HEALTH CONSCIOUSNESS IN TEKNAF:

A RURAL BANGLADESH VILLAGE

M. Mujibur Rahaman
K. M. S. Aziz
Abdul Quddus Mondal
Yakub Patwary
M. Mizanur Rahman

Teknaf Dysentery Project
Cholera Research Laboratory

The most important health problems of Bangladesh are common infectious diseases particularly diarrhoea, dysentery and respiratory infections which are responsible for the large bulk of morbidity and mortality. Poor environmental and personal hygiene are responsible for a high attack rate from infectious diseases which in turn bring about under-nutrition and malnutrition in an already impoverished population. The literacy in Bangladesh is approximately 20% and the level of general education is also poor. Very little health education is imparted in school where large majority of the population never go. Attacks from diarrhoea and dysentery are closely linked with the standard of hygienic practices, which in turn depends on an awareness of the knowledge of oral-faecal contamination. It was, therefore, decided to carry out a survey of health consciousness in Teknaf population. Attempts are being made to impart health education, supply safe water and instal sanitary privies in this community. It was therefore felt necessary to carry out a baseline survey on the existing state of health consciousness, current hygienic practices, and attitudes towards the proposed improvement in Teknaf so that any future changes could be evaluated.

MATERIALS AND METHODS

Population: The study families were from areas Jaliapara and Kulalpara situated close to Teknaf. The total population was 4,324 divided into 659 families. Two hundred families were selected on a random basis. One hundred of the respondents were females, almost all of whom were wives of the head of the families. The other 100 were male head of the families which were different from those of the female interviewee.

Questionnaire: The questionnaire was set up in Bengali and where appropriate local terms of some diseases were used. There were two interviewers involved in asking the questions. One of them was a lady who asked the questions to the female respondents; the other was a male interviewer who interviewed men only. Both the interviewers were well known to the community and were able to converse with them freely in the local dialect. A pre-test was carried out before the full survey was undertaken. On the basis of the pre-test a number of modifications were made and the modified questionnaire is shown in Appendix I.

The interviews were carried out over a period of two months as if during normal rounds of visits. The routine for carrying out interviews was so arranged that no neighbouring families were interviewed on the same or within a few days.

RESULTS

The final questionnaire had as many as 43 questions. Answers to only 26 questions dealing with hygienic practices, knowledge of enteric diseases, parasitic infestation and nutrition are presented here.

Age, sex, occupation, income and education:

Table 1 - 5 show the age and socio-economic condition of the two hundred families interviewed. Their ages had wide range, but the majority were young adults. Almost half were below 30 years of age and only 10% were above 55. Nearly 1/5th of the male head of families had no fixed jobs and were daily labourers. Twenty six were fishermen. There was a high proportion of petty-businessmen in this community mainly because of the closeness of the Teknaf Bazar which acts as a trading centre. Table 4 shows the range of monthly income of the families. Half of the families had an income between Taka 200-500 per month which will be about US $400 per year. Since the average family size is 6.5, the per capita income per year was less than $60 dollars.

Table 5 shows the educational level of the respondents. Half of the male respondents and 94% of the females never went to any modern schools at any time in their lives. Some 13% of men and 21% of women, however, went to religious schools where Arabic and religious practices were taught.

Sources of Water: Table 6 shows the sources of water used for drinking, washing and bathing. Concrete ring-wells are shallow dug-wells of less than 5 - 7 metres depth and their walls are protected by concrete rings. These wells were the principal sources of drinking water. Almost all of the ring wells are community water sources and serve a large number of families. Tubewells or handpumps serve a relatively smaller number of families due to difficulty in boring them through the subsoil rocks in this area. Water for washing comes from many sources. Half of the families get water for general washing purposes from ringwells and over one third of them go to the two tanks or ponds situated in these areas. Nearly half of the families use ringwell water for bathing and almost a similar proportion go to tanks or ponds.

