CHAPTER III

Improve the low usage of Oral Rehydration Therapy and continued feeding practices in household level through Social Marketing in Laharepauwa village, Rasuwa District, Nepal.

3.1 INTRODUCTION:

3.3.1 Rationale of the Study:

In The Rasuwa District, Nepal, the prevalence of Diarrhoeal Diseases among children under 5 year of age is highest when compared to other districts of the country. According to the Annual report, 1994/95 of the Department of Health Services, 48.8% of children under 5 years of age visiting health facilities were diarrhoeal cases and out of them 20.1% were severely dehydrated. These were all reported cases and there is a great chance of unreported cases. Therefore, it can be hypothesized that the usage ORT and continued feeding in the household level of the Rasuwa District is very low, which needs to be improved.

A study for the low usage of Oral Rehydration Therapy (ORT) and continued feeding practices in the country has not been undertaken yet. Thus, we do not know the actual reasons for this problem situation. Hence, Precede-Proceed Model (an analytical model) has been analyzed to identify the possible reasons that have a relationship with

low usage, different reasons show the relationship. The identified possible reasons (based on the reviewed documents) are as follows:

1. Predisposing factors (low knowledge of the mothers, particularly on increased fluids and continued feeding, existing beliefs).
2. Reinforcing factors (lack of interpersonal communication between the mothers and the health workers/volunteers).
3. Enabling factors (low access of mass media and print materials, low access of health facility and low availability of Oral Rehydration Salt).

Improvement of predisposing factors needs long term intervention. The existing predisposing reasons, such as: lack of knowledge, and existing beliefs cannot be solved within a short period. It needs continuous efforts. Besides, predisposing factors also have relationships with other socioeconomic status, such as: education, occupation, income etc. Improvement of socioeconomic factors needs the strong commitment of the government. Thus, improvement of these factors is rather complex.

Reinforcing factors include social feedback and support towards the adoption/abandoning or modification of a behavior. Social feedback or support requires improvement of healthy knowledge of the entire society (such as: family, peers, community members), which needs an alteration of existing social norms, beliefs, culture, traditions etc. Hence, reinforcing factors are also long term and more diverse in origin.

Enabling factors are considered as the barriers to change the environmental systems of the community. The existing enabling factors like low access to media, low access to health facility, and low availability of ORS are the products of the social system. These system are easy to change in comparison to other factors. Improvement of enabling factors (such as: availability, accessibility, affordability) have a direct relationship with behavior. In existing situation, it can be hypothesized that better access to media will promote the healthy behavior among the target population and create its demand. Similarly, improvement of availability, accessibility and affordability of the services will create its own demand. In addition, enabling factors can also indirectly improve the predisposing or reinforcing factors Thus, these factors are highly prioritized in the existing situation.

Three enabling reasons show the association with low usage of ORT and feeding practices in the country. They are less access to media, inaccessibility to health facility and low availability of Oral Rehydration Salt (ORS). Each of the above reasons show a significant relationship with for low usage. The importance of each enabling reasons will be described in brief as follows.

a. Accessibility of media/print materials:

Media are the channels that deliver education to the target population. Accessibility of media has direct relationship with behavior. Because, if the target population has greater exposure to media, they can improve their health knowledge, attitudes etc. suggesting improvement on change. The media influences the target

audiences by the reach (number of times the target are exposed to the specific message) and content (quality and/or type of message) in a particular period (Manoff, 1985).

Unfortunately, the access of media among the target population is very low, which is one of the important reason for low usage. According to the Nepal Family Health Survey, 1996 the existing mass media channels have low access among the target population. The report shows that 58.9% of Nepalese women of reproductive age (the potential target population of this study) are not exposed to any of the existing communication channels. According to the Survey, Only 5.3% of the target population have access to weekly Newspapers/Magazines. Only 12.3% are exposed to TV and 36.4% have access to Radio. Thus, it is necessary to modify the existing mass media to have better access and usage among the target population.

b. Accessibility of health facility:

Accessibility of health facility also play an important role for health related behavior. It can be assumed that increase access of health facility provides the interaction opportunity between the target population and the service provider. This interaction can clarify different confusion/clarifications of the target population resulting in the improvement of health knowledge, attitudes, belief, which further suggests increasement healthy practices.

Nepal is a mountainous country. About 2/3rd of the total country land is covered by hill and mountaintus regions, which are still less accessible by

transportation and communication means. The Central Bureau of Statistics, 1991 revealed that 55% of the people have to walk 3 minutes-3 hours to go to the nearest health facility. A study conducted in 1994 shows that long distance was the main reason for the low usage of health services. Thus, inaccessibility can be another important reason for the low usage of ORT and feeding practices.

FCHVS can minimize the inaccessibility problems related to CDD services, because, they are community people and most of the time easily accessible in the community. Different reports have shown that FCHVs can provide primary health care services (including CDD) in the community [Lammichhane and Dawson, 1994, Ware, 1996, Dawson, 1996]. Another benefit of FCHV services is that they also provide face-to-face education and practical demonstration up to the community level regarding ORT and feeding practices.

