

## **1. Introduction**

Nepal is a small landlocked country with a territory of about 1,47,181 square kilometres. It occupies only 0.03% of the total land of the earth. It is 885 km long from east to west. Nepal shares border with India in the east, west and south and with Tibet in the north. About 77% of the lands are covered with hills, rivers, forests and the Himalayas. The highest peak in the world, Mt. Everest (8848 m.) is located in the north of Nepal. The country is divided into three ecological regions called the Mountains, Hill and Tarai.

The country is divided administratively into 5-development regions and 75 districts. There are 3,915 Village Development Committees (VDCs) at the lowest level of administration and 58 Municipalities in the country. Each VDC is composed of 9 wards, Municipality ward ranges from 9 to 35 (Nepal in Figures, 2002).

Total population in 2001 is estimated to be 23151423. The urban population is expected to be about 14.2% of the total population. Even though the majorities of its people are Hindu (80.6%). Nepal is famous and rich for its multiethnic and multicultural heritage. The national per capita income is estimated in the order of US \$ 242 (provisional estimate) for 2000/2001). The economy is primarily agriculture-based. Total literacy rate is 53.74%, for male 65.08% and for female 42.49%. As the current population growth is 2.4 percent per annum. Life expectancy at birth is 59.7 years, crude birth rate is 32.5 /1000, crude death rate is 9.3/1000, total fertility rate is 4.1 and infant mortality rate is 64.1 /1000 live births (CBS, 2002).

Recognising diarrhoeal disease as one of the major public health problems among children under-five in Nepal, the National Control of Diarrhoeal Diseases Programme (NCDDP) has been accorded priority status by HMG and shall remain an integral part of Primary Health Care.

Improvement in diarrhoea case management will be used as a primary strategy for the reduction of mortality due to diarrhoea among children under five years of age. Standard diarrhoea case management will be provided in the health institutions by establishing Oral Rehydration Therapy (ORT) corners in all hospitals, Primary Health Care Centres, Health Posts throughout the country. All health facilities and community health volunteers will serve as the primary providers of Oral Rehydration Solutions (ORS).

## **2. Rationale of this study**

The topic diarrhoea has been selected for the study because it is one of the commonest causes of childhood mortality in Nepal. Diarrhoeal disease is a major public health problem in developing countries. It is one of the major causes of childhood mortality in Nepal. It is second top ten diseases. 20.4% Diarrhoea in two weeks precedes the survey. 21.8% of clients taken to a health provider. A survey on Childhood Diarrhoeal Diseases (CDD) in 1991 revealed that on average, each child suffered from 3.3 episodes of diarrhoea per

year. The number of deaths due to diarrhoea is estimated to be 45,000 per year (Annual Report , MoH,1999/2001).

This study provided the background information regarding childhood diarrhoea for the local and all people of Nepal as well as other health sector personnel to understand the current existin situation of knowledge, skill and attitudes regarding diatthoea in childresn in Mana Maiju VDC Ward No. 9 of Kathmandu District.

### **3. Objectives**

The specific objectives of the study were to determine the:

- Knowledge and beliefs of the mothers about the causes of diarrhoea
- Attitude of the mothers about the acceptability and practice of giving oral fluids and food to children with diarrhoea
- Knowledge, attitude and practice of the mothers about oral rehydration solution (ORS) during diarrhoea

## **4. Methods**

### **4.1 Interview**

The mothers were interviewed using various questions on the basis of structured questionnaires to determine their awareness and practice about diarrhoeal diseases with consent on the date April 2002. The questionnaires were based on the following items:

1. Introduction includes Caste, Respondent's age, Respondent's education, educational & occupational background
2. Episode of loose watery stool in a day
3. Causes of diarrhoea
4. Recognition of dehydration
5. Sources of information
6. Types of fluids given
7. Types of food served
8. Criteria for seeking medical help
9. Preventing diarrhoea
10. Known to make Jeevan Jal
11. Points to be remembers after making Jeevan Jal

### **4.2 Sampling**

A total of 50 mothers having under fives children were taken as purposive and convenience sampling and mothers were interviewed with aim of gathering data to identify the KSA of those mothers about diarrhoea in children in Mana Maiju VDC, Balaju, ward number 9, Kathmandu district, Nepal.