Places of defaecation: Table 7 shows the stated places of defaecation by adult males, females and children. An equal proportion of adult male and female used the fixed latrines which were most often an open pit. Only a small number of children (5.5%) however, used these latrines. The bank of the river situated nearby was the most frequently cited place for defaecation for the adult men. For the adult women on the other hand open places besides the houses were preferred more often than the bank of the river. Sides of the houses

were also more frequently used by children than the bank of the river. There were very few bushes around the house in this community. Therefore only a small number of families cited using the bushes. Going to the fields involved walking some distance from the house through the open fields which was responsible for its less frequent use as the places of defaecation by Teknaf women and children. The most significant feature of this table was the fact that majority of children did not use any fixed place for defaecation. Since attack rates from shigellosis is known to be the highest in children, the significance of this habit in spreading the disease is obvious.

A small proportion of families (7.5%) told us that they allow their children to defaecate in a fixed place within the compound of the house. These faeces were later collected and thrown out into the neighbouring fields or bushes.

Methods of cleaning anal area after defaecation:

Table 8 shows the information obtained regarding this practice. Almost all of the adults carry water in a pot with them while they go for defaecation. Only 3.5% go to the tanks or ponds to wash their anal areas after defaecating in the fields.

After cleaning their anal areas 26.5% of the respondents rinse their hands using nothing but water. Nearly 2/3rd of them rub their hands and fingers on mud and grass and then wash with water. Only 9% told us that they use soap regularly.

Knowledge and beliefs about hygienic practices and incidence of diseases:

The next series of tables show the beliefs of the population about some hygienic practices which have close relationships with enteric diseases, parasitic infestations and development of malnutrition.

Harmful effects of indiscriminate defaecation:

When the question was asked about any real harm that could come from indiscriminate defaecation, over ¼ of men and 2/3rds of the women gave a negative answer. Only 6.5% of both sexes told us that it could result in spreading of intestinal diseases; another 20% had some vague ideas that the practice could spread any disease (table 9).

On the other hand, when the question was asked whether any real harm could arise from handling food without washing hand soiled by cleaning the anal area after defaecation, 62.5% said that the habit may cuase intestinal disease (table 10). Another 15.5% said that the habit could also be responsible for causing other diseases. Only 4% said that there is no harm if they handle food after defaecation without washing hands.

Knowledge about the role of flies in spreading disease

Only 7% of male and 24% of female thought that flies were harmless (table 11). Over half of the respondents, 74% of the male and 24% of the female thought that they are responsible for spreading some diseases. Only about 15% think that foods

are made unclean by flies sitting on them and a similar proportion thought that they lay eggs on food and made them unwholesome by sitting on them.

When question was asked on the places of origin of almost all the men and 80% of the women had definite knowledge (table 12).

Knowledge about harmful effects of walking bare-foot:

Question on harmful effects of walking without shoes or sandals elicited a variety of answers without relationship to any particular disease (table 13). One fourth of the respondents saw no harmful effects at all and another 40% thought that it could cause soiling of the feet or cause some form of ulcer on the legs. Nearly 30% thought that it could cause some physical injury. Only 3.5% of the respondents told us that it could be responsible for infestation by some worms although no one mentioned hookworm as one of them.

Roundworm is considered to be the cause of many diseases in children in rural Bangladesh. When a question was asked on the mode of becoming infested by these worms, the answers (table 14) were found to be very interesting. Nearly half of the females and three of the males considered eating fish as a cause of infestation by the roundworms. Since Teknaf has many fishermen in the community and whose population is accustomed to eating fish almost round the year, the psychological association between the two is not surprising. Why men did not consider eating fish as a cause for infestation by worms compared to the female was

intriguing. Eating sweets including biscuits and banana, spoiled food and eating uncooked rice as cause of infestation by worms were also cited. Ingestion of dust was considered to be a cause in only 2% of the respondents.

