

## CHAPTER IV

### DATA EXERCISE

#### 4.1. Introduction

Iron deficiency anemia is the most common nutritional cause of anemia, a serious public health problem in Nepal. Pregnant women and women of reproductive age are the most vulnerable group. Iron deficiency anemia (IDA) affects over 2000 million people world wide.(FAO, 1995). WHO estimates that more than half the pregnant women in the world have anemia (Mother-Baby package, 1994). An estimated 58 percent of pregnant women in developing countries are anemic with the result that infants are more likely to be born with low birth weight and depleted iron reserves. IDA results from diets with insufficient iron, reduced iron availability, increased iron requirements and losses due to parasitic infections. Anemia in children and infants is associated with retarded growth and development of cognitive abilities and low resistance to infections. In adults it causes fatigue and lowers work capacity. Maternal anemia has been defined as the cause for as many as 20 percent of maternal deaths. It also leads to intra-uterine growth retardation, low birth weight and increased rates of perinatal mortality (Dawson, R.1997).

The maternal mortality rate of Nepal ranks one of the highest in the world and is the leading cause of death among the women of reproductive age in Nepal. The high maternal mortality of Nepal is a product of the low availability and utilization of health services, inaccessibility to affordable health facilities, the poor health and nutritional status of expecting mothers, inadequate birthing practices and early,

closely-spaced and repeated pregnancies which result in physical depletion, birth complications and delivery of low birth weight babies with low chances of survival.

Each year there are an estimated 927,000 pregnancies in Nepal, of which 40 percent or 371,000 pregnancies are considered high risk to the mother and child. (UNICEF-1996). The maternal mortality rate (MMR) for Nepal for the 1990-1996 period is reported as 539 deaths per 100,000 live births, according to the NFHS, 1996, which means that actually 12 women die every day in Nepal during pregnancy and childbirth. The main factors contributing to the deaths are related to poverty, such as ignorance and lack of education. In Nepal many young girls and women do not get to eat nutritious food. When these women become pregnant they may be anemic and malnourished. This is dangerous to both the mother and the child in her womb.

IDA is one of the contributory factors of high maternal mortality in Nepal. So it is very important to prevent and control the prevalence of IDA among pregnant women. IDA can be prevented or decreased by giving additional nutritional training to FCHV regarding IDA so that they can provide nutrition education to the pregnant mothers regarding the prevention of IDA.

This chapter deals with how the data was collected, analyzed and presented in providing the N.E. regarding the prevention of IDA among pregnant women who are 15- 49 years old. The findings will suggest how the intervention could be improved based on the lessons learned from the data exercise. The purpose of the data exercise is to reduce the incidence of IDA among pregnant women by providing N.E. to the mothers through the FCHV. The intervention will be done by training FCHV on enhancing nutrition to prevent IDA by increased consumption of locally available cheap iron rich and iron absorbent foods (vitamin c) by pregnant women. Training

will be provided to FCHV in December 1999 and the program will be implemented from January 1999 to August 2000.

Supervision and monitoring will be done twice during the year when nutrition education is implemented by FCHV, and evaluation will be carried after the completion of program. Focus group discussion and a survey questionnaire will be used to evaluate the impact of program.

Evaluation will be done to determine whether the methods and activities utilized during the program intervention result in the desired changes of the target population. Impact evaluation will be made to see how FCHVS are providing prenatal N.E. to pregnant women regarding prevention of IDA and to find out any changes in their knowledge, attitude and behavior regarding it's prevention.

#### **4.2. Objectives of the Data Exercise:**

The data exercise was done in Pragatinager village of Nawalparasi district district to fulfill the following objects:

1. To find out the level of knowledge regarding the prevention of IDA among FCHV so that the data collection method could be refined.
2. To find out the level of knowledge regarding the prevention of IDA among pregnant women so that the data collection method could be refined.
3. To find out the willingness of the FCHV to give nutrition education on prevention of IDA.
4. To modify the intervention based on the lessons learned from data exercise.

