

Study on Health and Socioeconomic Status of Mothers and Children Living in Bijeswari Army Family Quarter

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Abstract

Health and socioeconomic status of mothers and children living in Bijeswari Army Family Quarter was studied in July 1998. The wives of the serving soldiers and their children under 5 years of age were included in the study. Information on immunization status of the children, socio-demographic characteristics, reproductive history and child deaths were obtained.

Amongst all the women, almost half of them were illiterate and come from Chhetry ethnic. More than half were housewives only and other one third of the remaining were engaged in wool carving and few were in the service along with household work. The immunization coverage was about 95% for BCG, DPT, Polio and measles. Mean number of live children in the family was 2.4. Among the live borne children 7.3% of them died before the age of 5 years. The principle causes of death as reported by the mothers were respiratory tract infection and diarrhea. Fifteen percent of the women had history of abortion.

General hygiene and sanitation of the residential area was not satisfactory. There was insufficient supply of drinking water and most of the toilets were not in functioning condition.

Introduction:

The Expanded Programme on Immunization (EPI) is one of the priority programmes of His Majesty's Government (HMG). The main objective of the programme is to reduce morbidity and mortality from preventable diseases such as Measles, Tuberculosis, Tetanus, Diphtheria, Poliomyelitis and Pertusis (whooping cough). In Nepal EPI has started in the year of 1977 AD in 3 districts which is subsequently extended to 75 districts of the country by 1988. The objective of the programme was to attend at least 80% immunization coverage for all infant and women of reproductive age throughout the kingdom. The target set in the National Health Policy 1991, was to reduce infant mortality rate to 50 per 1000 live births and under-5 mortality to 70 per 1000 live births from 1991 estimate of 107 and 197, respectively by the year 2000 (1).

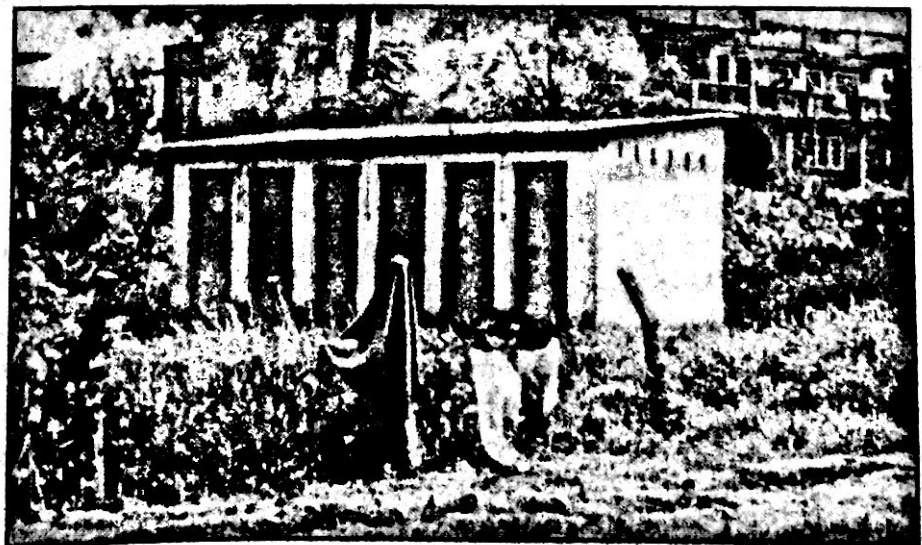
The national report on vaccine coverage published by Department of Health Services 2053/54(1996/97) was for BCG 100%, DPT3 80%, polio3 81% and measles 88%(1). Though report showed a high coverage of immunization at the National level, it is not uniform within the country, with some district achieving more than 95% coverage, and others staying far behind.

Royal Nepal Army personnel and their families being a part of the society, the health institution of Royal Nepal Army (RNA) also participates in achieving the HMG target of immunization programme. RNA has a medical cadre of different levels. Medical assistant level cadres are trained by the military hospital itself. These medical assistants provide the immunization service to the army families living in family lines near battalions and companies in rural part of the country. And in the capital and brigade level, military hospital and field ambulance provide this service. In addition, Army medical units have actively participated in National Immunization Day (NIDs).

Despite many activities related to mother and child health, there is no study on child health and immunization status in Military families. Present study attempts to obtain basic information in this area. For this study we have selected the Bijeshwari Army Family Quarter provided by RNA under its welfare activities. The finding of the study will enable the Army to plan an appropriate strategy for intervention for the health promotion of the families of the Army.



Children of families, living in Bijeshwary Army Family Quarter



Bijeshwari Army Family Quarter

Methodology

Study area:

Bijeshwari Family Army Quarter buildings were constructed in Kathmandu for the purpose of providing residential facilities to the families of Serving Army Soldier. The Quarter is located at Bijeshwari area near the Syoyambhu temple. It was build some 25 years ago. There are four two storeyed blocks arranged in parallel. Each block has the capacity to accomodate 56 families. One block is meant for officers and other three blocks for other ranks. There are all together 247 families (23 officers and 224 other ranks). Furthermore, different sections of the blocks are allotted to the different units, which are currently stationed in the Kathmandu valley. There are No 1 Brigade, No 10 Brigade, Nibesh, Shahi Rakchhak Brigade, and Technicians.