Attitude towards building latrine near home:

Latrines or privies in rural areas of Bangladesh are usually a shallow hole on the ground, smelly and poorly maintained. Therefore, people in general do not like to use them or build them near their homes. Question was asked as to whether the Teknaf villagers would like to have one near their homes if they are of the type that does not smell. Table 15 shows the response. The respondents were almost unanimous on their approval for such latrines. Only one man and three women had a negative attitude towards the latrines. Two of them gave shortage of space as the reason and the other two thought that drinkingwater will go "bad"if a latrine was built near their ho

To find out how seriously the population wanted latrine near their homes they were asked about their wilingness to pay for it. No exact amount was specified but it was made apparent that the total cost of materials and labour would be above Taka 300/-. Thirty five percent (table 16) of the population were still willing to pay for the latrines. Another 45.5% were willing to contribute by labour, as they stated that they were poor. Only 15.5% of those who wanted t. . .rines said that they were unwilling to pay either money or contribute labour.

Only 10% of them thought that contact with patients or eating their leftover food could cause the diseases. Another 10% considered flies as responsible for the spread of these diseases. Only 3.5% cited water as responsible for spreading diarrhoea.

Knowledge about practice of infant feeding:

Breast feeding is almost universal in rural Bangladesh. One of the main causes of failure of growth in a child between 6 - 18 months of age is almost total dependence on breast milk.

The belief of the population and the level of consciousness on some aspects of infant feeding are shown in the next series of tables.

When question was asked about the right age for stopping the breast feeding, only 4% of the women thought that it should be done at 18 months of age (table 20). Even at 24 months of age, only 41% of the women thought that breast feeding should be discontinued. Additional thirty-five and 21 percent of the women considered that the right ages for stopping the breast feeding was between 30-36 months respectively. Male respondents on the other hand, thought that the breast feeding should be discontinued a few months earlier than those mentioned by the women.

Effect of adding boiled rice to a breast-fed infant before reaching one year of age showed that 29% of the women and 12% of men thought that it could cause no harm to the child (table 21). The respondents gave various reasons against the practice which ranged from an inability to digest rice, cause of intestinal

Ratings on some possible items for development which could benefit the Teknaf villagers:

Table 24 shows the ratings of the villagers when some items for possible developments were mentioned. It was clear that hospital, water supply and latrine were the priority items despite the fact that these items for improvements were mixed with a large number of other items, some of which were more attractive in nature.

Table 1

TEKNAF

HEALTH CONSCIOUSNESS SURVEY

Distribution of Respondents According to Their Age and Sex

Age	Male	Female	Both	Percent
15 - 24	9	32	41	20.5
25 - 34	24	23	47	23.5
35 - 44	28	26	54	27.0
45 - 54	24	15	39	19.5
55 +	15	4	19	9.5
All Ages	100	100	200	100.0

TABLE 2

T E K N A F

HEALTH CONSCIOUSNESS SURVEY

Relationship of the Respondents to the Head of the Families

	Male	Female	Both	Percent
Self	87	8	95	47.5
Other	13	92	105	52.5
Total	100	100	200	100.0

TABLE 3

T E K N A F

Health Consciousness Survey

Distribution of Respondents and Head of the

Families According to Occupation

Own Occupation	Head's Occupation									
	None	Labour	Cultivation	Business	Fishing	Service	House wife	Other	Total	Percent
None	1	1	1	1	-	-	-	-	4	2.0
Labour	-	13	1	-	-	-	-	-	14	7.0
Cultivation	-	-	-	-	7	-	-	-	7	3.5
Business	2	2	2	39	-	-	-	-	45	22.5
Fishing	-	-	-	3	21	-	2	-	26	13.0
Service	-	-	-	2	-	14	-	2	18	9.0
House Wife	1	6	3	46	18	9	1	-	84	42.0
Other	-	-	-	2	-	-	-	-	2	1.0
Total	4	22	7	93	46	23	3	2	200	100.0
Percent	2.0	11.0	3.5	46.5	23.0	11.5	1.5	1.0	100.0	