This data exercise will help to learn about the qualitative research techniques. This will also help to understand the health perception of the health workers and views of the pregnant mothers. It will also help to describe the findings and suggest how the study could be improved based on the lesson learned from the data exercise.

#### **4.3. Data collection methods:**

1. Focus group discussion with FCHV.
2. Focus group discussion with with pregnant mothers.

For the data collection techniques I have used focus group discussion with FCHV of Pragatinager village of Nawalparasi District to refine the data collection method as well as data collection instruments. Both the methods were done according to the prepared guidelines.

#### **4.4. Sampling:**

Sampling is not necessary for the proposed study because all the 18 FCHVs from the two villages of Nawalparasi District of Nepal will be selected purposively for the study. For the data exercise 9 FCHVs from Pragatinager village were selected purposively for the focus group discussion in January 18<sup>th</sup> 1998.

##### **4.4.1. Focus group discussion with FCHV:**

The required number of participants “FCHVs” for the focus group discussion was selected purposively from each respective wards. There were altogether 9 FCHVs

from 9 wards of Pragatinager village of Nawalparasi District, so there was no need of sampling.

#### **4.4.2. Focus group with pregnant mothers.**

All the respondents were selected purposively among the pregnant mothers 15- 49 years old. There were altogether 8 pregnant mothers for the focus group discussion.

#### **4.4.3. Key informant interview:**

The FCHV programmer of the Nawalparasi District Health office was selected purposively as key informant .Similarly the District Public Health Nurse of the same office was also selected purposively as another key informant. Both of the key informant were the FCHV programmer of Pragatinagar village. Similarly Health post incharge was also selected as another key informant.

#### **4.5. Duration:**

The focus group discussion with the FCHVs was conducted on January 18 1998 in Pragatinagar village health post. Similarly FCHV programmer and Public staff nurse were interviewed on -17 and health post incharge was interviewed on the following day. All the 3 key informants were interviewed separately. The focus group discussion with pregnant mothers was done on 19 January 1998. I visited Nawalparasi on 16<sup>th</sup> January 1998 and 3 days was fixed for data exercise. The actual data collection period for proposed study was planned to be for 1 months in 2000 in the Dunkibas health post of Nawalparasi district of Nepal.

#### 4.6. Field Activities:

Prior going to the intervention village the necessary things required for the data exercise were collected. The focus group discussion guidelines were prepared at Kathmandu. The required materials were tape recorder, cassettes, cameras and focus group discussion questions. On January 16-1998, I went to I went to the intervention village with my two friends. It took me about 4 hours to reach Damkuli health post of Pragatinager village from Kathmandu.

Focus group discussion was conducted at 12.30 pm, on 17th January, 1998 according to scheduled date and time near the health post. There were 9 participating FCHVs. Formal focus group discussion was started by introducing myself, the moderator, note taker and the participants. The note taker has written all the participant's name, ages, sex, religion, occupation etc. The note taker was Lecturer of Institute of medicine (IOM), who has completed MPH from Salaya Mahidol. Then the moderator started the discussion clearly according to the prepared guidelines. The moderator's role was assumed by the Lecturer of IOM who has done her master of nursing from Kathmandu. Since her parents home was in Pragatinager, it was easy for me to stay in her home while collecting the data. Most of the participants were interested and friendly and shared their own experiences regarding the causes and prevention of IDA.

The moderator encouraged everybody to take part in the discussion equally without any hesitation, and she assured the respondents by telling what ever discussed will be quiet confidential. Discussion was started at 12.30 which took about 2 hours. At 2pm. discussion was completed and then snacks were served and finally, small gifts were given to all the participants.