Inadequate supervision of FCHVs at community level is being identified as a main constraint of this program (FCHV Program, 1994/95, Dawson, 1996). In this connection, the researcher had visited some FCHVs to identify their view. Inadequate supervision has discouraged them suggesting less importance to their free contribution. After discussion, the researcher concluded that moral recognition can encourage FCHVs, because they want support, timely feedback and respect from the community (Paudel and Marahatta, 1997).

c. Availability of commodity:

Availability also plays an important role for the low usage. It can be hypothesized that education improves knowledge and attitudes of the target population and creates demand for healthy practices including healthy commodity. But, if the commodities is not assured, it may create frustration to them and the educational efforts may go in vain.

Health related products are divided into two broad types: ethical and proprietary (Israel et al., 1987). Ethical products cannot be acquired without the help or prescription of health personnel, such as: birth control pills, diaphragms, intra- uterine devices, injections etc. Proprietary goods are those which can be purchased or used by the individual at their own discretion. They do not need the prescription or presence of health personnel. Examples are condom, ORS etc. Being a proprietary product, ORS can be supplied even through other commercial outlets, such as: super market, grocery shops etc. in the study area. One such agency is the Nepal CRS company, a nonprofit making contraceptive-selling agency. Since 1978, Nepal CRS company has been involved in selling health commodities in different parts of the country at subsidized rates up to the lowest level. At present, this agency has a network system with all 75 districts of the country including remote rural areas through 11,000 medical and other distribution outlets (Rayamajhi, 1997).

The above enabling reasons suggest that there are a number of causes that have a casual relationship with low usage. These reasons are interrelated, thus, involvement

of a single approach cannot improve the expected extent. For this, there is a need for multidisciplinary approaches, such as: educating people, improving the access of media, and assurance of respective health commodittes.

Social Marketing is a multidisciplinary approach. It deals with a variety of approaches, such as: educating people, working with a variety of disciplines and working with the people/organization that may not be concerned with health improvement. Being multidisciplinary in approach, Social Marketing has better acce ;s to the target population, because each approach collectively reinforces others and improves accessibility. Similarly, these approaches are complementary too, because other approaches can complement, if one approach may have less access resulting in an increasment of coverage (the extent of usage).

Social Marketing interventions often deal with marketing approaches, which comprises of the extensive use of possible media (within the limitation of allocated resources and the availability of media including face-toface education. Mass med a can reach a large population with the same messages even in a short period and can improve the health knowledge of the target population. Similarly, face-to-face education allowing for repetition and practical demonstrations suggests a high level of understanding. Thus, the results of Social Marketing approaches are less time consuming (Kaplan et al., 1993, Israel et al., 1987), which is another benefit of this approach.

Being consumer driven in process, Social Marketing approaches are more acceptable among the targeted population. Because, Social Marketing approaches are carefully designed based on the needs and wants (choices) of the target population. Intuition and even expert opinions are not relied upon during the process, because, they have very little regard for consumer satisfaction. On the other hand, Social Marketirg strategies can be directed even towards the disadvantaged groups and minority population (Glanz, 1997), which is another benefit of this approach.

Social Marketing is not a simple specific approach. It requires co-ordination of a variety of disciplines, such as: health, advertising, social-science research and evaluation skills. Therefore, it is often criticized as an expensive approach. At the same time, Social Marketing is a flexible approach, because there is not a strict limitation on choosing the approaches. Any approaches can be selected, which seems to be cheap a d effective. The result being that many multidisciplinary approaches are proved to be cost effective (Kaplan et al., 1993, Manoff, 1985).

On the bas is of the above reasons, it has been concluded that Social Marketing will be the appropriate approach for Rasuwa District (including other similar parts of the country), where the low usage of ORT and continued feeding practices are related to a numbers of enabling factors. But, the approaches should be selected carefully in order to make the intervention program cost effective.

3.1.2 Application of the Study:

The main concern of this study is to improve the Diarrhoeal Diseases Control services (CDD services) in the study area by improving the usage of increased amount of fluids and continued feeding practices among children during Diarrhoeal Diseases including the usage of Oral Rehydration Salt in dehydration cases. In addition, the attempt will be made to improve the knowledge of the caretakers of recognizing the signs of dehydration and other diarrhea associated complications so that they could contact the health personnel at the earliest possible time. The findings of the intervention program (impact evaluation) can be utilized to determine whether this type of health education approaches (mass media campaign, face-to-face education and practical demonstration) can improve ORT and feeding practices in the country. The findings of this study will be evidence to the decision-makers of NCDDP to introduce or not such types of intervention program in other parts of the country. Thus, NCDDP will be the main beneficiary of this study.