TABLE 4

T E K N A F

HEALTH CONSCIOUSNESS SURVEY

Distribution of The Respondents According To Gross Monthly Income Of The Families

Monthly Income (in Tk.)	Number	Percent
≤ 100	2	1.0
100 - 200	28	14.0
201 - 500	103	51.5
501 - 1000	35	17.5
Above 1000	30	15.0
Not Known	2	1.0
Total	200	100.0

TABLE 5

T E K N A F

HEALTH CONSCIOUSNESS SURVEY

Distribution of Respondents According to

Their Educational Status

Education	Male	Female	Both	Percent
No Education	33	73	106	53.0
Religious Education	13	21	34	17.0
Primary School	39	-	39	19.5
Secondary and higher	13	4	17	9.0
Not Known	1	2	3	1.5
Total	100	100	200	100.0

TABLE 6

T E K N A F

HEALTH CONSCIOUSNESS SURVEY

Distribution of Families According to Their Water Sources

Using Type		Ring Well	Tube Well	Tank	Ditch Within home	Not Known	Total
	No.	170	24	-	5	1	200
Drinking							
	%	85.0	12.0	-	2.5	0.5	100.0
	No.	99	14	72	14	1	200
Washing							
	%	49.5	7.0	36.0	7.0	0.5	100.0
	No.	91	14	83	11	1	200
Bathing							
	%	45.5	7.0	41.5	5.5	0.5	100.0

Table 7

T E K N A F

HEALTH CONSCIOUSNESS SURVEY

Distribution of Families According to Places of Defaecation

	Fixed Latrine	Bank of River	Side of House	Bushes	Field	No Fixed Place	Defaecate at home and thrown to the side of the house later	Not Applicable	Total
ADULT MALE									
Number	41	71	46	11	28	2	-	1	200
Percent	20.5	35.5	23.0	5.5	14.0	1.0	-	0.5	100.0
ADULT FEMALE									
Number	41	56	84	12	5	1	-	1	200
Percent	20.5	28.0	42.0	6.0	2.5	0.5	-	0.5	100.0
CHILDREN									
Number	11	14	26	6	4	115	15	12.0	200
Percent	5.5	7.0	13.0	1.5	2.0	57.5	7.5	6.0	100

TABLE 8

T E K N A F

HEALTH CONSCIOUSNESS SURVEY

Distribution of Respondents According to Cleaning Habits of Anus and Hands After Defaecation

	Male	Female	Both	Percent
To wash anus				
a) Carry Water	94	99	193	96.5
b) Go to Tank	6	1	7	3.5
Wash hands with				
a) Only Water	25	28	53	26.5
b) Rubbing with Mud	67	62	129	64.5
c) Rubbing with soap	8	10	18	9.0

TABLE 9

T E K N A F

Health Consciousness Survey

Knowledge About Harmful Effects (Other Than Bad Smell)

Of Indiscriminate Defaecation Near Home

	Male	Female	Both	Percent
No Harm	27	70	97	48.5
Helps Spreading Disease	30	10	40	20.0
Helps Spreading Intestinal Disease	5	8	13	6.5
Cause Problem in Movement	21	2	23	11.5
Ugly to Look At	4	5	9	4.5
Flies Grow	1	-	1	0.5
Combination of two of above	5	-	5	2.5
Other	-	2	2	1.0
Do not Know	3	1	4	1.0
Not Known	4	2	6	3.0
Total	100	100	200	100.0

TABLE 10

T E K N A F

HEALTH CONSCIOUSNESS SURVEY

Knowledge About The Effect Of Handling Food Without Washing Hands After Defaecation

	Male	Female	Both	Percent
No harm	1	7	8	4.0
Intestinal disease	59	66	125	62.5
Disease	26	5	31	15.5
Dirty	8	18	26	13.0
Do not know	2	3	5	2.5
Not known	4	1	5	2.5
Total	100	100	200	100.0

