Assessing Health Status of Khanigaun Village Development Committee in Nuwakot District of Nepal

Thapa JK,[1] Manandhar P,[1] Subedi RK,[1] Dahal S,[2] Mahotra NB,[3] Pandey A,[4]

[1]Department of Public Health, Little Buddha College of health Science, Minbhawan, [2]Department of Public Health, Central Institute of Science and Technology, [3]Department of Clinical Physiology, Maharajgunj Medical Campus, Institute of Medicine, Tribhuvan University, [4]Nepal Health Research Council, Ramshah Path, Kathmandu, Nepal.

ABSTRACT

Background: Assessing health status is crucial to understand the level of health in the community. Maternal health, child health and behavioral practice on diseases are key issues to assess health status of a community in Nepal. Nationwide surveys and literature suggest that there is improvement in health status of Nepalese community. Thus, the aim of this study was to assess general health status of Khanigaun VDC of Nepal and compare it with regional and national status.

Methods: A descriptive cross-sectional study was undertaken using semi-structured questionnaire, interview and observation methods. Simple random sampling was done to conduct household survey among 346 (30%) households. Ethical approval was taken from Nepal Health Research Council, Ethical Review Board

Results: General Fertility Rate (GFR) of the VDC was found 69.15 per 1000 Women. Literacy rate of the VDC was 71.14% and 74.92% of households depended on agriculture for income. The major health problem of the community was diarrhea followed by unknown fever and respiratory problems. More than 50% of women breastfed their children only up to the age of one year. Contraceptive prevalence rate was 72% and more than two third of women were found to be have delivered their most recent baby at home. It was found that 31% of newborn were born underweight and measles immunization coverage was 89%. After need identification and prioritization, Micro Health Project (MHP) was conducted to create health related awareness among the people through demonstration and exhibition.

Conclusions: Regular health status assessment of a community people that ultimately helps to plan the health programs and services accordingly.

Keywords: Cross-sectional study; health status; khanigaun; micro health project.

INTRODUCTION

Improving health is shared responsibility of all those sectors including health care providers and public health officials, as well as variety of organizations and individuals that vision to improve health status of people and contribute to the community's wellbeing.[1] Community health assessment refers to a state, tribal, local, or territorial health assessment that identifies key health needs and issues through systematic, comprehensive data collection and analysis. [2] Health status assessment works to promote the awareness of these determinants and their relationship to health as well as to identify disparities in health such that action can be taken by health care providers to optimize the health of the whole population.[1]

In Nepal, Nepal demographic health survey is carried out every five years. Each of the survey indicators shows that the health status of Nepalese community is improving. However, there is no any remarkable change on child health, health service utilization and behavior change. [3]Mortality and morbidity rates especially among women and children are alarming and Both, Communicable & non communicable childhood illness, complication of child birth, nutritional status and endemic diseases continue to prevail at a high rates.[4] These problems are further exacerbated by under-utilization of resources, shortage

Correspondence: Janak Kumar Thapa, Department of Public Health, Little Buddha College of health Science, Minbhawan, Kathmandu, Nepal. Email: janakthapa7@gmail.com, Phone: +9779851196386.

of adequately trained personnel, underdeveloped infrastructure, Poor public sector management, and the weak intra and inter-sectoral co-ordination.[5]

METHODS

A descriptive cross-sectional study was conducted from July to August 2012, among general people of Khanigaun VDC of Nuwakot district. As per the household list provided by the VDC office there were a total of 1174 households in the VDC. 346 household were chosen using systematic random sampling technique. Which was approximately 30% of total households in the VDC. From the sampling frame, almost equal proportion of household were selected from each wards.

Data collection was done using household survey questionnaire, anthropometric measurement of children (below five years of age), observation of the households, and documentary analysis of records from VDC office and sub health post. The household survey questionnaire consisted of Demographic information, Personal and environmental health, Common health problems, Family planning, Safe motherhood, Safe abortion, Child health, Healthy behavior, Need identification

Observation method was used to assess the general condition of housing and environmental status of households. Secondary data like list of household, morbidity, mortality, disease pattern were collected from documentary analysis of records from VDC office and sub health post which was beneficial for comparison of VDC findings was done with district, national and regional data.Need prioritization was done by observed needs and felt needs. Observed needs were identified from the analysis of data. Felt need were found by conducting group discussion with the community key leaders, teachers, FCHVs, intellectuals, social and development workers. Based on the need prioritization, real needs was identified.

