

Utilization of Maternal and Child Health Care Services and Nutritional Status of Under Five Children in Bungmati Village Development Committee, Lalitpur, Nepal

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ABSTRACT

Introduction

Maternal and child health care services is essential component to promote family health. Despite of being provided free of cost, adequate utilization of services is still the issue affecting health of both mother and child in Nepal.

Objective

The objective of this study was to assess the utilization of maternal and child health care services and nutritional status of under five children in Bungmati Village Development Committee, Lalitpur, Nepal

Methodology

Descriptive cross sectional study was conducted in Bungmati VDC of Lalitpur district, Nepal among one hundred and fifty households having either under five children, postnatal mothers or pregnant women which was selected purposively based on the objectives of the study. Data was collected by using interview guidelines and anthropometric measurement of children under five was taken. Collected data were analyzed in SPSS.

Results

Regarding utilization of maternal health care services, 90.9% had done their four-time antenatal checkup, 94.2% had delivered their baby at hospital and 65% married women of reproductive age were using one of the family planning methods. Likewise, immunization of under five children showed 100% BCG coverage, 88% pentavalent DPT and Polio, 77% Measles and low coverage of injectable Polio vaccine. About nutritional status of under five children, more than half (57%) of the child were underweight, 41% were stunted and 20% of them were wasted.

Conclusion

Utilization of maternal health care services is good though coverage of family planning needs to be improved and immunization program should be strengthened. Awareness program for improvement of nutritional status of the under five children should be planned to address nutritional problem of children.

KEY WORDS

Family planning, health services, immunization, utilization

INTRODUCTION

Health and well being of both mother and the children is shaped by kind of health care services that woman receives during pregnancy, childbirth and post-partum period.¹ Most of the reproductive age group women are dying due to complications of pregnancy and childbirth,² especially in the developing countries.³ Similarly, 5.9 million children under the age of 5 years die annually where 45% deaths are attributed to malnutrition.⁴ More than two thirds of maternal and child death occurred in South East Asia region only.⁵ More than half of these early child deaths could be prevented with simple and affordable interventions.⁴

Child and maternal mortality and morbidity rates continue to remain high in Nepal; however, some improvements are seen in recent years. These improvement in maternal health is possible only due to improvement in health care services provided to the women.¹ In Nepal, under five children face multiple obstacles such as infections, malnutrition for survival and development, along with the poor maternal nutritional status during pregnancy.^{6,7} Access to family planning contributes to Maternal and Child Health (MCH) by preventing unintended pregnancies and poor obstetrical outcomes.⁸ Maternal mortality in developing countries could be dropped by more than 20% if the current demand for family planning services were met.⁹ Utilization of MCH care services is related to the decision making power and autonomy of the women about her own health problems and spousal communication.¹⁰ Underutilization of MCH services is one of the important contributing factor to high maternal mortality and child mortality especially in context

of developing countries like Nepal where most of the deliveries takes place at home.¹¹ Therefore, this study assessed the utilization of MCH services and nutritional status of under five children in Bungamati VDC, Nepal.

METHODOLOGY

Descriptive Cross-sectional study was conducted from February to June 2015 in six wards (1-6) of Bungamati VDC in one hundred and fifty households. Households having either under five children, postnatal mothers or pregnant women were selected purposively based on the objectives of the study. Data was collected by direct interview and observation method using structured questionnaire. Weight of the children was measured using mechanical weighing machine and height was measured using clinical measuring tape. Informed consent was taken from the respondents before collecting the data. Data was entered in Microsoft Excel and analysis was done by using SPSS 20 version. Descriptive statistics (frequency and percentage) were used for analysis.