Similarly, another beneficiary will be National Health Education, Information Communication Center (NHEICC). The main concern of this center is to develop better health education messages and offer it towards most of the target population through different channels of communication including printed materials. Findings of preliminary research and process evaluation, such as: identification of the needs and wants of the target population (in terms of designing health education messages related to Diarrhoeal Diseases) can be utilized by the programmers of NHEICC for designing better health education messages in other similar districts in near future. Further more, the findings of media research can also be utilized by the same center to identify those

channels of communication that have better access and usage in the study area. In spite of the government priority, very little of this type of study (intervention study) have been conducted in the country. Thus, this study will be a small complementary effort to fill up the want of such type of study to the government.

3.2 PURPOSE STATEMENT OF THE STUDY:

The purpose of this study is to provide a multidisciplinary health education services in Laharepauwa Village. The primary cause of death by diarrhea is dehydration, which can be prevented and even corrected by the usage of ORT. Another important cause of death by diarrhea is undernutrition, which can be prevented by the continued usage of nutritious foods during and after diarrhea. Thus, the main focus of this study will be to provide health education services among the mothers of children under five years old for the promotion of ORT and continued feeding practices including the usage of ORS in dehydration cases. In addition, the education will be provided to recognize the signs/symptoms related to diarrhea associated complications so that health personnel can be contacted as early as possible.

The education will be provided from different approachas, such as: mass media campaign, face-to-face education and practical demonstration of ORT/ORS preparation throughout the intervention period. In addition, a consensus will be done with a commodity selling company for the sale of ORS through other commercial sources too. The intervention program will be corrected and implemented throughout the intervention period. Process evaluation will be done after six months of program

implementation and an impact evaluation will be done at the end of the program intervention.

3.3 OBJECTIVES OF THE STUDY:

3.3.1 General Objective of the Study:

The main objective of this study is to improve Diarrhoeal Diseases Control services (CDD services) of Laharepauwa Village, Rasuwa District, Nepal by improving the usage of ORT and continued feeding practices during diarrhea among children under 5 years of age.

3.3.2 Specific Objectives:

1. To identify the target audiences of the intervention program.
2. To identify the needs of the target audiences
3. To identify the possible channels of communication for the proposed health education program.
4. To develop and pre-test the health education messages.
5. To disseminate health education messages through different approaches (by the usage of possible media, face-to-face education and practical demonstration) among the targeted population.
6. To monitor and supervise the health education program.
7. To evaluate the impact of the health education program.

3.4 STUDY AREA:

Ward (the smallest unit of the Village) numbers 1 to 9 of Laharepauwa Village, Rasuwa District, Nepal.

3.5 GENERAL INFORMATION OF THE STUDY AREA:

Rasuwa District is one of the eight districts of the Bagmati zone, which falls inside the mid development region of the country (Please refer to Appendix 5 for the details of district, zone, and region). This district is about 120 km north from Kathmandu, the capital city of Nepal. According to the 1991 census, the population of this district is 36,768, among them the male population is 19,199 and female population is 17,569. The population increase rate of the district is 21.6%. Rasuwa district is one of the remote areas of the country, which is touched by China (Tibet) in the north, Nuwakot District in the south, Sindhupalchok District in the east and Dhading district in the west. This district is situated at the mountain region in the range of 314 meter to 7134 meter. Limited transportation and communication system, as well as lack of educational and health services are the main problems in this district (Rasuwa district profile, 2051). The district is further divided into 18 Village development committees and one of these is Laharepauwa Village, which is the study area of this study.

Laharepauwa is a remote rural Village situated in the southern part of the Rasuwa District. According to a census of 1991, the Village has 774 households. The total population of the Village is 4276, among them the male population is 2174 and the female population 2102 including 653 children of under five years ofage. The transportation and communication means are very limited in this Village. Most of the areas are non- motorable and must be accessed on foot. The Main occupation of the people is

farming. Most of the people have low education. There is a government health post in this Village, a peripheral level health facility, which provides basic primary health services. Health Post has one in-charge and other staff: two auxiliary health workers (AHW), one auxiliary health midwifes (ANM), one Village health worker (VHW), one administrative clerk and two peons.

3.6 STUDY DESIGN:

Both qualitative and quantitative research methods are utilized during the process of Social Marketing. These include ethnographic observation, focus group discussion, In-depth individual interviews, direct observation, mailing survey, telephone survey, structured interviews etc. The usage of qualitative or quantitative research methods depends on the nature of the study. The main intention of this study is to explore the perception and the behavioral aspects of the target population including their interest and preferences. This type of exploratory study is best performed by qualitative approach rather than by a quantitative one (Israel et al., 1987, Robson, 1997).

Similarly, the proposed intervention process will go through many test, refine, retest, refine series, which is the main feature of an action research (Bawden, 1991). Therefore, the study will be a qualitative approach action research. Focus group discussion will be the main research technique, which shall be carried out in a series throughout the design, implementation and control of the intervention program. While key informant interview and service statistics review will be other research techniques (other than focus group discussion) for the impact evaluation of the intervention program.