TABLE 11

T E K N A F

HEALTH CONSCIOUSNESS SURVEY

Knowldege About The Role Of Flies In Causing Harm

	Male	Female	Both	Percent
Do not harm	7	24	31	15.5
Spread desease	74	29	103	51.5
Food becomes unclean	9	19	28	14.5
Lay eggs on food	6	21	27	13.5
Other	-	1	1	0.5
Do not know	3	6	9	4.5
Not known	1	-	1	0.5
Total	100	100	200	100.00

TABLE 12

T E K N A F

HEALTH CONSCIOUSNESS SURVEY

Knowledge About The Origin Of Flies

Origin of Flies	Male	Female	Both	Percent
Bush/Dustbin	50	18	68	34.0
Cowdung and Faeces	32	36	68	34.0
Rotten Fish	16	26	42	21.0
Others	1	1	2	1.0
Do not know	1	17	18	9.0
Not known	-	2	2	1.0
	100	100	200	100.00

TABLE 13

T E K N A F

HEALTH CONSCIOUSNESS SURVEY

Knowledge About The Effects Of Walking Barefoot

Effect	Male	Female	Both	Percent
No Harm	29	27	49	24.5
Soiling of feet and ulcer on legs	46	35	81	40.5
May cause injury	28	29	57	28.5
Worm	4	3	7	3.5
Other	-	4	4	2.0
Not Known	-	2	2	1.0
Total	100	100	200	100.0

TABLE 14

T E K N A F

HEALTH CONSCIOUSNESS SURVEY

Knowledge About The Mode of Infestation of Worms in Children

Causes	Male	Female	Both	Percent
Do not Know	78	12	90	45.0
Eating Fish	3	50	53	26.5
Eating sweets/ biscuits/banana	8	6	14	7.0
Spoiled Food	3	7	10	5.0
Eating uncooked rice	4	5	9	4.5
Ingesting dust	2	2	4	2.0
Combination	1	3	16	8.0
Not Known	1	3	4	2.0
Total	100	100	200	100.0

TABLE 15

HEALTH CONSCIOUSNESS SURVEY

Willingness of making latrine near home

	Male	Female	Both	Percent
Yes	99	97	196	98.0
No	1	3	4	2.0
Short of space	1	2		
Water goes bad	1	1		

TABLE 16

T E K N A F

Health Consciousness Survey

Distribution of Respondents Willing to Pay Expense

As Labour For Building Latrine Near Home

	Male	Female	Both	Percent
Pay Expanse	51	19	70	35.0
Pay by Labours	43	48	91	45.5
Un willing	4	27	31	15.5
No Comment	2	6	8	4.0
	100	100	200	100.0

TABLE 17

T E K N A F

HEALTH CONSCIOUSNESS SURVEY

Knowledge About the Symptoms of Dysentery

Symptoms	Male	Female	Both	Percent
Do not Know	2	-	2	1.0
Mucous in stool	5	1	6	3.0
Blood in stool	-	6	6	3.0
Mucous and blood in Stool	59	65	124	62.0
Abdominal Pain	2	-	2	1.0
Mucous and Abd. Pain	8	2	10	5.0
Blood and Abd. pain	1	1	2	1.0
Mucous + Blood + pain + frequent diarrhoea	19	22	41	20.5
Not Known	4	2	6	3.0
Total	100	100	200	100.0

TABLE 18

T E K N A F

HEALTH CONSCIOUSNESS SURVEY

Knowledge About the Symptoms of Diarrhoea

Symptoms	Male	Female	Both	Percent
Do not Know	5	2	7	3.5
Watery Stool	69	74	143	71.5
Watery stool & Vomiting	11	14	25	12.5
Vomiting	4	1	5	2.5
Watery stool + Frequent diarrhoea + patient becoming weak	2	4	6	3.0
Abdominal Cramp	-	2	2	1.0
Watery Stool + Vomiting + Patient becoming weak	8	3	11	5.5
Not known	-	1	1	0.5
Total	100	100	200	100.0

