

## FACTORS ASSOCIATED WITH SAFE MOTHERHOOD PRACTICES AMONG YOUNG MARRIED WOMEN

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### ABSTRACT

Safe motherhood is one of the key components of reproductive health and young women are notably concerned with the population of it in Nepal. This study attempts to analyze the factors associated with safe motherhood practices among young married women in five child marriage prevalence districts identified by UNFPA. The analysis uses data from research entitled “Situation Assessment of Child Marriage in Selected Five Intervention Districts of Nepal” conducted in 2017. It was confined to the women (N=239) who had at least one child. Bivariate analysis is used to identify the level of association between background characteristics and safe motherhood practices. The result showed nearly four in five (77.8%) women were married age at 15-19 years and more than three-fifth (61.1%) started to give birth. Regarding education, only 18 percent received the degree of SLC and above. Women who were engaged in marriage at below 15 have significantly fewer visits to the ANC in comparison to the women married at age 20-24 years. Women who have two or more children were significantly less likely to visit health institutions for delivery and PNC. The result indicates that adolescents face a high risk of complications during pregnancy and childbirth due to biological immaturity and socio-economic factors.

**Keywords:** safe motherhood - antenatal care - institutional delivery - postnatal care - association - Nepal

### INTRODUCTION

Safe motherhood is related to the quality of maternal health services which include the care provided by skilled health personnel in different stages specifically before, during, and after childbirth. Technically they are called Antenatal Care (ANC), delivery care, and Post Natal Care (PNC)

services respectively which are the key components of safe motherhood (Letamo & Rakgoasi, 2003, Ministry of Health Nepal, New ERA, & ICF, 2017, Pulok, Sabah, Uddin, & Enemark 2016). These services make certain the health and well-being of women and their babies. The safe motherhood policies were introduced in the 1990s in Nepal and then increased the number of community-level health workers and skilled birth attendants (UNICEF 2016).

Safe motherhood is a vital component of reproductive health and crucial to reducing maternal and neonatal and morbidity mortality (Adhikari 2016, Ministry of Health and Population, 2021). Ending preventable maternal death is top of the global agenda and subsequently, it has been discussed at international conferences. The principles of the program of Action of International Conference on Population and Development 1994 and Millennium Development Goals (MDGs) are explicitly embedded in the Sustainable Development Goals (SDGs) to decrease national maternal mortality ratios (Mbada 2020, Starrs *et al.* 2018). To reduce the lack of steady progress of maternal health especially across the developing countries (Pulok *et al.* 2016), restate the importance of the unfinished agenda of reducing maternal mortality ratio to achieve a global average of 70 per 100,000 live births by 2030 Sustainable Goals era (Moran *et al.* 2016; World Health Organization 2015). Nepal is also committed to being part of the global Sustainable Development Agenda 2030 as a member of the UN (National Planning Commission 2017a).

Ensuring maternal health is one of the key priorities of the World Health Organization, (WHO) and works to contribute to the decrease of maternal mortality by increasing research evidence (World Health Organization 2019). A human right based approach recognizes that women deserve the right to health is thoughtful to achieving an equitable decrease in maternal mortality (Mbada 2020). Assuring that women can exercise their rights to safe motherhood is critical to the health of all women during pregnancy, birth, and following birth. The National Safe Motherhood Program is one of the priority areas for the government of Nepal to improve maternal and neonatal health (Ministry of Health 2017). The constitution of Nepal states that health is one of the fundamental rights of a citizen (Secretariat Constituent Assembly 2015) where safe motherhood is one of the key concerns of women's health.

There may have different factors associated with the utilization of safe motherhood services. Acharya (2017) showed women who have unable to utilize safe motherhood services; different demographic, social, and economic factors may appear surrounding them. Different studies (e.g., Acharya 2017; Anastasi *et al.* 2015; Fagbamigbe & Idemudia 2015, Ministry of Health Nepal *et al.* 2017; Pasad 2012, Pulok *et al.* 2016) from Nepal and other countries exhibited utilization of safe motherhood services, several demographic, social and economic factors, effects in utilization situation of safe motherhood services. Karkee, Lee and Binns (2013) highlighted the structure and provision mechanism and utilization of maternity services have improved in the past decade in Nepal. However, progress has been slow for maternal and neonatal service use (Aryal, Sharma, Khanal, Bista, & Sharma 2019) and this may not be adequate to achieve the Sustainable Goals (SDGs) by 2030 that currently committed by the government of Nepal (National Planning Commission 2017b).

