet needs (UN 2018). There are about 13 million childbirths among teenagers aged 15-19 years each year, indicating 44 childbirth per 1,000 adolescents in this age group. Childbirth from premature age can raise threats for adolescent moms themselves along with their neonates (WHO 2018).

Nepal is dedicated to making fair availability of contraceptive methods providing services on the basis of informed choices for all individuals and couples mainly for poor, helpless, and unreached young couples (MoH 2015/16). Young women may unduly experience the unmet need for contraception because of their different reproductive choices allied by this period of life. Consecutively, they might be associated with greater amounts of unmet need because they do have not enough awareness of their choices, the right to use services is missing (mainly those planned for young couples or spacing needs commonly), or because targeted programs undervalue the desires of young women (Mac Quarrie 2014).

Previous studies show that (Ashford 2003, Khan *et al.* 2008, Ojaka 2008, Hameed *et al.* 2011, MacQuarrie 2014, Nyauchi & Omedi, 2014) various factors comprising age, marital status, literacy status, religion, occupation, and household prosperity be significantly interrelated to unmet need for family planning. Misunderstandings and fears of the health risk associated with these methods influence contraceptive use in a significant way and therefore retain unmet needs high, especially among currently married young women. Similarly, the determinants of unmet need among currently married young women have not been explained. There is a study on Unmet Need for Family Planning and Fertility in Nepal: Levels, Trends, and Determinants (Pant, Pandey & Bietsch 2019) which focuses on all women of reproductive age but not the currently married young women. In addition, no other studies have identified the trends of unmet need for 15 years and its determinants to be true for young women in Nepal. A high level of unmet need for contraception continues among currently married young women however, their unmet need and associated factors are not exclusively analyzed in the context of Nepal.

Therefore, this study aims to analyze the trends and explore the determinants that have a strong effect on the unmet need for contraception among currently married young women in Nepal using the cross-sectional data from NDHSs 2001, 2006, 2011 and 2016.

## **DATA AND METHODS**

### **Source of data and sample**

This study has been developed using the data of 2001, 2006, 2011 and 2016 of Nepal Demographic and Health Surveys (NDHS). It is limited to currently married female youth aged 15-24. Therefore, the sample size is 2,573, 2,389, 2,552 and 2,387 female youth from the four NDHSs surveys 2001, 2006, 2011 and 2016 respectively.

### **Dependent study variables**

This study utilized total unmet need as the dependent variable. Currently married female youth who stated no need for another child (limiters), or want to delay two or more than two years before having an additional child (spacers), but were not using any family planning devices, are assumed as having an unmet need for contraception. Pregnant female youth are regarded to have an unmet need if their recent pregnancy is in inappropriate time or undesirable at all. Likewise, amenorrhoeic females are categorized to have an unmet need if their latest child was in an inappropriate time or undesirable at all. These responses for unmet needs were classified into 9 groups in the NDHS data file. These are further recategorized into two groups and create a dichotomous variable for this study like Unmet need coded as 1 and No unmet need coded as 0.

### **Independent study variables**

The independent variables are designated for the analysis of this study based on their significance in the empirical findings of earlier studies as well as theoretical explanations of previous research with unmet need for contraception. Statistics acquired from replies to the survey questionnaire make available in demographic, socio-economic features of various contraceptive method's users and for those having an unmet need. Therefore, altogether twelve variables are used as independent variables. Among them, five are roughly clustered into demographic variables (age of women, age of cohabitation, number of children alive, having son, and spousal separation), and the remaining seven variables are grouped as socio-economic variables (education of female youth, education of their husband, occupation of female youth, occupation of their husband, caste/ethnicity, wealth status, and living residence). These variables are examined

as the predictor variables for their impact to determine of unmet need for contraceptive methods.

### **Method of data analysis**

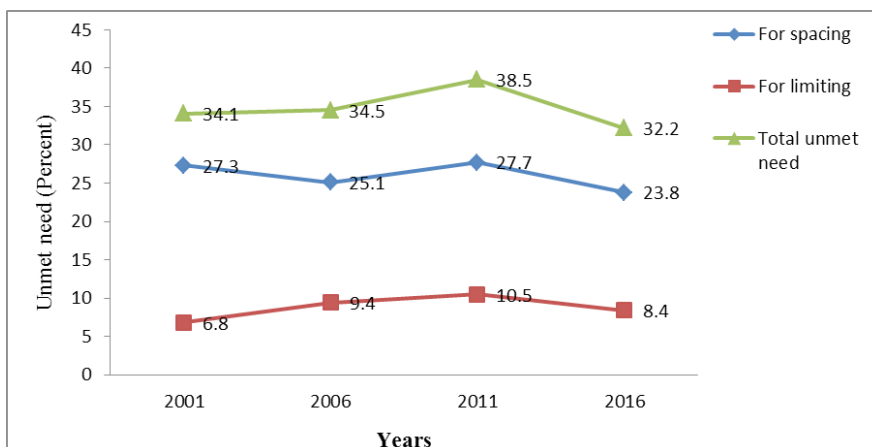
This study analyses the trends of unmet need for contraception for a period of 15 years (2001-2016). And logistic regression analysis is applied to identify the determinants of unmet need for contraception among married female youth, applying weighted data of the NDHS 2016. The logistic regression permits the assessment of the happening of an outcome due to the effect of several expounding variables and lets for the change of many expounding variables and adjusting for several confounders at a similar time and equally, it supports easy discovery of the relations between expounding variables.