#### **4.7. Limitations**

The purpose of the study is to increase the consumption of locally available cheap iron rich and iron absorbent foods and "vitamin c" by the pregnant women of the rural community by giving nutrition education. through the trained FCHVs in Dumkibas and Ramnager villages Parasi of Nawalparasi district, Nepal. As there is a high ( 95 per cent anemia) rate in Nawalparasi district according to the JNSP study (1986) and there are altogether 77 villages in the district. The main limitation of the data exercise is the study and selection of samples from only one village (Pragatinager) due to the time limitation.

Another limitation is that the FCHVs were gathered easily from 9 wards but unfortunately the target population of pregnant mothers could not be collected from each 9 wards They were collected from only two wards of Pragatinagar village, therefore their views do not represent the whole 9 wards wards. The findings of the discussion cannot be generalized for the whole study area consisting of 9wards.

Evaluation will be carried out by using focus group discussion and a survey questionnaire with the pregnant mothers who achieved the nutrition education regarding the prevention of IDA after one year of the program. The major limitation of the data is that it is relevant to Dumkibas health post and the 18 FCHVs from the two of villages Dumkibas and Ramnager. So training need and willingness of the FCHVs cannot be generalized to other FCHVs of the country.

#### **4.8. Findings of the Data Exercise**

##### **General characteristics of participants:**

##### **4.8.1 Female Community Health Volunteers**

There were 9 FCHV participants from 9 wards. Most of them were between 25-30 years old. All the participants were Hindu and 6 were literate. One of the FCHV had kitchen garden training and she knew about its importance, but due to lack of water she had to go for 1-2 hours to fetch the water and so did not have a kitchen garden.

#### **4.8.2. Pregnant Mothers**

Eight pregnant mothers 20 – 40 years old attended the focus group discussion. Most of the pregnant mothers were Hindu except two who were Buddhist. All were housewives and all had worked in the kitchen garden, but 4 of them did not have kitchen gardens so they used to work in daily wages to earn money. The women who worked for daily wages were mostly migrants people who do not have land. They were very poor, with nothing to eat unless they go and work for others. They have migrated from Bhutan, and they were homeless because due to disasters like fire burn, floods and earthquakes. The qualifications of their husband 3 of them were illiterate, 5 were below grade 10. Two of them were bus drivers and others were farmers.

#### **4.8.3. Knowledge regarding IDA**

All the FCHVs know about IDA but do not know about the locally available foods such as millet, buckwheat, gundruk and masewra which contain iron and iron absorbent foods which should be eaten after the foods. FCHVs said that they were not taught about IDA in their course. And it was found that they were interested to learn about the IDA in their course, and it was found that they were interested to learn about the IDA if they were given additional training on IDA.



All the mothers who attended the focus group discussion said that do not know about IDA and do not know locally available foods contain iron and vitamin c. They said if given information about this, they would have consumed these foods in sufficient amounts. The pregnant mothers and FCHVs didn't know that they should not drink tea or coffee and eating and also didn't know that they should eat iron absorbent food with vitamin c after meals. These findings suggest that the pregnant mothers need nutrition education regarding the prevention of IDA.

#### **4.9. Discussion:**

All the FCHVs and pregnant mothers were curious and co-operative about discussion regarding the prevention of IDA . Among the FCHVs and pregnant mothers the awareness about the prevention of IDA was low. They did not know that gundruk, masura, buckwheat and foods such as vitamin c , which are Amala ,lemon ,orange guavae etc which are cheap and locally available in the community contain iron rich and iron absorbent foods. So the pregnant women do not consume these foods in enough quantity. The key informant FCHV program officer of National Training Health center in Kathmandu said that FCHVs have only 2 weeks training and during this period the IDA topic is not included. Iron deficiency anemia as this topic is also not included in their curriculum ..The pregnant mothers and FCHVs didn` t know that they should not drink tea or coffee after meals and also didn` t know that they should eat iron absorbent food and vitamin c after meals.

These findings suggest that the pregnant mothers need nutrition education regarding the prevention of IDA. The FCHVs are the frontline and the most important grassroots health personnel in the overall MOH services delivery strategy.