National Planning Commission (2020), for example, showed the maternal mortality rate (per thousand live births) has been limited to 239 while the target was to reduce it to 145. One of the main causes of failing to meet the target can be the existing deep-rooted early marriage and childbearing practices in immature age prevailing in society. Regarding the impact of early marriage, some scholars (e.g., Karki 2018, Mahato 2016, Pandey 2017, Woodward, Fergusson & Horwood 2001) stated that biologically, child-bearing practices at below 20 years of age harms both mother and child health. The Nepal Demographic and Health Survey (NDHS), 2016 shows the median age at first birth is 20.4 years among the reproductive age 15-49 years of women and it is the same proportion (17%) reported begun childbearing among women age 15-19 in both 2011 and 2016 surveys. Similarly, it shows the median age at first marriage is 17.9 years (Ministry of Health Nepal *et al.* 2017). Similarly, studies also stated that Nepal has one of the highest child marriage rates in the world and the prevalence is even higher in Terai region (Bhandari 2019, Mahato 2016). These mentioned studies indicate that the high prevalence of early marriage and immature age at birth is seriously concerned with safe motherhood. In this context, it is important to analyze the factors associated with safe motherhood practices among young married women (15-24 years) in the high prevalence rate of child marriage districts identified by UNFPA (2017).

## Theoretical framework

The socio-ecological model developed by Urie Bronfenbrenner in the 1970s and later formalized as a theory in the 1980s (Kilanowski 2017) has been applied as a theoretical framework the core concept of which is that how social, environmental and biological factors jointly influence health. Kilanowski (2017) and Sallis, Owen and Fisher (2008) stated that health is affected by multiple levels often including intrapersonal (biological, psychological), interpersonal (social, cultural), organizational, community, physical environment, and policy. Similar to the socio-ecological model, safe motherhood practices in this study are especially considered influenced by different factors, such as demographics and biological characteristics to the system level (Mekonnen, Dune & Perz 2019, Sallis *et al.* 2008).

## METHODOLOGY

This study is based on secondary data obtained from five most child marriage prevalence districts identified by UNFPA Nepal which was carried out by the Central Department of Population Studies (CDPS), Tribhuvan University entitled “Situation Assessment of Child Marriage in Selected Five Intervention Districts of Nepal” in 2017. Data were taken from the core research team of CDPS with permission from UNFPA. It was conducted in five districts namely Rautahat, Kapilbastu, Rolpa, Bajhang, and Baitadi for UNFPA. There were 401 young married women aged 15- 24 years. Among them, 239 women having at least one child and 12 women were currently pregnant for the first time. Thus 251 women are used in this study.

## Variables

The dependent variable is used safe motherhood practices of last birth measured by antenatal care, delivery at health institution, and received postnatal care from the health service provider in this study. Recognizing the effective proper antenatal care (ANC) is four times check-up from health personal, visiting four times and more is considered as ANC. The factors demographic (women’s current age, age at first marriage, age at first birth, children ever born), social (education and caste/ethnicity, media exposure), economic (women’s occupation and wealth index), and contextual (district, ecological zones, and place of residence) are taken as independent variables which are associated with safe motherhood practices.

**Method of data analysis**

This study utilizes descriptive analysis to identify the distribution of independent variables and bivariate analysis is used to analyze the association between dependent and independent variables. A Chi-square test has been performed to test the significance of association between two variables (independent and dependent). They have been recoded from the data file to make a meaningful analysis.