Quantitative data was analyzed using descriptive statistics in SPSS version 17 Descriptive statistics like mean, and percentage were calculated whereas qualitative data was analyzed manually. Ethical approval was taken from Nepal Health Research Council, Ethical Review Board. Written informed consent was taken from each participant before including them in the survey.

RESULTS

The mean age of respondents was 35.64 years with 14.77 SD. The range of age of respondents was 18-90 years.
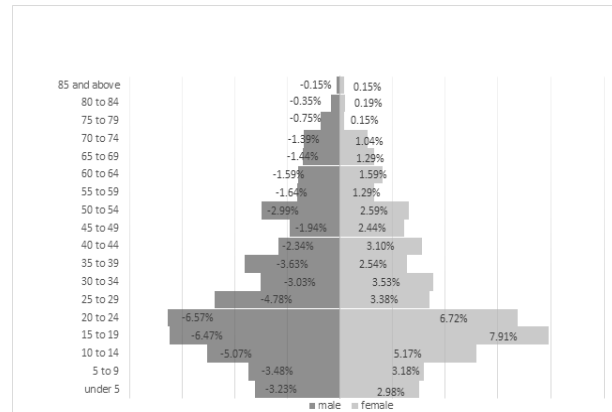
Figure 1. Population Pyramid of Khanigaun VDC

More than half (50.79%) were males. As shown in population pyramid (figure 1), the population of age group 0-4 is less than that of 5-9 years which is due to low birth rate and use of family planning devices. Moreover, the population of age group 15 to 19 and 20 to 24 are comparatively higher in proportion which indicates more productive age population in the VDC.

Furthermore, the survey explores some of the basic demographic indicators of the Khanigaun VDC. Crude Birth Rate (CBR) and Crude Death Rate (CDR) were found to be 18.4 and 5.47 rates per thousand populations respectively. Similarly, Infant Mortality and Neonatal Mortality were 54.05 and 4.05 per thousand live births respectively. General Fertility Rate (GFR) was 69.15 per thousand Women of Reproductive Age (WRA). Similarly, Total Literacy Rate of the VDC was found to be 71.14% (Table 1).

Table 1. Demographic indicators

Indicators	Value
Crude Birth Rate(CBR)	18.4 per 1000 population
Crude Death Rate(CDR)	5.47 per 1000 population
Infant Mortality Rate(IMR)	54.05 per thousand live births
Neonatal Mortality Rate(NMR)	54.05 per thousand live births
General Fertility Rate(GFR)	69.15 per thousand WRA
Total literacy rate(TLR)	71.14 per hundred population

The majority of the respondents were Hindu (89.90%) in the VDC followed by Buddhist (9.24%). More than half (54.75 %) of the families were nuclear. Agriculture was the major source of income (Table 2). The survey found out agriculture (49.63%) as the major occupation in Khanigaun VDC (Table 2).

Table 2. Occupation status of the households.		
Occupation	Frequency(n=1364)	Percentage (%)
Agriculture	677	49.63
Student	204	14.95
Housework	167	12.93
Service	163	11.95
Business	64	4.69
Labour	63	4.61
Others	17	1.24

It was found that almost half (49.56%) of the respondents used tap water followed by natural tap (44.66%), spring (2.30%), well (2.30%) and river (1.15%) as the sources of drinking water. In addition, almost 90% of households did not use any method of purification for drinking water while filtration and boiling were done by 7.23% and 2.88% respectively. From the observation, it was found that majority (88%) of the households had toilet facility in the VDC while the remaining households practiced open defecation.

A total of 137 respondents (39.60%) suffered from any illness within past three months preceding the survey. Among them, almost 80% of respondents visited health institution for general health checkup followed by private clinic (32.27%), traditional healers like Dhami/ Jhankri (18.73%) and 4.61% did home based treatment during illness. Diarrhea (21.16%) was the major health problem suffered by respondents in the VDC followed by unknown fever (19.70%) and respiratory problems (13.86%) as shown in Table 3.