3.7 CONCEPTUAL FRAME WORK:

The conceptual framework of this study has been modified from Jintaganont et al, 1992, which has been presented in figure 3.1. As suggested by the Precede-Proceed model, the usage of ORT and feeding practices during diarrhea have been considered to be more complex, multidimensional and influenced by variety of factors:

1. Factors associated with target population:

Which include knowledge, attitudes, and belief of the mothers/caretakers. The improvement on health knowledge, attitudes, beliefs etc. can show the positive association towards the improved usage of ORT and feeding. However, socio-economic status (occupation, education, income etc.) can also influence the behavior, but, their relationship cannot be easily and directly determined. Thus, these variables will not be included in this study.

2. Factors associated with health care providers:

Which include the number of contacts or visits of health care providers with target population in order to encourage the usage of ORT and feeding practices. It is hypothesized that an increased number of contacts between the health care providers and the target population can provide the opportunity to interact more to improve their (target population's) healthful knowledge, attitudes and beliefs resulting in encouragement for usage.

3. Availability and accessibility of services:

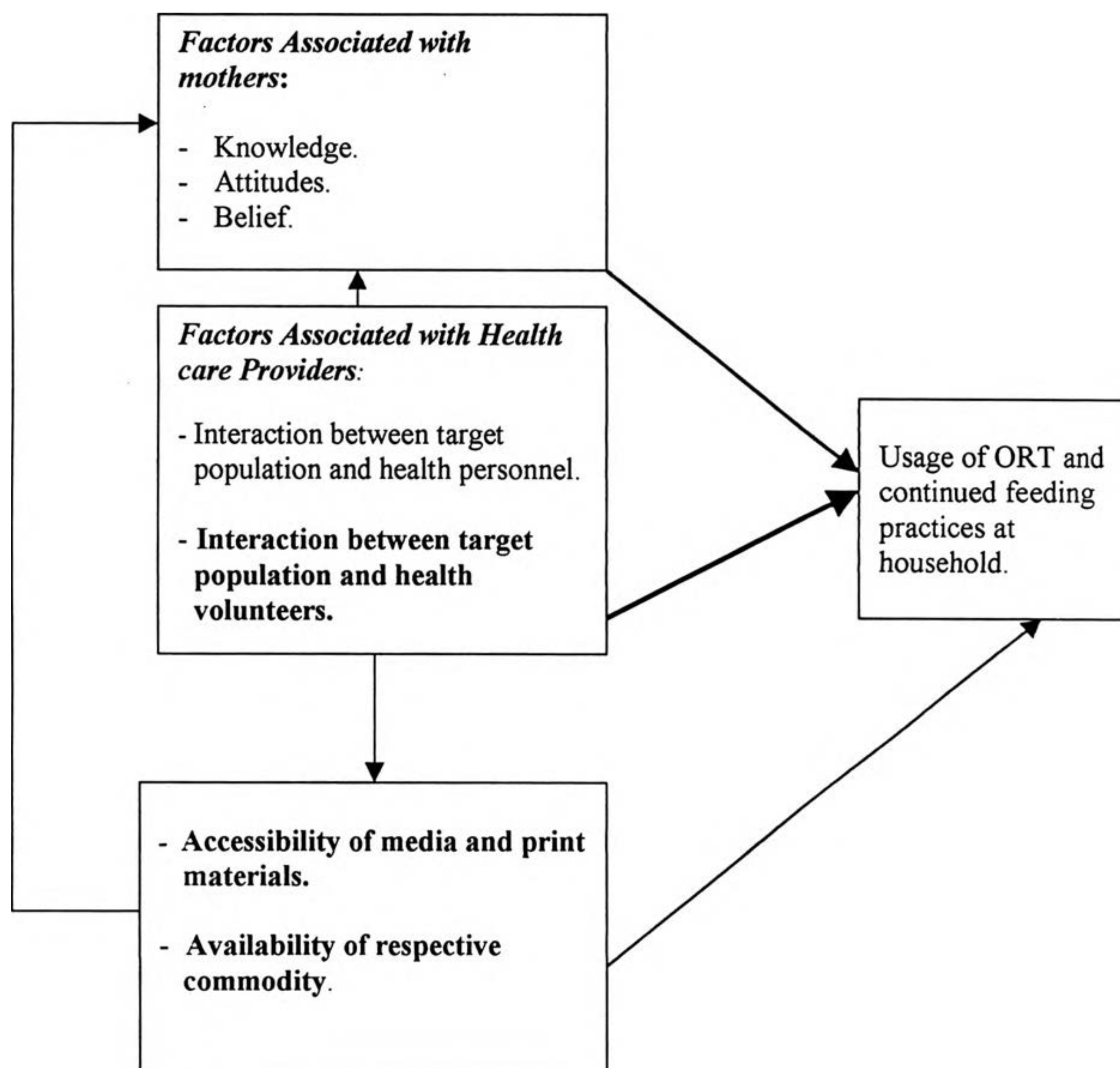
Effective access to media and printed materials as well as the provision of respective commodities can improve the usage. Effective access to media and print materials can improve the healthful behavior indirectly through improvement of health knowledge, attitudes, and beliefs suggesting change. Similarly, the provision of the respective commodity can improve usage directly as well as indirectly (through improve healthful knowledge, attitudes and beliefs). The focus of this study is on improving these factors since they are of a high priority.