**RESULTS AND DISCUSSION****Socio-demographic and economic characteristics of respondents**

It has commonly been assumed that the background characteristics regarding demographic, social, economic, and contextual are strongly associated with whether the maternal health services are received properly or not. The study found most of the young women (85.8%) were from the 20-24 years age group. Nearly four in five (77.8%) women were married age at 15-19 years, and more than three-fifth (61.1%) started to give birth. Only about one in five (17.6%) had the degree of SLC and above in terms of education. A considerable proportion of women (39.3%) were from the Brahmin/Chhetri group followed by Dalits (21.8%). An overwhelming majority of women (83.3%) were exposed to at least one media. Similarly, in terms of occupation, most of the young married women were involved in household work (65.7%) and agriculture (24.3%). Near or about one-fifth of women were found from poorest, poor, middle, and rich wealth quintile and except the richest household wealth index. The majority of women were from Rural (80.8%) and Terai (41.4%), and it was about one in fifth from Rautahat, Kapilbastu, and Rolpa districts (see Table 1 in Annex 1).

**Safe motherhood practices: Bivariate analysis**

The services of safe motherhood generally include three main components of care: antenatal care (ANC), delivery from skilled birth attendants, and postnatal care (PNC). There are various factors associated with safe motherhood practices. However, frequently used factors, such as demographic, social, and economic are considered to be associated with the utilization or non-utilization of maternal health services in Nepal. Table 2 (see Annex 2) presents the results for bivariate analysis between young married women's background characteristics and maternal health services concerning the ANC visiting four times and more, last birth delivery at health institution and received PNC at last birth.

There is a crucial role of ANC for both mothers' and new-born babies' health. ANC visits may strongly influence institutional delivery service utilization. All pregnant women should have at least four antenatal visits to avoid the health risk during pregnancy. WHO has recommended that every pregnant woman should have at least four ANC visits (World Health Organization 2016). Data reveals that high variation exists in the use of 4 times ANC visits based on the demographic and socio-economic background of women. Table 2 (see Annex 2) showed slightly more than two-thirds of women (66.7%) received the ANC at their last birth. It is lower than the national average shown by the Nepal Demographic and Health Survey (NDHS) (71.8%) 15-24 age group of women (Ministry of Health Nepal *et al.* 2017, Shrestha 2018). This may be the result of child marriage practices and the poor socio-economic background of respondents (Thapa 2020).

The adolescent women (15-19 years) were less involved (62.5%) for ANC visits to compare with 20- 24 years women (67.5%). A similar situation was found in age at first birth where fewer adolescent women visited the ANC than the women aged 20-24 years. This result is inconsistent with the NDHS findings that women under age 20 were more likely to use ANC services from skilled providers than their older counterparts' age. However, it has no significant association between the age of women and ANC visits in this study. Similarly, the women who were engaged in marriage at low age (less than 15 years of age) have significantly fewer visits to the ANC than married at age 20-24 years. It indicates adolescents, in the words of Sallis *et al.* (2008) "intrapersonal" factors influence safe motherhood and face a high risk of complications during pregnancy and childbirth due to the biological immaturity and socio-economic factors as shown by different scholars (e.g., Gurung *et al.* 2020; MK Al-Akaishi, A Alfadhul & HM Al-Kilabi 2017, World Health Organization 2020). The variation of age for ANC visit.

It has commonly been assumed and the majority of studies reported that there is a positive relationship between the level of education with ANC, Delivery care, and PNC. Women having a secondary and above level of education are more likely to involve to use maternal health services than those who had no education (Banke-Thomas, Banke-Thomas, Kivuvani & Ameh 2017, Mekonnen *et al.* 2019; Singh, Singh, Kumar & Rai 2013). Though the woman's having pre-primary/primary level of education has been found poor (45.7%) situation to compare with no education (60.8%)

and other higher level of education. It indicates that the general assumption of the positive relationship between education and ANC visit may not always have similar conditions in all contexts.

It was found statistically significant between caste, media exposure, occupation, and wealth index variables and ANC visit. Among the different ethnic groups, a higher proportion (82.8%) of Brahmin and Chhetri women had four ANC visits compared to other ethnic groups, while other Terai castes (42.2%) and Muslim (40.0%) had the smallest proportion of women who completed the four ANC visits. This finding is in line with the study of the Ministry of Health Nepal *et al.* (2017). A low number of women who were living in a rural area, Terai and Rautahat, and Kapilbastu district visited the ANC to compare with urban, mountain, and Hill regions, Rolpa, Baitadi, and Bajhang districts respectively. Similarly, women who were engaged in household work and unable to access media exposure were poorly involved in ANC visits in comparison to other profession and exposure to media (Thapa 2020). “Poverty” as the “systemic level” also influences the maternal health services as explained by Mekonnen *et al.* (2019). Specifically in this study, the poorest were more (86.0%) attended to during prenatal care than the middle (63.9%), and the richest (45.7%). It contrasts with the results shown by the NDHS report (Aryal *et al.* 2019; Ministry of Health Nepal *et al.* 2017).