Table 3. Health Problems and Place visited for health check up.		
Place visited for health checkup (n=137)	Frequency	Percentage
Health institution	109	79.53
Private clinic	44	32.27
Dhami/Jhakri	26	18.73
Home based treatment	6	4.61
FCHVs	6	4.03
Medical shop	2	1.44

Others	1	0.28
Type of health problems (n=250)		
Diarrhea	53	21.16
Unknown Fever	49	19.70
Respiratory problem	35	13.86
Common cold	31	12.40
Gastrointestinal diseases	26	10.21
Skin Diseases	14	6.56
ENT & Eye problems	11	5.10
Accidents & injuries	11	5.10

It was found from the survey that 98% of pregnant women had consumed deworming tablets during their last pregnancy but only 53.92% of respondents took all a standard dose of 60 mg iron + 400 μg folic acid daily for 6 months.

It was found that 68% of their last deliveries were conducted at homes which were mostly assisted by FCHVs and members of women group in the community. Of those home deliveries, majority of cord cutting was done by new blade (77.4%) but sickles/knives and old blades were used by 12.99% and 9.6% respectively. Among all deliveries, bleeding (37.5%) and prolonged labor (37.5%) were major problems during child birth followed by abnormal position of the fetus (25%).

It was found that only 69% of women had correct information about legalized safe abortion, 21% were misinformed and 10% had no information at all. The study revealed that 86% of the respondents had fed their newborn with colostrum milk. Regarding the duration of breastfeeding, 12.82% of respondent stopped breastfeeding before their child reached 6 month of age and more than 37% stopped when the child was between 6 month and one year of age.

It was found that 31% were of newborn had low birth weight and 57% were between 2.5 to 3.5 kg. Regarding knowledge of preparing super-flour (SarbottamPitho), 93.13% of respondents didn't know the right method of preparing it. Only 43.79% of total respondent had information about malnutrition, and Consumption of vitamin A capsule and De-worming tablet was 35.4% among the mothers. It was found that 90.2% of households consumed iodized salt and among those who consumed

iodized salt, 11.8% didn't know the importance of it. Regarding immunization, it was found that Bacillus Calmette-Guérin (BCG) coverage in the VDC was 97%, DPT/HepB/HiB-3 was 91%, Polio-3 was 91% and measles coverage was 89%.

It was found that family planning users in the VDC was 72% among the married couple of reproductive age group (15- 49 years). Condom users were maximum 29% followed by injectable (Depo) users 22% and oral pills 19%. Minilap users were 15% and those doing vasectomy were 8% out of total contraceptive users which yielded a total of 23% of permanent family planning users (Table 4).

Table 4. Family planning methods		
Family Planning methods (n=250)	Frequency	Percentage
Condom	73	29%
Injectable (Depo-provera)	55	22%
Pills	47	19%
Minilap	38	15%
Vasectomy	19	8%
Implant	17	7%

The study reveals that, about the Structure of House 22.34% of houses' roof were kacchi, followed by 64% semi pakka. Similarly, 18.78% of the house got a plaster wall and majority 59.39% were made up of mud. Majority 96.45%of the households got kitchen inside the house and remaining didn't. During the observation, among all houses 134 (68 %) houses got their own toilet.

Major activities carried out during micro health project (MHP) were demonstration of six steps of hand washing among school students and community people, During the day of primary health care outreach clinic (PHCORC) procedure of preparing super-flour (sarbottam pitho) and proper way of preparing Oral Rehydration Solution (ORS) was done.

DISCUSSION

Health status assessment of the community helped to know the level of health of the community people and made it easy to compare with the national averages. It was found that the literacy rate of Khanigaun VDC was higher than the average literacy rate of Nepal. According to Centre Bureau of Statistics (CBS) report 2011, literacy rate of Nepal is 65.9%.[6] Around 88% of household have toilet facilities but CBS report 2011 shows that 38.17% of household do not have their own toilets.

Though the percentage of households using toilet is higher than that of national average, still 12% do not use the toilet. This fact might be one of the reasons behind the diarrhoeal diseases being one of the major health problems of the VDC (21%).[7] Other health problems of the VDC were unknown fever (19.7%) and respiratory problems (13.86%) while the major health problems of the country according to Annual Report 2011/2012 of Department of Health Services (DoHS) were Acute Respiratory Infection (ARI) and Diarrheal diseases.[8] Contraceptive Prevalence Rate (CPR) of the VDC was 72% which was higher than that of Nuwakot district (37.21%) and others districts of Nepal as per DoHS annual report 2011/12.[7] It was found that home delivery in the VDC was 68% which was slightly higher than national average.[7] Among home deliveries, cord cutting practices using sickle/knife and old blade were 12.99% and 9.6% respectively.