## Results

A total of 50 mothers having under fives children were interviewed aiming of gathering data to identify the KSA of the mothers about diarrhoea in children in Mana Maiju VDC, ward number 9. The results are presented below.

**Table 1: Percentage distribution of socio -demographic characteristics of respondents**

Variables	Number	Percent
<b>Total</b>	<b>50</b>	<b>100%</b>
<b>1. Caste</b>		
• Brahamin	12	24%
• Chhetri	21	42%
• Newar	7	14%
• Tamang	6	12%
• Others (Rai, Gurung etc.)	4	8%
<b>2. Respondent's age (in years)</b>		
• 15-24	20	40%
• 25-34	14	28%
• Above 35+	16	32%
<b>3. Respondent's education</b>		
• Illiterate	20	40%
• Literate	30	60%
<b>4. Level of Literate</b>		
• 1-5 Primary Level	4	8%
• 6-8 Lower Secondary Level	8	16%
• 9-10 Secondary Level	8	16%
• Above 10+2 Higher Secondary Level	10	20%
<b>5. Respondent's Occupation</b>		
• Housewife	38	76%
• Farmer	4	8%
• Service	5	10%
• Labourer	2	4%
• Others	1	2%

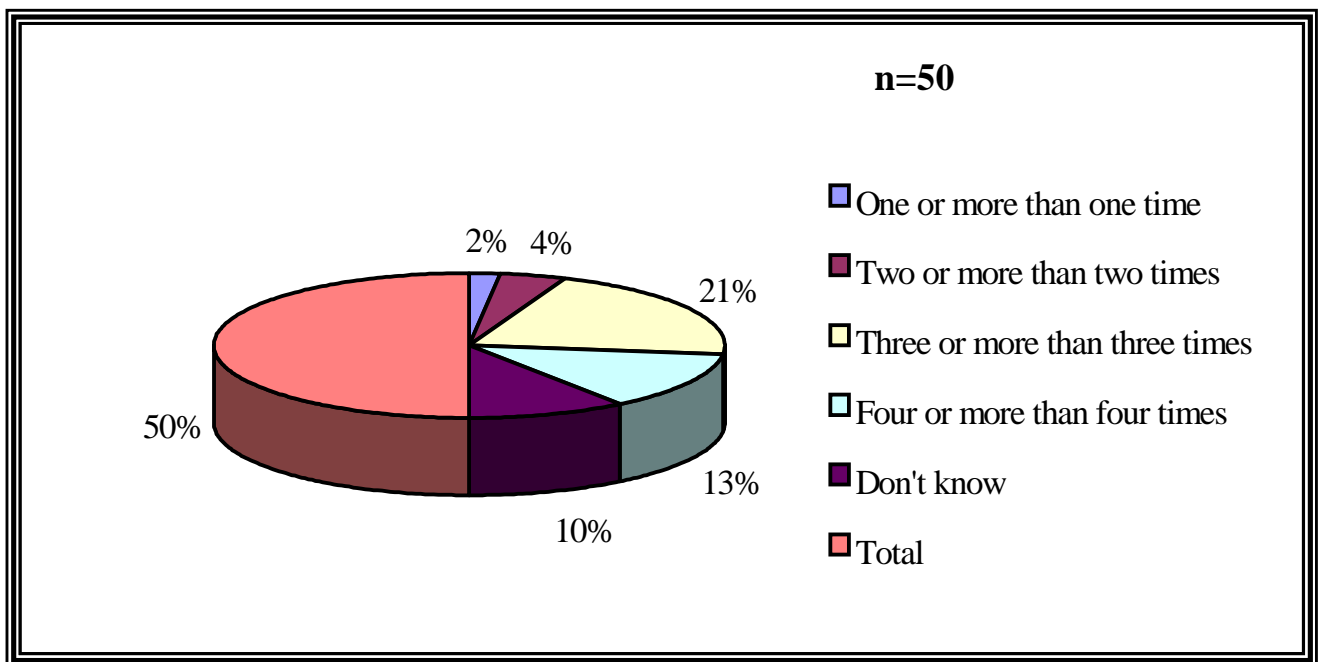
Almost all respondents (42%) were Chhetri and only (8%) were Gurung, Rai and Magar.

Looking at the respondents age the highest age group falls between 15-24 years (40%) and the lowest in above 35+ ( 32% ).Among them, the better knowledge was found also in between the age 15-24 years because those mothers were completed their high school also.