To provide other welfare services one Medical Inspection (MI) room for the first aid and primary medical treatment is operated manned by a Nursing Assistant. A Pre-primary school is runs since 2054 by Royal Nepal Army Officer's Wives Association (Shahi Nepali Sena Adhikrit Shreemati Sangh).

General hygiene and sanitation of the area was dismal. Inadequate water supply, inappropriate location of the toilet, frequent blockage of drainage and uncleaned court yard magnified the situation.

Study population:

A household survey was carried out during the period of 2nd-5th July 1998. All married women residing in the Bijeshwari Army Family Quarter were included as subjects for the study. Of 247 households, 202 women were interviewed. Forty-five households (11 officers, 34 other ranks) couldn't be included because 15 were vacant then, 16 have not been pregnant, and 14 were not available during the survey. A semi-structured pre-tested questionnaire was used to collect the information by face to face interview on socio-demographic characteristics, reproductive history and child health particularly on immunization status and mortality. Information on immunization was collected only with the mothers who have under-5 children then. They were 187 under-5 children from 149 mothers.

Interviewers were selected from the student nurse assistant of Birendra Hospital. They were provided

one day orientation training prior to the study. Four teams, two in each, were used for interviewing. The questionnaire were pre-tested among the women who came to out-patient department (OPD) of Birendra Hospital. Data entry and analysis was done in Epi-enfo computer software.

Result

A total of 202 mothers were interviewed. Among them 149 mothers had currently under 5 years of age children and they were 187. A separate analysis was done for mother and children groups.

Socio-demographic characteristics

Table 1 shows the socio-demographic characteristics of the study population. Almost half of the families were from the rank of NCOs and chhetri ethnic. Majority of the women were illiterate, housewives, of the age, 25-29 years. In addition to the household work, 38% of the women were engaged in wool carving and 10% were in service. As informed by the women, all their husbands were literate and 42.6% of them had education higher than grade 10.

Table 1.

Socio-demographic characteristics of the family living in Bijeshwari Army Family Quarter

Variables	Number (%)
Rank	
Officers	13 (6.4)
JCOs	21 (10.4)
NCOs	100 (49.5)
Others	68 (33.7)
Ethnic	
Brahmin	18 (8.9)
Chhetri	96 (47.5)
Newar	18 (8.9)
Gurung/Magar	44 (21.8)
Rai/Limbu	16 (7.9)
Others	10 (4.9)
Mother's age	
<20 yrs	4 (2.0)
20-24 yrs	46 (22.8)
25-29 yrs	75 (37.1)
30-34 yrs	41 (20.3)
35-39 yrs	26 (12.9)
40 +	10 (5.0)

Mother's education	
Illiterate	92 (45.5)
Informal	37 (18.3)
School (1-10)	43 (21.3)
>10 grade	30 (14.9)
Mother's occupation	
House wife only	115 (56.9)
Service	10 (5.0)
Others(wool carving)	77 (38.1)
Father's education	
Illiterate	00 (0.0)
Informal	19 (9.4)
1-5 grade	34 (16.8)
6- 10 grade	63 (31.2)
>10 grade	86 (42.6)
N total	202

Immunization status of the children

Table 2 shows the summary of Immunization status of the children who were currently under 5 years of age. In total, the coverage was more than 95% except for the measles and BCG (92.7% and 94%, respectively) which is far more than Government target of 80%.

Table 2.

Immunization status of the children under 5 years of age. N=187

Vaccine	Vaccinated No (%)	Non-vaccinated No (%)	Not eligible No
BCG	176 (94.1)	11 (5.9)	x
DPT I	178 (96.7)	6 (3.3)	3
DPT II	175 (96.2)	7 (3.8)	5
DPT III	174 (96.1)	7 (3.7)	6
Polio I	179 (97.3)	5 (2.7)	3
Polio II	179 (98.4)	3 (1.6)	5
Polio III	177 (97.8)	4 (2.2)	6
Measles	153 (92.7)	12 (7.3)	22

Not eligible: still young for vaccination during survey. For the percent calculation Not eligible children were not included in the denominator.

Reproductive history and child health status

Table 3 presents reproductive history of the women and their children status. Majority of the women were 1 or 2 gravid. Mean number of pregnancy was 2.8 with maximum number of 9. Higher number of mother had history of abortion either induced or spontaneous. Among 202 mothers 30 (14.9%) had abortion history. More than half of the families had living children 1 or 2, and few of them had children 5 or more. Fifteen percent of the women had history of child death below the age of 5 years.

Table 3.

Reproductive history of the women

Variables	Number (%)
Number of pregnancy (Gravid)	
1-2 gravid	99 (49.0) (Max: 2)
3-4 gravid	83 (41.1) (Mean: 2.8)
5-6 gravid	17 (8.4)
> 6 gravid	3 (1.5)
History of abortion	
Yes	30 (14.9)
No	30 (14.9)
Frequency of abortion	
1	19 (63.3) (Max: 2)
2 and more	11 (36.7)
Currently living children	
1-2	126(62.4) (Max: 2)
3-4	68(33.7) (Mean: 2.8)
5+	7 (3.5)
Number of dead children	
0	172 (85.1)
1	22 (10.9)
2	8 (4.0)

There were a total of 568 pregnancy outcomes from 202 mothers, in which 91.2% were live born, 8.6% were abortion and 0.2% were still birth. Among live borne children 7.2% were died before they reach the age of 5 years (Table 4).