Family planning allows people to attain their desired number of children and determine the spacing of pregnancies. It is achieved through use of contraceptive methods and the treatment of infertility.[9] Healthy children live in families, environment, and communities that provide them with the opportunity to reach their fullest developmental potential.[10] The survey regarding child health was targeted to mothers of children under 5 years and the total respondents were 65.

Regarding Infant Mortality Rate (IMR), it was found that IMR of the VDC was higher than that of Nepal Demographic Health Survey, 2011 which was 46 per thousand live births.[11] However, Neonatal Mortality Rate (NMR) was found almost eight times less in the VDC than that of national average found by NDHS, 2011 which was 33 per thousand live births.[8] Immunization coverage among under five children in the VDC was higher than national averages of DoHS Annual Report 2011/2012 which was BCG 97%, DPT/HepB/Hib 91%, Polio 3 91% and Measles 89%.[12] Moreover, it was found that Low Birth Weight in the community was 31% which was more than 18% higher in average than the findings from NDHS, 2011.[5]

Prioritization means using a systematic method of assigning greater or lesser importance to various diseases, problems, needs, and interventions.[13] Micro health Project (MHP) is a small scale health project in which people are involved to identify their real needs and solve them by taking short duration of time through the maximum utilization of locally available resources and techniques. [14] Prioritization helped to cope with these complex decision problems. Real health needs in the community, listed by comparing observed health needs and felt health needs of the VDC, were selected

with the consent of community people based on feasibility to conduct MHP. MHP was then conducted on health awareness through demonstration and exhibition.

To address the need of community people, MHP was conducted to aware people on their health through demonstration and exhibition on hand washing practices, preparation of Sarbottam Pitho and preparation of ORS.

CONCLUSIONS

This study provides a general health status of community like quality of life, health status, family planning status, maternal and child health status, immunization status, Nutritional status and priority health programme status as well as the problems faced by the people like home delivery and unsafe cord cutting practices, etc. And its impacts is still Infant Mortality Rate (IMR) was higher than national average and it was reported that almost one third of newborn had Low Birth Weight. This study findings suggest that further concentrated and coordinated efforts will be required to support the national health programme. It is good groundwork for next developmental stage that would be untaken by policy makers for development of VDC level programmes.

ACKNOWLEDGEMENTS

REFERENCES

1. City of Long Beach Department of Health and Human Services. Community health assessment. 2013;1–170.

2. Assessment HS. How healthy. 2011;(February).

3. Boerma T, Geneva WHO, Chikersal J, Hansen P, Low D, Fund G. Community Health. 2011;(April):1–18.

4. Doria-ortiz C. Bexar County Community Health Assessment Report. 2013;

5. Ghimire SS, Constraints CD, Division P, Health M, Era N, International ICF. Nepal. 2011;163–71.

6. Statistics CB of. National Population and Housing Census 2011 (National Report) Government of Nepal. 2012;01:1–270.

7. Rh C, Ap A, Dahal R, Subedi J, Blengero J, Williams-blengero S, et al. A Study on Nutritional Status of Under Five Jirel Children of Eastern Nepal Introduction : 2005;3(2):39–42.

8. Services H. Annual Department of Health Services. 2014;71.

9. Van Minh H, Tuan Anh T, Rocklöv J, Bao Giang K, Trang LQ, Sahlen K-G, et al. Primary healthcare system capacities for responding to storm and flood-related health problems: a case study from a rural district in central Vietnam. Glob Health Action [Internet]. 2014 Jan [cited 2015 Jan 21];7:23007. Available from: http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=4265642&tool=pmcentrez&rendertype=abstract

10. Community C. Report to the Community Community Benefit Program. 2013;

11. Khanal V, Adhikari M, Karki S. Social determinants of tobacco consumption among Nepalese men: findings from Nepal Demographic and Health Survey 2011. Harm Reduct J [Internet]. 2013;10:40. Available from: http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=3880042&tool=pmcentrez&rendertype=abstract

12. Nepal Annual Report 2014. 2014;(April):1–30.

13. Johnson et al. Creative partnerships for community health improvement: a qualitative evaluation of the Healthy Carolinians community micro-grant project. Heal Promot Pr. 2006;7(2):162–9.

14. Study C. Study on Availability of and Access to Free Health Services in Nepal.