TABLE 19

T E K N A F

HEALTH CONSCIOUSNESS SURVEY

Knowledge About the Mode of Spread of Diarrhoea and Dysentery

Spread by		Male	Female	Both	Percent
Do not Know	Dia.	48	53	101	50.5
	Dys.	51	45	96	48.0
Walking over or near diarrhoeal stool	Dia.	16	14	30	15.0
	Dys.	18	29	47	23.5
Eating left over food of patient/ contact with patient	Dia.	13	12	25	12.5
	Dys.	13	8	21	10.5
Flies	Dia.	10	12	22	11.0
	Dys.	9	9	18	9.0
Bad food	Dia.	7	4	11	5.5
	Dys.	4	4	8	4.0
Polluted water	Dia.	5	2	7	3.5
	Dys.	3	2	5	2.5
Other	Dia.	1	3	4	2.0
	Dys.	2	3	5	2.5

TABLE 20

T E K N A F

HEALTH CONSCIOUSNESS SURVEY

Belief About The Right Age For Stopping Breast Feeding

Age (months)	Male	Female	Both	Percent	Cum. percent
6	1	-	1	0.5	0.5
12	12	2	14	7.0	7.5
18	17	2	19	9.5	17.0
24	44	37	81	40.5	57.5
30	14	35	49	24.5	82.0
36	10	21	31	15.5	97.5
48+	2	2	4	2.5	99.5
Not Known	-	1	1	0.5	100.0
Total	100	100	200		

TABLE 21

T E K N A F

HEALTH CONSCIOUSNESS SURVEY

Believes of Respondents on Effects of Feeding Boiled Rice

To Infants Before 1 year of Age

Effects	Male	Female	Both	Percent
No harm	12	29	41	20.5
Can not digest/will cause intestinal disease	40	17	57	28.5
Make a child weak/have large belly	10	15	35	17.5
Cause worm infestation	17	10	27	13.5
Combination of above	20	18	38	19.0
Not known	1	1	2	1.0
Total	100	100	200	100.0

TABLE 22

T E K N A F

HEALTH CONSCIOUSNESS SURVEY

Belief of Respondents About The Age of Children Acquiring Ability to Digest Rice, Meat and Fish

Age (months)	Male	Female	Both	Percent	Cum. Percent
6 - 12	2	-	2	1.0	1.0
13 - 18	8	9	17	8.5	9.5
19 - 24	11	20	31	15.5	25.0
25 - 30	10	16	26	13.0	38.0
31 - 36	26	10	36	18.0	56.0
37	43	43	86	43.0	99.0
Not Known	-	2	2	1.0	100.0
Total	100	100	200	100	

TABLE 23

T E K N A F

HEALTH CONSCIOUSNESS SURVEY

Believes of the Villagers on Causes of Malnutrition

In Children of 2 yrs. of Age

Cause	Male	Female	Both	Percent
Do not Know	34	57	91	45.5
Bad Effect of Breast Milk	8	23	31	15.5
Insufficient milk/ weak/sick at birth	23	3	26	13.0
Worm	14	6	20	10.0
Uncleansness	2	-	2	1.0
Combination of any two	16	9	25	12.5
Not Known	3	2	5	2.5
Total	100	100	200	100.0

TABLE 24

TEKNAF CONSCIOUSNESS SURVEY

Ratings by the Villagers on Some Suggested Items for Development

Items	essential	Useful	Useless	Total
Electricity	77.0	20.5	2.5	100.0
Cinema Hall	7.5	29.5	63.0	100.0
Rice husking machine	87.5	11.0	1.5	100.0
Hospital	99.0	1.0	-	100.0
Water supply	97.0	2.0	1.0	100.0
Mosque	80.5	17.0	2.5	100.0
Tank	88.5	11.5	-	100.0
College	62.5	36.5	1.0	100.0
Road to Shahpuridwip	70.0	29.5	0.5	100.0
Market	67.5	31.5	1.0	100.0
Latrine	95.0	4.0	1.0	100.0
Loan	30.5	44.5	25.0	100.0