While looking at the respondent's education, almost all (60%) were literate with having different level of education and (40%) were illiterate.

In the case of respondent's occupation, out of 50, most of the mothers (76%) do not have any work to do (housewife) and followed by service (10%), farmers/labours (8%) and others that is own business (grocery shop) were (2%).

**Figure 1: Percentage distribution of respondent's knowledge in identification of diarrhoea through episode of loose watery stool**



Among 50 mothers, most of them (42%) were able to identify the diarrhoea in a correct way that is 3 or more than three times in a day and very few mothers (20%) answered they don't know to identify the diarrhoea.

**Table 2: Percentage distribution of respondent's about the causes of diarrhoea**

<b>Causes of diarrhoea</b>	<b>Number n=50</b>	<b>Percent %</b>
• Improper weaning	8	16%
• Unhygienic surrounding	6	12%
• Contaminated water	12	24%
• Worm infestation	4	8%
• Over eating	6	12%
• Contaminated and steal foods	50	100%
• Raw unripe foods	16	32%
• Adult type food given	20	40%

**Response by duplication**

Responding the causes of diarrhoea, all mothers (100%) said that usual cause of diarrhoea could be giving of contaminated and steal foods to children. Some mother (8%) mentioned about it is due to worm infestation.

**Table 3: Percentage distribution of respondents on the recognition dehydration**

<b>Recognition of dehydration</b>	<b>Number n=50</b>	<b>Percent %</b>
• Sunken eyes	40	80%
• Dry lips and tongue	32	64%
• Less elasticity of skin	14	28%
• Low output of urine	20	40%
• Others	10	20%

**Response by duplication**

On the recognition of dehydration, out of 50 mothers, 40 (80%) identified the dehydration on children through sunken eyes followed by 32 (64%) dry lip/tongue, 20 (40%) low output of urine, 14 (28%) less elasticity of skin, and 10 (20%) others means depressed fontanel, much thirst and fatigue.

**Table 4: Percentage distribution of respondents' knowledge on diarrhoea regarding the sources of information**

Sources of information	Number n=50	Percent %
• Radio	37	74%
• Television	34	68%
• Health personnel	20	40%
• Relatives	10	20%
• Neighbours	8	16%
Others (Nursing students, newspapers and school)	41	82%

#### Response by duplication

Most of the mothers 41(82%) knew about the diarrhoea through the source of others (nursing students, newspapers and school) followed by radio 37 (74%), television 34 (68%), health personnel 20 (40%), relatives 10 (20%) and neighbours/friends 8 (16%).

**Table 5: Percentage distribution of respondents on types of fluids given to diarrhoeal child**

Types of fluids given	Number n=50	Percent %
• Continue breast milk	7	14%
• Jeevan Jal	42	84%
• Fresh fruit juices	22	44%
• Yogurt	3	6%
• Vegetable soup	15	30%
• Weak black tea	0	0%
• Rice water	5	10%
• Others (Pulses soup, plain water etc.)	13	26%

#### Response by duplication

On the hand of providing types of fluids serve during diarrhoea 42 (84%) of mothers were mentioned about Jeevan Jal or Nava Jeevan and very few mothers 3 (6%) said that they are giving Yogurt to their diarrhoea child.

**Table 6: Percentage distribution of respondents on types of foods served during diarrhoea**

Types of food served	Number n=50	Percent %
• Jaulo	49	98%
• Banana	15	30%
• Cereals mixed with vegetables (Khichadi)	13	26%
• Usual food	10	20%
• Others (bread, biscuit and Anar)	9	18%

**Response by duplication**

Among 50 mothers 49 (98%) served jaulo to their children followed by 15 (30%) banana, 13 (26%) cereals mixed with vegetables, 10 (20%) usual food and 9 (18%) others that is bread, biscuit and anar.

**Table 7: Percentage distribution of respondents on deciding criteria for seeking medical help**

Criteria for seeking medical help	Number n=50	Percent %
• Not getting better with following treatment	44	88%
• Diarrhoea continue	37	74%
• Marked thirst	5	10%
• Raised temperature	6	12%
• Eating/drinking poorly	18	36%
• Repeated vomiting	10	20%
• Blood in stool	7	14%

**Response by duplication**

Regarding seeking medical help by the respondents, most of the mothers 44 (88%) said that they will decide to take their children at the favourable health institutions if children are not getting better within the following treatment and only 5 (10%) said if marked thirst is existed.