RESULT

In one hundred and fifty households, there were 797 persons. Out of 797 people, 146 (18.3%) were under five children and 230 (28.8%) married women of reproductive age, 55 (6.9%) were mothers of under one year children. Most (87.5%) of the households were Newars and more than three fourth (85.6%) of them were following Hindu religion. More than half (54%) had joint family followed by 40% nuclear family. (Table 1)

Table 1: Socio demographic characteristics of the households (n=150)

Variables	Categories	Frequency	Percentage
Ethnicity	Newars	131	87.5
	Others	19	12.5
Type of Family	Joint	81	54
	Nuclear	60	40
	Extended	9	6
Religion	Hindu	128	85.6
	Buddhists	21	13.7
	Christian	1	0.7

Among 230 married women of reproductive age, more than half 65% were using one of the family planning methods where Depo-Provera was the most common (68%) used

Encephalitis whereas injectable polio vaccine was introduced recently so this vaccine was obtained by only 11% of under five children. (Figure 1)

Table 2: Utilization of family planning Services among married women of reproductive age (n=230)

S.No.	Variables	Categories	Frequency	Percentage
1	Use of family Planning	Yes	150	65.2
		No	80	34.8
2	Methods of family planning	DEPO	102	68
		Laparoscopy	15	10
		Pills	13	9
		Condom	10	6.8
		Norplant	6	4
		IUCD	4	2.2

temporary methods of family planning followed by pills (9.33%) and condom (6.67%). Similarly, (10.67%) had done laparoscopy as a permanent family planning.

Utilization of maternal health care services was assessed among fifty five mothers who had under one years of child. Among them (90.1%) had gone for four time Antenatal Checkup (ANC) and all of them had got tetanus toxoid vaccine and albendazole tablet. Among them, most (94.5%) had delivered their baby at hospital whereas 5.4% had delivered at home. Around three fourth of them (74.5%) had normal delivery and one quarter (25.5%) had cesarean delivery. (Table 3)

Figure 1: Immunization coverage of under five children (n=146)

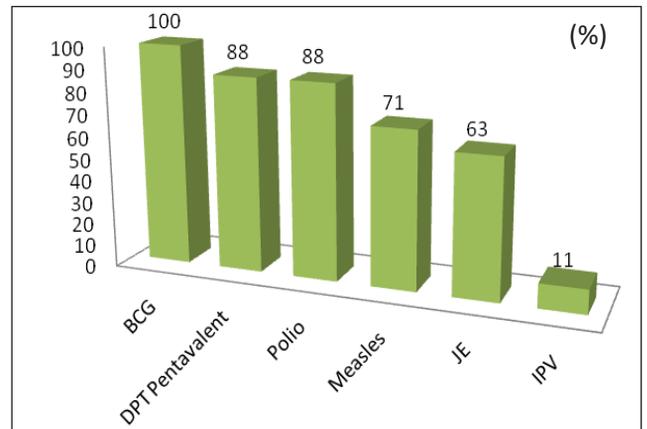
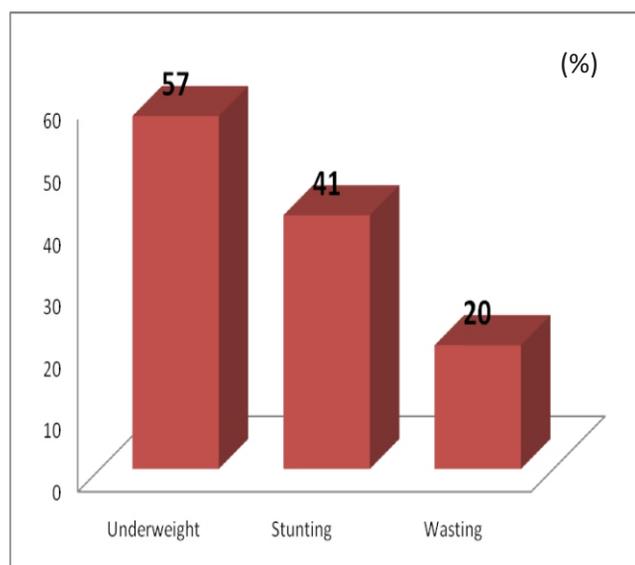


Table 3: Utilization of maternal health care services among women of under one years of age children (n=55)

S.No.	Variables	Categories	Frequency	Percentage
1	Place of Delivery	Hospital	52	94.5
		Home	3	5.4
2.	Mode of Delivery	Normal	41	74.5
		Caesarean Section	14	25.5
3	Four time ANC check up	Done	50	90.9
		Not Done	5	9.1
4.	TT Vaccine	Given	55	100
5	Albendazole	Taken	55	100

There were 146 under five years children, among them all had got BCG vaccine, 88% had got DPT and Polio, 71% Measles and 63% had got vaccination against Japanese

Examination of nutritional status of under-five children found that more than half (57%) were underweight, 41% stunted and 20% of them were wasted.