Female community health volunteers play a more important role in this study. Because, they can affect the acceptance of ORT and feeding practices both directly and indirectly. The repetition of health education messages and practical demonstration can improve the acceptance of ORT and feeding directly. On the other hand, they can affect the acceptance of ORT and feeding indirectly through the improvement of knowledge, and attitudes of the target population including alteration of negative beliefs. At the same time, they can influence upon the availability of commodities (particularly ORS) by increasing the contacts with target population, because they keep ORS stock regularly. They can also improve the accessibility to media by complementing the health education messages provided through different media and printed materials.

Thus, it have been conceptualized that effective involvement of female community health volunteers, better access to media and round year availability of ORS can collectively improve the usage of ORT and feeding practices. The thick arrow and

the bold letters inside boxes show the relationship with the proposed intervention approaches. The conceptual frame work is shown in the following figure.

Figure 3.1: Conceptual Framework:



Source: Modified from Jintaganont et al. (1992). The impact of an Oral Rehydration Therapy Program in Southern Thailand. *Intervention. Research on Child Survival.Mc Graw- Hill Book Co.*

3.8 PROPOSED PROGRAM:

The Social marketing process requires the involvement of precise sequential phases like design, implementation, control and evaluation of the health education program. Therefore, it is necessary to review all phases of the intervention program. For convenience, the whole intervention program will be divided into three main phases including development, implementation and evaluation as follows:

3.8.1 First phase: Development of strategies:

The first attempt of the researcher will be to get approval of the proposed project. Thus, this proposal will be presented to the director of the National Health Education, Information Communication Center (NHEICC) and the manager of the National Control of Diarrhoeal Diseases Program (NCDDP) for approval after review and revisions if any. After approval, the researcher will request them to provide one representative from each offices (NHEICC and NCDDP) to work collaboratively on the proposed project. In addition, they will be requested to provide a recommendation letter to Nepal CRS Company to support the project effort by selling ORS in the study area. In this connection, one representative from Nepal CRS company will be asked to work as a coordinating body between the project office and Nepal CRS company. This team (researcher and the representatives from NHEICC and NCDDP) will further proceed to Laharepauwa Village, where the proposed health education activities will be performed. After the registration of the project in the district administrative office Rasuwa, one house will be rented as a project office closed to the Village health post. A

committee will be formed to implement the program effectively. (The potential committee members are given in Appendix 9).

The committee will request all 9 Female Community Health Volunteers (FCHVs) of the Village to work collaboratively with the project effort to provide face-to-face education and practical demonstration of fluids and foods recommended f ır diarrhea cases. Similarly, the health post staff will be requested to help the project efforts preferably by monitoring and supervision of FCHVs. The researcher and communication officers will get regular salary throughout the intervention period, where other committee members will be provided meeting allowances. In addition, health personnel will be provided field allowances for monitoring and supervision activities. The first phase will deal with four major activities: identification of the target audiences, identification of their problem perception and health related behaviors, identification of the possible channels of communication and to design and pretest t..e health education messages and media. These activities will be discussed in brief as follows:

3.8.1.1 Identification of target audiences:

Every health education programs are targeted towards a specific population group called the target population. The term target population is referred to as target audiences in the Social Marketing Program. Identification of the target audience (also known as audience segmentation) is done to divide heterogeneous audiences into a number of smaller homogenous audiences in order to design and offer the specific

messages and overall communication strategies based on the needs of that particular audience group.

Social Marketers include mainly four criteria to segment the target audiences, they are geographic, demographic, psychographic and behavioral (Kotler and Roberto, 1989, Israel et al., 1987). Geographic segmentation includes dividing the target population into different geographical units, such as: nation, states, regions, countries, cities etc. Psychographic segmentation divides the different groups of target population on the basis of life style or personality characteristics. Demographic segmentation analyzes the audiences into different demographic variables, such as: age, sex, family size, education, income etc. Behavioral segmentation divides the audiences into groups on the basis of their knowledge, attitude, use or response to a product or behavior. Most of the health education intervention audiences are grouped on the basis of demographic and behavioral segmentations. The target audiences for this study will be segmented based on the findings of two research questions:

1. Who in the family are the main responders of the children during DD?
2. Who in the family are exposed more towards the media and other educational programs?