**Table 8: Percentage distribution of respondents on prevention of diarrhoea**

Preventing diarrhoea	Number n=50	Percent %
• Promote breast feeding	4	8%
• Eat clean/safe foods	46	92%
• Drink clean water	33	66%
• Hand washing	27	54%
• Use of latrine	8	16%
• Complete course of immunization	0	0%
• Keep clean surrounding	15	30%
• Others (avoid over eating)	5	10%

**Response by duplication**

While looking knowledge of mothers in the prevention of diarrhoea, 46(92%) mothers mentioned about eating clean /safe foods and followed by 33 (66%) drink clean water, 27 (54%) hand washing, 15(30%) keeping surrounding clean, 8(16%) use of latrine, 5(10%) that is others mean avoid over eating, 4 (8%) promote breast feeding and nobody mentioned about immunization.

**Table 9: Percentage distribution of respondents' knowledge in making of Jeevan Jal**

<b>Known to make Jeevan Jal</b>	<b>Number n=50</b>	<b>Percent %</b>
• Yes	50	100%
• No	0	0%
• Followed prescribed standard techniques of making Jeevan Jal	50	100%
Correct technique	10	20%
Wrong technique	40	80%

Almost all mothers said they know how to make Jeevan Jal but when asked about the technique of making Jeevan Jal, only 10 (20%) mothers answered the correct technique.

**Table 10: Percentage distribution of respondents' knowledge on the importance points to be remembers after making Jeevan Jal**

<b>Points to be remember</b>	<b>Number n=50</b>	<b>Percent %</b>
• Keep covers with lid	26	52 %
• Use within 24 hours	48	96 %
• Do not boil again	10	20 %
• Others (don't know)	7	14 %

**Response by duplication**

Concerning about importance points to be remember after making Jeevan Jal 48 (96%) said it should be use within 24 hrs, followed by 26 (52%) keep cover with lid, 10 (20%) do not boil again and 7 (14%) said they don't know what to do after making it.

**6. Discussions and Conclusion**

After passing through the interpreted data, this small-scale research study showed that diarrhoeal disease is a major health problem in Mana Maiju area due to various reasons, which can be concluded in following ways:

1. In this study area, the mothers of the lowest age group 15-24 years (40%) have had higher education (above 10+2) & these respective educated mothers were concerned with management of diarrhoea in an effective way rather than those who have less educational level.
2. Overall, KSA of mothers regarding diarrhoea was found good such as most of the mothers (42%) were able to identify diarrhoea in a correct way, almost all (84%) were providing Jeevan Jal (JJ) & serving foods (98%) at the time of diarrhoea.
3. Early decision making on seeking medical help are related with sources of information which belongs highest in others (82%) i.e. positive impact of Maharajgunj Nursing Campus's PCL, 1st year Nursing students' field activities.

4. Regarding the preparation of Jeevan Jal, almost all mothers (100%) answered they can prepare but when measured their skill with provided knowledge, only 20% showed the correct techniques of preparing such solution against the established standard performance.

## **Recommendations**

1. Empower the girls and women through better education in order to reduce the risk of morbidity and mortality of such cases because this study already has been proven that education plays a vital role in managing the child with diarrhoea.
2. Keep continue in providing health education to community people in updates their KSA regularly as needed through mobilizing the peripheral level professional and non-professional health personnel (FCHVs, MCHWs, VHW, Mothers group etc).
3. Extend the Maharajgunj Nursing Campus's field activities in other areas to deliveries their beneficial expertise.
4. Emphasize in doing such type of research activities in a regular basis to keeping touch with the community people for knowing their problems/needs as a whole.
5. Continue in raising public awareness about Jeevan Jal use in the treatment of diarrhoea and correct preparation of it through different types of media as well as from different health institutions.