The result shows about three-fifth (62.3%) of young women were delivered at a health institution. The age at marriage and delivered at health institutions are statistically significant and it showed that the women with low age at marriage are less involved in delivering at the health institution. However, receiving the PNC is not significant with age group and age at marriage. Women who have two or more children were significantly less likely to have a delivery at health institutions and PNC. The women who have exposures to media as the accessibility of service at the “organizational level” (Mekonnen *et al.* 2019) significantly influence the maternal health services i.e., the women with media exposure have higher in ANC, delivery at health institutions and PNC than the women with no exposure. In the same way, there is a significant association between higher level of education and involvement in the agriculture and students sectors were more involved in the delivery at health institutions and PNC. Terai region especially, Rautahat district and rural residence of women seemed in poor condition to visit the health institution for delivery and PNC to compare among the study districts and urban area.

## CONCLUSION

This study assessed the association between demographic and socio-economic factors and maternal health service utilization among young married women in child marriage prevalence districts of Nepal. Having a high level of education and involvement in non-agriculture sectors seems less common among young married women. Several factors might have influenced the maternal health services utilization of young married women which include individual, interpersonal, institutional, and systemic levels. Most of the young married women were married below 20 years and having their first birth at this age and adolescents especially may have a high risk of complications during pregnancy and childbirth due to biological immaturity. The below national average ANC indicates that young women have poor safe motherhood conditions in the study area. If women have better socioeconomic status, they may be able to use maternal health services properly. The incidence of early marriage may not be only a threat to their reproductive health but also harms their own and the nation's future as a whole. So, it needs to have the attention that the women, who face greater geographical, sociocultural, and economic barriers in accessing care, capture the commitment of SDGs Goals in time.

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## (ANNEX-I)

**Table 1:** Distribution of respondents according to background characteristics

<b>Background characteristics</b>	<b>Percent (%)</b>	<b>Number (N)</b>
<b>Age (in years)</b>		
15-19	14.2	34
20-24	85.8	205
<b>Age at first marriage (in years)</b>		
<15	11.7	28
15-19	77.8	186
20-24	10.5	25
<b>CEB (Child Ever Born)</b>		
1	68.2	163
2 or more	31.8	76
<b>Age at birth of first child</b>		
15-19	61.1	146
20-24	38.9	93
<b>Education</b>		
No formal education	29.7	71
Pre-primary/primary	15.5	37
Secondary	37.2	89
SLC & above	17.6	42
<b>Caste/ethnicity</b>		
Brahmin/Chhetri	39.3	94
Terai/ Madhesi (Excluding Muslim)	16.7	40
Dalits	21.8	52
Janajati	18.8	45
Muslim	3.3	8
<b>Media exposure</b>		
No exposure	16.7	40
Exposure at least one media	83.3	199
<b>Occupation</b>		
Agriculture	24.3	58
Non agriculture	3.8	9
Household Work	65.7	157
Students	6.3	15
<b>Wealth index</b>		
Poorest	22.2	53
Poor	18.0	43
Middle	22.6	54
Rich	21.3	51
Richest	15.9	38
<b>Total</b>	<b>100.0</b>	<b>239</b>
<b>District</b>		
Rautahat	22.2	53
Kapilbastu	19.2	46
Rolpa	20.9	50
Bajhang	27.2	65
Baitadi	10.5	25
<b>Ecological zone</b>		
Mountain	27.2	
Hill	31.4	
Terai	41.4	
<b>Place of residence</b>		
Rural	80.8	
Urban	19.2	
<b>Total</b>	<b>100.0</b>	

Source: Situation Assessment of Child Marriage in Selected Five Intervention Districts of Nepal, 2017, data file

(ANNEX-II)