The primary target audiences of this study will be the mothers of the children, because, they are directly responsible for day to day child-care. They are the primary responders to the children, especially during their sickness including DD. Either they treat the children at the home or take them to the health personnel if needed. On the other hand, they are also expected to be one of the responders to the media (such as:

Radio listening, Television watching etc.) so that they can responsd to the health education messages offered through different channels. Other potential target audiences can be the father and grandmother of the children, who can directly influence the primary target audiences (mothers) on using ORT and feeding. Similarly, health personnel, community volunteers, formal and informal leaders of the community can be the potential secondary or tertiary target audiences of this study, who can influence the primary target audiences by teaching, supporting or reinforcing towards the proposed practice.

Focus group discussion is an exploratory technique useful for gaining insides into psychological and behavioral aspects of the respondents. This technique can provide a detail information on social and practical enterprises, therefore, can be helpful to the researcher for identifying the roles of different members of the family/community in order to determine other target audiences (secondary, tertiary). A series of focus group discussions will be conducted among the mothers of children under five years of age to determine the other target audiences. Please refer to the data collection part of this chapter for the details of focus group discussion process and Appendix 10 for focus group discussion guidelines.

3.8.1.2 Identification of the needs:

The second important task of Social Marketing process (after the identification of target audiences) is to identify the needs of the target audiences. To increase the acceptability, the Social Marketing product (health education message, commodity or services) are designed according to the needs of the target audiences, identification of the problem perception and health related behavior of the target population is the best way to determine their needs. There are a number of psychological and sociocultural reasons behind the perception and behavior of any health problem. There fore, the Social Marketers should be able to understand these psychological or sociocultural reasons of the target population that are related with the proposed behavior change (usage of ORT and feeding).

All Sociocultural groups have heir own perception for any illness followed by causes, consequences and treatment pattern. As a result, the definition of health and illness may be perceived differently from one culture to another. What is considered o be illness in one culture may not be considered as illness in another culture. Although, some of these belief are very old and constantly changing still there are many types of beliefs in the country that adversely affect the proposed behavior changes. The success of any health education intervention is most likely when the designer identify these sorts of perceived reasons and offer the best solution through the health education messages. Thus, it is necessary to explore these sociocultural beliefs related to Diarrhoeal Diseases and its management and to acquaint the target audiences with the biomedical fact.

Ethnographic fieldwork (such as: participating observation) is the best technique to identify these sorts of beliefs related to causes, consequences and treatment patterns of any health problem. But, one of the main drawbacks of this technique is that it is too time consuming including a high cost (Israel et al., 1987). In such a condition, focus group discussion will be the alternative of ethnographic fieldwork. Therefore, focus group discussion will be conducted among the mothers of children under five years old in order to identify these beliefs associated with DD and the usage of fluids and nutritious foods during diarrhea. The process of conducting focus group discussion is given in the data collection part of this chapter. The interview guideline is given in Appendix 10.

3.8.1.3 Identification of the possible channels of communication:

Media are the prime channels for delivering the message in health education programs. The purpose of a Social Marketing campaign communication strategy is to effectively utilize the available media to promote the message, product sales or service access related to the proposed intervention program. To achieve this goal a Social Marketing intervention should develop well-crafted messages and disseminate it through the possible media with greatest reach and frequency.

Successful health education campaigns make effective use of mass media (such as: Radio, Television, Billboards, Newspapers etc.) that have better access and use in the target audiences. Thus, the third attempt of this phase will be to identify the possible channels of communication in the study area in order to fit the health education

messages and offer it towards most of the target audiences. Television, Radio and Newspapers are the common channels of communication in the country. The possibility of using these channels will be described in brief.

Television (TV) is an audio-visual media, therefore, ithas a high attention rating in the comparison with audio media only. It is considered to be one of the best forms of media for providing mass education in a short period. But, it is often expensive, and it's availability is limited in the developing world. The coverage of TV among the Nepalese women of reproductive age (which are the possible target population of this study i.e. the mothers of children under five year age old) is only 12.3 % (NFH Survey, 1996). Since Laharepauwa Village is a remote and in a rural part of the country, it can be assumed that the accessibility of TV will be very low, thus, the possibility of utilizing this media is also very low.

Newspapers are other popular sources of information in this era. However, this source is common only among literate people. The Nepal Family Health Survey, 1996 shows that the coverage of Newspapers among the Nepalese women of reproductive age is very low (5.3%). Therefore, the possibility of utilizing this media in Laharepauwa Village is also very low (where the target audiences are very lowly educated and even uneducated).

Radio is the most effective mass media that is used most in the developing world. It is seen that the rural people are very fond of Radio listening in Nepal, even during their regular work. The coverage of Radio is also relatively high (36.4%) among

the Nepalese women of reproductive age (NFH Survey, 1996) in comparison to TV and Newspapers. Therefore, Radio can be one of the most potential forms of media in this study.