## **References**

1. HMG/MOH. (2000/2001). **Annual Report.**
2. Dixit, H. (1999). **The Quest for Health.** 2nd Ed, Educational Enterprise (p) Ltd: Nepal.
3. HMG/CBS. (2001). **Nepal Statistical Year Book, CBS.**
4. HMG/CBS. (2001). **Nepal in Figures, CBS.**
5. Upreti, P. et al. (1986). **Awareness and practice of mother about diarrhoeal diseases** Journal of the Institute of Medicine. Vol.8, No.2.
6. . WHO, UNICEF, & USAID,(1996) **A manual for the treatment of Diarrhoea for use by the physicians and senior health workers;** HMG/Nepal, Child Health Division, National Daiarrhoeal Diseases Control Programme.
7. WHO (1994). **Readings on diarrhoea student manual.**India: AITBS.
8. WHO, UNICEF and Institute of Medicine, Department of Child Health Nepal. (2000): **Integrated Management of Childhood Illness (IMCI).**
9. WHO (1992). **Management of the patient with diarrhoea.** Program for Control of Diarrhoeal Diseases'.

10. JSI/Nepal (1996). Results of interviews conducted with female community health volunteers (FCHVS) on knowledge of diarrheal diseases and use and availability of Jeevan jal(ORS) in Kaski District.
11. HMG/MOH. (2001). Preliminary report of population Census.

## **Appendix**

**Questionnaires on Mothers' Knowledge, Skill and Attitude on diarrhoea in children  
at Mana Maiju VDC, Balaju, Kathmandu district, Nepal**

*Name of interviewer:*

*Respondent's identification number;*

*Complete address:*

*Date of interview taken:*

**Part I: Socio -demographic characteristics of respondents**

1. In which caste do you belong?

- Brahamin
- Chhetri
- Newar
- Tamang
- Gurung
- Others (Please specify).....

**2. How old are you?**

- 15-24 years
- 25-34 years
- 35-44 years
- Above 45 years

**3. What is your educational status?**

- Illiterate
- 1-5 Standard (Primary Level)
- 6-8 Standard (Lower Secondary Level)
- 9-10 Standard (Secondary Level)
- Above 10+2 (Higher Secondary Level)

**4. What is your main occupation?**

- Housewife
- Farmer
- Service
- Business
- Labourer
- Others (please specify).....

***Part II: KSA about diarrhoea***

**5. How do you recognize diarrhea?**

- Passing of watery loose stool one or more than one time in a day
- Passing of watery loose stool two or more than one time in a day
- Passing of watery loose stool three or more than one time in a day
- Passing of watery loose stool four or more than one time in a day
- Others (Please Specify).....

**6. What can be the causes of diarrhoea? (Multiple answer)**

- Improper weaning
- Bottle feeding
- Unhygienic surrounding
- Contaminated water
- Malnutrition
- Worm infestation
- Over eating
- Contaminated and stale foods
- Adult type food given
- Incomplete immunization
- Others (Please Specify).....

**7. How you detect that child is having dehydration? (Multiple answer)**

- Sunken eyes
- Dry lips & tongue
- Less elasticity of skin

- Low output of urine
- Others (Please Specify).....

**8. From which sources did you know about diarrhoea?(Multiple answer)**

- Radio
- Television
- Health personnel
- Relatives/neighbours
- Friends
- Others (Please Specify).....

**9. What types of fluids do you give to your child when he/she suffers from diarrhoea? (Multiple answer)**

- Continue breast milk
- Jeevan Jal
- Fresh fruit juices
- Yogurt
- Vegetable soup
- Weak black tea
- Rice water
- Others (Please Specify).....

**10. What types of foods do you give your child when he/she gets diarrhoea? (Multiple answer)**

- Jaulo
- Banana
- Cereals mixed with vegetables (Khichadi)
- Usual foods
- Others (Others Specify).....

**11. In which conditions do you seek medical help? (Multiple answer)**

- Not getting better with following treatment
- Diarrhoea continue
- Marked thirst
- Raised temperature
- Eating/drinking poorly
- Repeated vomiting
- Blood in stool
- Others (Please specify).....

**12. What are the points to be consider to prevent diarrhoea? (Multiple answer)**

- Promote breast feeding
- Eat clean/safe foods
- Drink clean water
- Hand washing
- Use of latrine
- Complete course of immunization
- Keep clean surrounding
- Others (Please Specify).....

**13. Do you know how to prepare Jeevan Jal?**

- Yes
- No

**14. If yes, (Please Specify).....**

**15. Do you know what are the important points to remember after preparing the Jeevan Jal? (Multiple answer)**

- Keep covers with lid

- Use within 24 hours
- Do not boil again
- Others (Please Specify).....