**Table 2:** Distribution of background characteristics of young married women by maternal health services

Background characteristics	Maternal health services					
	ANC visiting 4 times and more		Last birth delivery at health institution		Received PNC at last birth	
	%	N	%	N	%	N
<b>Age</b>						
15-19	62.5	32	64.7	34	52.9	34
20-24	67.5	163	62.0	205	46.3	205
<b>Age at first marriage</b>						
<15	47.8	23	42.9	28	32.1	28
15-19	65.8	149	61.8	186	48.4	186
20-24	91.3	23	88.0	25	56.0	25
$\chi^2$ test	10.010***		11.560***			
<b>CEB (no of live births)</b>						
1	62.5	32	68.7	163	55.8	163
2 or more	67.5	163	48.7	76	28.9	76
$\chi^2$ test			8.856***		15.026***	
<b>Age at first birth</b>						
15-19	62.3	144	57.5	146	43.8	146
20-24	72.8	81	69.9	93	52.7	93
$\chi^2$ test			3.696**			
<b>Education</b>						
No formal education	60.8	51	40.8	71	25.4	71
Pre-primary/primary	46.7	30	62.2	37	48.6	37
Secondary	74.0	77	69.7	89	52.8	89
SLC & above	75.7	37	83.3	42	71.4	42
$\chi^2$ test	9.422**		23.891***		24.642***	
<b>Caste/Ethnicity</b>						
Bramin/Chhetri	82.8	87	73.4	94	54.3	94
Terai/ Medhesi	42.9	28	40.0	40	32.5	40
Dalits	64.1	39	67.3	52	51.9	52
Janajati	52.8	36	57.8	45	44.4	45
Muslim	40.0	5	37.5	8	25.0	8
$\chi^2$ test	22.121***		16.453***			
<b>Media (Radio Television Magazine Mobile)</b>						
No exposure	44.8	29	37.5	40	27.5	40
Exposure at least one	70.5	166	67.3	199	51.3	199
$\chi^2$ test	7.311***		12.629***		7.541***	

Table 2 contd...

<b>Occupation</b>						
Agriculture	67.9	53	79.3	58	60.3	58
Non agriculture	71.4	7	66.7	9	55.6	9
Household Work	62.5	120	53.8	156	40.4	156
Students	100.0	14	75.0	16	60.0	15
$\chi^2$ test	<b>8.078**</b>		<b>13.948***</b>		<b>8.168**</b>	
<b>Wealth index</b>						
Poorest	86.0	50	69.8	53	50.9	53
Poor	74.4	39	72.1	43	44.2	43
Middle	63.9	36	55.6	54	51.9	54
Rich	54.3	35	47.1	51	37.3	51
Richest	45.7	35	71.1	38	52.6	38
$\chi^2$ test	<b>18.902***</b>		<b>10.363**</b>			
<b>District</b>						
Rautahat	20.0	25	18.9	53	18.9	53
Kapilbastu	50.0	40	73.9	46	56.5	46
Rolpa	74.5	47	74.0	50	64.0	50
Bajhang	86.7	60	67.7	65	36.9	65
Baitadi	78.3	23	96.0	25	84.0	25
$\chi^2$ test	<b>42.979***</b>		<b>61.042***</b>		<b>40.669***</b>	
<b>Ecological Zone</b>						
Mountain	86.7	60	67.7	65	36.9	65
Hill	75.7	70	81.3	75	70.7	75
Terai	38.5	65	44.4	99	36.4	99
$\chi^2$ test	<b>36.648***</b>		<b>25.823***</b>		<b>23.987***</b>	
<b>Place of residence</b>						
Rural	63.9	155	58.0	193	44.6	193
Urban	77.5	40	80.4	46	58.7	46
$\chi^2$ test			<b>7.942***</b>		<b>2.987*</b>	
<b>Total</b>	<b>66.7</b>	<b>195</b>	<b>62.3</b>	<b>239</b>	<b>47.3</b>	<b>239</b>

Source: Situation Assessment of Child Marriage in Selected Five Intervention Districts of Nepal, 2017 data file

Note: \*\*\*Significance at 1 percent level, \*\* Significance at 5 percent level and \* Significance at 10 percent level