Apart from the existing communication channels initiated by the government, it is necessary to utilize other channels that may have better access and usage in the study area. Thus, another attempt will be to identify other possible forms of media that may be feasible in the study area. One of such channel is Drama. It is seen that drama is an important source of communication in the country, where illiteracy and ignorance prevail. A Social Marketing intervention Program in the Gorkha district of the country showed that drama can be an important source of communication in remote rural areas of the country, where illiteracy and ignorance prevail (Frederick, 1992). However, there may be lack of a drama team in Laharepauwa Village, but it can be hired from Kathmandu, the capital city (which is only 120 km away). There are a lot of drama teams in Kathmandu including open theater and street drama expertise. "Sarvanam" and "Arohan" are two renowned street-drama teams. They have successfully performed many drama shows in the remote areas of the country on family planning, diarrhea and other health related issues. Thus, one drama team can be hired for some period as a channel to provide mass education. Billboards and wall painting can be other possible channels of communication in the study area. Similarly, flip charts can also be other supporting media, especially while providing face-to-face education.

The researcher will formulate a subteam of three members (researcher, and representatives from NCDDP and NHEICC) for the selection of communication

channels within the resource capability of the project. The attempt will be made to incorporate a balance mix of media and interpersonal channel, since they collectively support each other suggesting better results.

3.8.1.4 Design and pretest of health education messages:

Based on the characteristics of the target audiences and findings of their problem perception and health-related behaviors towards Diarrhoeal Diseases, the attempt will be made to design the health education messages. A joint subteam including researcher and the representatives of NHEICC and NCDDP will be involved in the development of health education messages. They will draft the message collectively and review with all the committee members. The draft will be further pre-tested among the community members (mothers of children under 5 year of age) and refined. The message will be re-drafted and re-tested continuously, unless most of the target audiences find it suitable and understandable to them. The purpose of testing and refining the message is meant so intervention program should be reach through the point of view of the audience themselves, in order to make it more acceptable and suitable.

The messages will be developed separately for each identified media. Precautions will be taken that the message should be culturally relevant, believable and obtainable within the existing socio-economic capacity of the target audiences. After the final approval of the message from the view of target audiences, it will further be reviewed with each communication specialist in Kathmandu. For example: Radio

message will be reviewed by Radio announcers and the drama theme will be reviewed with the director/actors of the drama team.

At least two types of Radio messages will be developed, which will be pre-tested among the mothers of children under 5 year old in the Village (potential primary target audiences). They will be asked to choose the appropriate one, between these two messages. Similarly, the attempt will be made to identify the reactions of the target audiences on the content of messages including both liked and disliked parts. In addition, the target audiences will further be asked to provide their suggestion for making the message more understandable and acceptable among the target population

The drama will also be pre-tested among the target audiences, before it's duly shown. During pre-testing, the target audiences will be asked many questions related to the content, understandability and acceptability of the message including both liked and disliked parts. The messages and the story of the drama will further be corrected until most of the target audiences find it interesting, understandable and acceptable.

Similarly, printed materials, such as: posters, pamphlets, flipcharts etc. will be pre-tested among the potential target audiences to provide their views on the message, pictures etc. About 2-3 types of messages and pictures for each type of printed materials will be designed target audiences asked to choose the most appropriate one (based on understandability and acceptability). If these pictures or messages are not understood well, it will further be revised and pre-tested again until it is more understandable and acceptable. The message pre-testing will be done by a series of

Focus Group Discussions with the mothers of children under 5 years of age. Similarly, after a six month interval, during the process evaluation, this message will further be pre-tested among the target audience and corrected if felt necessary. (Please refer to the process evaluation part of this chapter for more details). Details of the focus group discussion process are given in the data collection part of this study. Please refer to Appendix 11 and 12 for the interview guidelines of Focus Group Discussion.

3.8.1.5 Setting Objectives of the project:

The main concern of the intervention program will be to create awareness among the mothers of children under 5 years of age to improve the usage of ORT and feeding practices. Thus, attempts will be made to provide basic knowledge about DD including its causes, consequences and effective case management at household level. The actual objectives of the project will be set after consultation with NCDDP/NHEICC, based on the findings of preliminary research (such as: characteristics of the target audiences, their problem perception and health related behaviors, availability of media etc). However, the potential project objectives will be as follows:

1. To improve the knowledge of the target population about Diarrhoeal Diseases including its causes and possible dangers (such as: dehydration, under nutrition and other complications).
2. To improve the knowledge and practices of the target population on increasing the amount of fluids, and foods during Diarrhoeal Diseases.

3. To improve the knowledge and practices of the target population about the correct preparation of fluids, foods and Oral Rehydration Salt solution along with the required quantity.

4. To improve the knowledge of the target population on recognizing different signs of diarrhea associated problems.

5. To decrease the number of severely dehydrated cases (at most) at Village health facility as well as community level.

3.8.2 Second Phase: Implementation part:

Being multidisciplinary in approach, the proposed intervention program requires experts from a variety of disciplines. So as to keep costs low through the sharing of facilities, training and supervision, and to maximize health benefits through different strategies, the proposed intervention program will be fitted within an existing organization and work in an integrated way with other organization too. The project team will work hand in hand with different community organizations of the study area.