FCHVs are local women who are trained for a brief period of time 15 days and are supervised by health post staff. FCHVs are expected to provide the information on available health services and communicate basic knowledge of immunization, family planning, oral rehydration therapy, nutrition and antenatal care at the family level, both in the home and through women's groups (UNICEF-1999) FCHVs provide monthly reports to VHW.

#### **4.10 Conclusion:**

It has been found that the existing FCHVs in the country were never taught about IDA and they lack the knowledge and skill in IDA according to key Informant. FCHVs Programme Officer of National Health Training Center, Kathmandu. All the relevant knowledge and skills are required by their own effort and experience. They are very eager to have additional classes or training about IDA.

The FCHV programme was found to be successful and is desired by the community for delivery of the primary health care services and health education program. The existing training manual also does not contain any components on IDA. There is a high achievement in immunization coverage and treatment of diarrhea with oral rehydration solutions but low achievement in the field of nutrition and sanitation. (FCHV-1999). The FCHV program officer of the National Health Training center also accepted that there is a severe lack of trained health manpower both at the central and peripheral level. (Annual Report 1995-1996) On the basis of the above reasons we can conclude the existing FCHV training manual does not contain any components on IDA. At present FCHVs are provided training education only in other primary health centers and family planning components. They have little knowledge on nutrition

related to IDA, and they are also interested in having additional training on the IDA. The annual report of 1995/1996 also show that there is a severe lacking trained manpower regarding the prevention of IDA both at the central and peripheral levels. Therefore, we can conclude that if we provide additional training on IDA, they (FCHVs) can provide better nutrition education to pregnant mothers to improve the consumption of IRF/IAF in order to reduce the incidence of IDA. As FCHVs are the first people to contact with the families during pregnancy they, should be mobilized with additional training on IDA so the prevalence of IDA can be reduced. If the IDA is reduced, then the maternal mortality and maternal morbidity rate will also be reduced.

#### **4.11. Lesson Learned From The Focus Group Discussion**

It was learned that focus group discussion is essential for exploring the perceptions of the FCVH and the pregnant mothers about IDA. Focus group discussion helps to get the information regarding the causes, signs and symptoms, prevention and it's effects on pregnant mothers and on infants during pregnancy and labour. This information collected from the focus group discussion will be helpful to refine data collection methods and will help to strengthen the prevention and control of IDA among the rural people of Nepal through mobilization of FCHVs.

It also has been learned and realized from the focus group discussion that to prevent IDA among the people of rural communities in Nepal FCHVs should be motivated and mobilized to provide information regarding the prevention of IDA because FCHVs are the only health personnel who give nutrition education to the

community people. They are found to be very interested in providing health services to the rural people of the country.

Focus group discussion with FCHVs and pregnant mothers of Pragatinagar village helped to obtain information about the knowledge, attitudes and practices relevant to anemia, their health seeking behavior, attitude and practices in the consumption of iron rich and iron absorbent foods by the poor people of Nawalparasi District. FCHVs are the major and most important health personnel in the overall MOH service delivery strategy. They are the only health workers whose work provides direct contact at the family level. Therefore the well trained, FCHVs are in terms of preventing IDA are required to provide nutrition education to pregnant women to increase the consumption of iron rich and iron absorbent food. It was found that the FCHVs are not taught about IDA during their 2 weeks training period. So they do not give nutrition education regarding the prevention of anemia. Therefore FCHVs need additional on IDA to decrease the prevalence of anemia in rural communities of Nepal. Different studies conducted have shown that FCHVs are provided additional training in acute respiratory infection(ARI), chronic diarrheal disease(CDD), vitamin a and MCH components which have shown better results on educating the target population. From the success of that program, FCHVs have become popular according to the key informant who was FCHV Programme Officer of National Health Training Center, Kathmandu. Therefore, from the data exercise ,FCHVS can give better nutrition education to pregnant mothers so that the knowledge and skills of pregnant women will improve.