Three models are offered at the multivariate level. In Model I demographic variables are examined independently to describe the result of demographic variables only in the unmet need (crude effects). Socioeconomic variables are analyzed independently to describe the influence of socioeconomic variables only with the unmet need (crude effects) in Model II. And in Model III, the adjusted effect of each of the variables on the probability of facing an unmet need of contraceptives is explained, adjusting for the effects of other designated expounding variables (refined effects). In this study, odd ratios with 95 percent confidence intervals are used to analyze the results.

## **RESULTS**

### **Trends of unmet need for contraceptives**

The level and trend of unmet need for contraceptives can be used to study the current situation, detect and assess the achievement of family planning programs in the country. Figure 1 shows the level and trend of unmet need for contraception among currently married female youth from 2001 to 2016. The unmet need for spacing is quite more (24%) in comparison to that of limiting (8%) in all four surveys because the study populations are female youth and they expect to bear children in the future, therefore they favor the spacing method of family planning. Similar results are also found in the PRB report. In Nepal, the unmet need for spacing is high among young women who want to delay pregnancy but are often scared that the contraceptives will make them infertile (PRB, 2012).



**Figure 1:** Levels and trends of unmet need for contraception among currently married female youth age 15-24 years in Nepal, 2001-2016 (in %)

Source: NDHS 2001, 2006, 2011, and 2016 data file.

Nearly one-third (32%) of currently married female youth in Nepal have an unmet need of contraception (24% for spacing and 8% for limiting) but are not currently using any contraceptive devices (Figure 1) in 2016, which means near about one-third of Nepalese youth female do not desire to conceive or wanted to limit or space their pregnancies but unable to get these intents. Overall, the total unmet need for contraception among currently married young women has declined somewhat since 2001 (34%) but still, it is at a high level (32%).

### Determinants of unmet need for contraception

Binary logistic regression examination is applied by assigning all the independent variables with the total unmet need in the regression model and effects are displayed in Table 1.

Both crude and refined effects are used to confirm the relationship between the total unmet need of married female youth with all of the predictor variables before and after adjusting the influence of the other analyst variables. In this study, an effort has been prepared to observe the special effects of several influential variables on the total unmet need for family planning and pinpoint several factors that have significant effects on youth married females’ unmet needs in Nepal.

**Table 1:** Crude and adjusted effects (odds ratios) for unmet needs for contraception

Characteristics of women	Model I demographic variable only	Model II Socio-economic variable only	Model III (adjusted) both, demographic and socio-economic variables
<b>Demographic characteristics</b>			
<b>Age of women (in Year)</b>			
15-19	1		1
20-24	0.504***		0.535***
<b>Age at cohabitation (in Year)</b>			
Below 15	1		1
15-19	1.582***		1.563**
20-24	2.493***		2.583***
<b>No. of living children</b>			
0	1		1
1	2.094***		2.115***
2 and more	2.616***		2.493***
<b>Having son</b>			
No son	1		1
Having at least one son	1.123		1.134
<b>Spousal separation</b>			
Living separate	1		1
Living with her	0.125***		1.123***
<b>Socio-economic characteristics</b>			
<b>Education of women</b>			
No education		1	1
Primary		1.417**	1.603
Secondary		1.775***	2.035***
Higher		1.656**	1.661**
<b>Education of husband</b>			
No education		1	1
Primary		0.882	1.200
Secondary		1.011	1.162
Higher		0.876	1.002
<b>Occupation of women</b>			
Not working		1	1
Agriculture		1.062	0.941
Non-agriculture		0.914	0.621*
<b>Occupation of husband</b>			
Agriculture		1	1
Non-agriculture		2.924***	1.149
<b>Wealth status</b>			
Poorest		1	1
Poorer		0.660***	0.617***
Middle		0.712**	0.656**
Richer		0.557***	0.650**
Richest		0.452***	0.667*
<b>Caste/ethnicity</b>			
Brahmin/Chhetri		1	1
Other Tarai castes		0.947	0.858
Dalits		0.923	0.071
Janajati		0.798*	0.805
Muslim		1.237	1.205
<b>Living Residence</b>			
Rural		1	1
Urban		0.792**	0.860
<b>Total Number of women</b>			

\* 10 percent level of significance, \*\* 5 percent level of significance, and

\*\*\* 1 percent level of significance

Table 1 shows that the prominent determinants of unmet need are the age of youth female, age at cohabitation, their total number of children alive, spousal separation, level of education of women, occupation of their husband, household's wealth rank, and place of living residence. The unmet need of contraception is higher among adolescent females aged 15 -19 years as compared to married young females aged 20-24 years (OR = 0.535 in model III). It stipulates that adolescent married females have a higher demand for contraception. In both models, youth females having two or more children alive with her are more than two times more likely to have unmet needs as compared to youth females with no living child.