Figure 2: Nutritional status of under five children (n=146)

DISCUSSION

Child and maternal mortality and morbidity rates continue to remain high in Nepal though decline was observed from last five years.¹ Present study demonstrates utilization of MCH services and nutritional status of under five children. Among married women of reproductive age, this study revealed 65% were using one of the family planning methods, though; we did not look for the foreign employment of their husbands. It is higher than (42%) that of reported in Nepal Demographic Health Survey (NDHS) 2011¹² and national data of 014/15 which showed contraceptive prevalence rate 43%¹³ and study in a district of western Nepal showed to be 42%.¹⁴ In this study, most common method of family planning was Depoprovera (68%) followed by female sterilization (10%) and oral pills (9%). In contrast to this, NDHS 2011¹² found three most popular modern methods used by married women were female sterilization (15%), injectables (9%), and male sterilization (8%) and study of Jumla showed 38% male sterilization and no female sterilization was used.¹⁴ This differential results might be due to diverse geographical location and characteristics among the study population. The results signifies awareness regarding male sterilization should be provided in Bungamati VDC to increase uptake of male sterilization.

Moreover, our study showed that 94.5% of women of under one year age children had delivered in hospital and only 5.4% had home delivery which is approximately similar to the study conducted in eastern part of Nepal, where 80% had institutional delivery and 20% had home delivery.¹⁵ On contrary to this, in Jumla 95.8% women had given their child

birth at home.¹⁴ It reflects utilization of institutional delivery services is remarkable in our study area, this difference may be due to different geographical patterns and facilities available in two settings, as our study area is in outskirts of capital city of Nepal. Likewise, more than 90% had done their four-time antenatal checkup which was assessed based on WHO recommendation and almost all got Tetanus Toxoid injection and Albendazole in their last pregnancy among our study participants which is similar with the findings of study of eastern part of Nepal.¹⁵ In contrast to this, one third of women did not go for ANC in Jumla.¹³ This difference might be due to accessibility of services due to geographical terrain though MCH services are provided free of cost from Government of Nepal.

In determining child health status, immunization plays crucial roles. Our study found that almost all under five child got BCG vaccination followed by 88% DPT and Polio and 71% measles which is similar in case of BCG and lower for other vaccines than the National coverage.¹³ Injectable polio was recently included in National Immunization schedule so it might be the reason of low coverage.

The nutritional status of under-five children is an important measure of children's health. Adequate nutrition is critical to children's growth and development.¹⁴ In regards to nutritional status of under five children, this study found more than half (57%) of children were underweight and 29% were wasted which is higher than NDHS report 2011 and 41% were stunted which is same as NDHS 2011 findings.⁶ However, study conducted in Mahottari district by Nepal Health research council showed 29% wasted and 22% stunted which is less than in our study population.¹⁶ Prevalence of stunting and underweight among boys was 45.6% and 52.5% and among girls was 43.4% and 46.1% respectively in Kathmandu which is approximately similar to our study finding though we did not analyze nutritional status based on sex of child.¹⁷ Moreover, in a study conducted in Chitwan showed prevalence of stunting was 22.7%, underweight 37.3% and wasting 25.7% where stunting and underweight is higher in our population and wasting is slightly lower than the study conducted in Chitwan.¹⁸ This differential nutritional status of under five children may be due to different determinants which was not the scope of present study. This study was cross sectional study conducted in one VDC with limited sample size so causal relationship could not be established.