Table 4.

Total children borne to the 202 mothers by birth outcome and current status. N= 568

Variables	N (%)
Birth outcome	
Live born	518 (91.2)
Still born	01 (0.2)
Abortion	49 (8.6)
Current status	
Alive	480 (92.7)
Died	38 (7.3)

Table 5: demonstrates the causes of child deaths according to mother's report. Acute respiratory tract infection (ARI) was the most frequent cause of death followed by diarrhoea. According to mothers, most of the children were died before they came to reside in Bijeshwari family quarter. Only 5 children were died in Bijeshwari family quarter, while 33 children were died before they came to this quarter.

Table 5. Causes of death mentioned by mothers

Name of diseases	N (%)
Respiratory tract infection	9 (23.7)
Diarrhoea	7 (18.4)
Sudden	2 (5.3)
Fever	5 (13.2)
Others	9 (23.7)
Don't know	6 (15.8)
Total	38 (100)

Others includes jaundice, no eating, skin infection, meningitis and measles.

Causes of child death according to mother's report

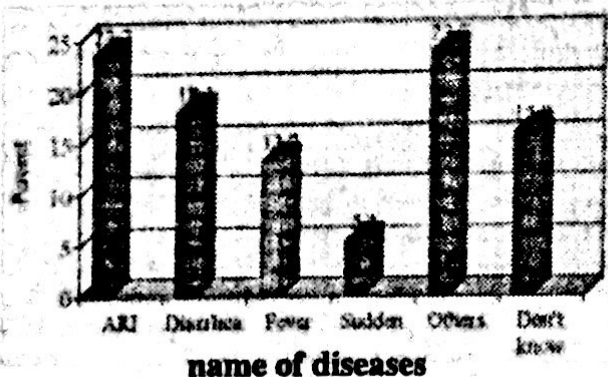


Table 6 demonstrates the incidence of diseases during the time of survey. To assess the current disease problems among the children, women were asked about the child illness during the last two weeks of survey. According to the mother diarrhoea and fever was the most frequent illness among children followed by respiratory infection.

Table 6.

Incidence of child illness in last two weeks. N=202

Name of diseases	N (%)
Diarrhoea	33 (16.3)
Fever	31 (15.3)
Respiratory infection	9 (4.5)
Dysentery	3 (1.5)

Conclusion and Discussion

This study has provided information on immunization status of the children and reproductive history of the women who were currently residing in Bijeshwari Family Quarter.

Immunization status:

The finding has suggested the high immunization coverage among the children under-5 years of age, currently living in the study area. More than 90% of the children were completely immunized which was more than national target of at least 80%. The minority of the children who were not immunized or had incompletely immunized may be from the family who were just come to live in this area. Analysis was not done in this respect.

Socio-demographic factors

Compared to the literacy rate of national level, the literacy rate among military family was better. Approximately 55% of the women were literate or higher whereas in national level it is only 25% for the women². Though the finding showed 100% literacy among their husband, it was an over representative sample. Because they are military soldier and to enter in to the military service formal education is basic requirement.

It is appreciating that the women are contributing in income generation activities by wool carving, which may have positive impact on over all health status of the family. However, the work was not professional, it was in primitive condition. They were carving wool in their bedroom without any precaution and adequate ventilation. These women and their children exposed to the occupational hazards which may increase the respiratory tract problem in this group of population. By little health education and precaution these hazards can be eliminated.

Reproductive and child health status:

Almost half of the women were 1 or 2 gravid and few had pregnancies more than 6 times. Fifteen percent of the women have had abortion. In Nepal where the abortion (induced) is considered as a sin and is socially not acceptable, the actual number of abortion may be higher than reported. A report published by Maternity hospital has shown that annually about 1400 women treated with the complications of abortion³, which indicates a serious problem in maternal health. In Nepal,

abortion alone contributes a 15-30% of maternal mortality. The 7.3% rate of the under 5 child death in our finding is appreciably lower than the rate of national level of 11.8%⁴. Majority of the child death was due to respiratory tract infection and diarrhoea, which was similar to the other reports in Nepal and other developing countries.

The study was prompted to find the immunization status in children of army families as a child from army family was reported to have died of Poliomyelitis in Kanti Children Hospital. However, at the same time this study provided a base line information on socio-demographic and reproductive health of the mother in addition to immunization status. The literacy rate, under -5 mortality and immunization status was found to be much better than those in the general population (National figure). However there are many areas that has to be improved e.g hygiene and sanitation of the area, elimination of occupational hazards of working in the primitive conditions in their living room. RNA should take positive measures to maintain the hygiene and sanitation of the residential area, manage a separate room for wool carving, and health education to the families.

Acknowledgment:

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