Both crude and refined models confirm the unmet need for contraception is higher among the female youth who have got secondary and high levels of education (crude OR = 1.755 and refined OR= 2.035) as compared to female youth who have no education. The outcome of the full model elucidates *Muslim* married youth females are more likely to have an unmet need for contraception as equated to Brahmin/Chhetri female youth. The diagnostic outcomes of Table one point out that unmet needs of contraception is lower among married female youth who belong to rich families.

## DISCUSSIONS

The study analyzes trends of unmet need for contraception and its determinants among currently married female youth in Nepal. This study identifies that the unmet need for contraception among married female youth is 32 percent which is significantly greater than the total unmet need of 24 percent among all married women of reproductive age (MoH *et al.* 2017). This study results depict that the current age of the female youth, their total number of living children, age of cohabitation, education of women, occupation of their husband, household wealth rank, and place of residence are significant determining factors for the unmet need for contraception among married female youth in Nepal.

The unmet need for contraception is considerably higher among female adolescents aged 15-19 years than that of youth aged 20-24 years. Adolescents do have higher unmet needs probably due to insufficient knowledge of contraceptive methods. Previous research findings (Hameed *et al.* 2011, Klijzing 2000) showed the unmet need for contraception increases with the age of women, the present study demonstrates the opposite finding by female adolescents (aged 15-19 years) are more likely to have unmet



needs as compared to married female youth aged 20-24 years. The study result proves the statement that female youth are sexually vigorous, further, they are eager of escaping from pregnancy, however are not applying any modern method of contraceptive devices (UN 2011). Therefore, young women have most likely to have a high unmet need for contraception (Ojaka 2008).

The greater possibility of the unmet need for contraception among female youth with more number of living children, consequently, proposes less of an unmet need for spacing than for limiting child births (Klijzing 2000). The result of the present research is also similar to that of findings from previous studies (Khan *et al.* 2008, Hameed *et al.* 2011) as well and finds the unmet need of contraception to be higher among female youth with a more number of living children as compared to married female youth having no birth or have only one child.

It is generally hypothesized the mother's level of education displays an active role to influence the unmet need of contraception (Ojaka 2008, Acacio-Claro & Borja 2010, Hailemariam & Haddis 2011, Ali & Okud 2013). As observed in Eastern Sudan (Ali & Okud 2013), unmet need for spacing, limiting, and total unmet need are found to be lesser among women with an advanced level of education. Women who achieved higher-level education had more awareness of contraceptive methods since they are further exposed to contraceptive methods through mass media and other types of the promotional program of family planning methods and also for they passed utmost their stage of life in school, they initiate childbirth at a later age (Wolff, Blanc & Gage 2000).

Bradley *et al.* (2012) conducted an analytical study by casing the 59 countries using DHS data, found that the association between unmet need and education is not consistent. Study results show that in most countries, unmet need declines as women's education rises. However, in four countries, the Democratic Republic of the Congo, Guinea, Mali, and Niger, the unmet need rises with women's education. In all four countries, levels of unmet need also are greater among urban women. In these nations, more educated women are more likely to live in urban areas and to have matching levels of unmet need for contraception (Bradley *et al.* 2012).

But in this study, education retains a significant negative association with unmet needs and demonstrates the contrary result. It is found that female youth with no education are less likely to have an unmet need for

contraception as compared to those with a primary and secondary level of education. This influence possibly is because of the wider progress of education and school curriculum-based family planning awareness-raising platform in the present time that raises the consciousness of contraceptive methods in young people as a result emerging the unmet need for family planning among female youth (Lamichhane 2017).

Concerning occupation, female youth were presently employed in the agricultural occupation are more likely to have an unmet need of contraceptives. The present study backings the results of previous research in Eastern Sudan (Ali & Okud 2013), Ethiopia (Hailemariam & Haddis 2011) and Kenya (Ojaka 2008), which revealed that unmet need was lower among women who engaged in non-domestic activities.

## CONCLUSIONS

The study inspects and analyse the trends of unmet need of contraceptives and its determining factors among currently married youth females aged between 15 and 24 years. Availability of contraceptive methods and people's consciousness about it has enhanced prominently, however, the unmet need for contraception stays too high among currently married youth females in Nepal. During 15 years, the unmet need for contraception among currently married youth females has decreased slightly in the recent year however still high (32%) compared to all women of reproductive age (24%) in 2016 in Nepal.

Study findings confirm that demographic factors such as age, age of cohabitation, the total number of children alive, spousal separation, and socioeconomic factors like youths' education, their husbands' occupation, and household wealth ranking are the independent predictors/determinants of unmet need for contraception. Typically, reproductive health and financial implication of the liability of unmet need confirmed the results of this study can be widespread to the huge bulk of female youth characterized by – married adolescents; female youth with high parity, women not currently working; educated young women; women who are from Dalit and Muslim family; and women belong to a poor family and living in rural areas. When the unmet need is more, there is a demand for services all over society. It is needed to expand and improve family planning services with quality and informed choice in rural as well as in urban areas.

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