CONCLUSION

MCH services are crucial in determining the health of mother and children. This study reflected, though, utilization MCH

services was satisfactory, nutritional status of under five children was not good. We should try to increase the coverage of services to make it cent percent. All those pregnant mothers not attending the ANC clinic for four times as per government schedule and delivering baby at home, need to be identified. The underlying factor for under utilization of the service should be identified.

RECOMMENDATION

There is need of further explorative analytical study to identify the determinants of not utilization of MCH services. Intervention targeted to reduce the nutritional problems of under five children is recommended to address the identified nutritional problem of under five children.

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CONFLICT OF INTEREST

There was no any conflict of interest to declare.

REFERENCES

1. Ministry of Health and Population (MOHP) [Nepal], New ERA, and ICF International. Nepal Demographic and Health Survey 2011:119-120
2. Alkema L, Chou D, Hogan D et al. Global, regional, and national levels and trends in maternal mortality between 1990 and 2015, with scenario-based projections to 2030: a systematic analysis by the UN Maternal Mortality Estimation Inter-Agency Group. *Lancet*. 2016; 387 (10017): 462-74
3. World Health Organization: Maternal mortality fact sheets. Media Centre, 2016[cited 2016 November]; available from <http://www.who.int/mediacentre/factsheets/fs348/en/>
4. World Health Organization. Children: Reducing Mortality. Media Centre, 2016. [Cited 2016 Sep]; Available from <http://www.who.int/mediacentre/factsheets/fs178/en>
5. Bhandari TR. Maternal and Child Health Situation in South East Asia. *NJOG* 2012; 7(1): 5-10
6. Ministry of Health and Population (MOHP) [Nepal], New ERA, and ICF International. Nepal Demographic and Health Survey 2011:149-170
7. Ministry of Health and Population (MOHP) [Nepal]. 2004. Nepal National Newborn Health Strategy-2004. Kathmandu, Nepal: Ministry of Health and Population
8. World Health Organization. Monitoring maternal, newborn and child health: understanding key progress indicators. A report prepared by Countdown for Maternal, Newborn and Child Health, Health Metrics Network and WHO. Geneva: WHO. 2011:23
9. Cleland J, Bernstein S, Ezeh A, Faundes A., Glasier A., Innis J. Family planning: the unfinished agenda. *Lancet*; 2006; 368 (9549):1810-1827
10. Poudel DR, Pitakmanaket O. Utilization of maternal health services in Nepal. *JHAS* 2010;1(1):28-37
11. Baral YR, Lyons K, Skinner J, Teijlingen ER. Maternal Health services utilization in Nepal: Progress in the new millennium? *Health science journal*. 2012; 6(4):618-633
12. Ministry of Health and Population (MOHP) [Nepal], New ERA, and ICF International. Nepal Demographic and Health Survey 2011:93-110
13. Government of Nepal, Ministry of Health and Population, Department of Health Services. Annual report 2013/2014. Kathmandu: 2014/2015;71. (http://dohs.gov.np/wpcontent/uploads/2016/06/Annual_Report_FY_2071_72.pdf)
14. Rawal LB, Tiwari SK, Devkota BS, et.al. Women's Educational Status And Maternal And Child Health Care Practices In Jumla District West Nepal. *Journal of Nepal Health Research Council*. 2014;2:19-22
15. Bhandari B, Pokhrel B, Bhatta B et al. Utilization of maternal health care services in Belbari VDC of Eastern region of Nepal. *Journal of Nobel Medical College* 2011;1.:53-57
16. Shrama R, Mishra SK. Nutritional status of children under five years and factors associated in Mahottari district, Nepal. Research report of Nepal Health Research Council. 2010:14-31
17. Ghosh A, Adhikari P, Chowdhury SD, Ghosh T. Prevalence of undernutrition in Nepalese children. *Annals of human biology*. 2009 Jan 1;36(1):38-45
18. Ruwali D. Nutritional Status of Children Under Five Years of Age and Factors Associated in Padampur VDC, Chitwan. *Health Prospect* 2011, Vol. 10.14-18Chitwan. *Health Prospect* 2011, Vol. 10.14-18