The researcher will be the manager of the project, who will be liable for overall intervention activities including planning, management and researches. He will be directly involved in the formulation of Social Marketing strategies, such as: the identification of target-audiences, identification of their needs, identification of possible media as well as development of health education messages. Similarly, he will be involved in data analysis, findings and recommendation parts of evaluations.

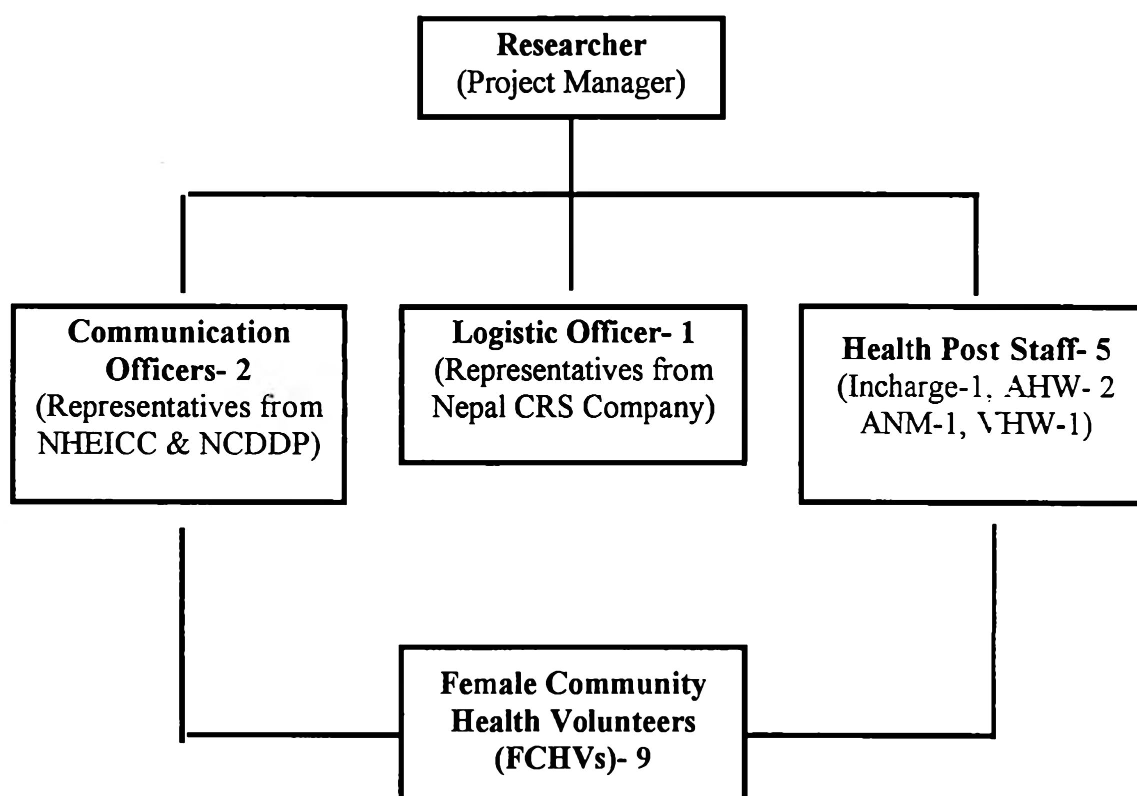
There will be two communication officers beneath the project manager. These two communication officers will be the representatives from NHEICC and NCDDP. They will help the researcher to design and pretest messages for different media identified at the Village. They will work the coordinating body between the project staff and their employer institution (NHEICC and NCDDP). They will help the researcher for data collection, interpretation and analysis held during study period. They will be directly and regularly involved in the project activities along with the project manager throughout the intervention period.

The Logistic manager will be the representative from Nepal CRS Company and mainly be responsible to make regular availability of ORS in the commercial channels, such as: pharmacy, grocery shops etc. He will work independently in his own employer institute, but will work as a coordinating body between the project office, distribution outlets and Nepal CRS Company. He will contact the project staff periodically or whenever requested.

Five health personnel (one in-charge, two auxiliary health workers, one auxiliary nurse mid-wife and one Village health worker) of the Village health post will be requested to be the committee members of the project. The project staff will work hand in hand with them. The health personnel will help the project activities by providing education to the mothers/caretakers, while visiting the health post for getting services for their children. During education, health personnel will convey the project messages related to increased amount of fluids and foods during each case of diarrhea and to use ORS only when the children get dehydraed. In addition, the health post staff

will help the project staff to monitor and supervise FCHVs in the community (the details are given in monitoring and supervision part of this chapter). The network of the proposed intervention will be as given in figure 3.2.

Fig 3.2: Network of the proposed intervention program



The intervention program will deal with two main health education approaches. One approach will be the mass media, such as: Radio, Drama, Bill boards, Wall paintings, and Printed materials, such as: Posters, Pamphlets, Flip charts etc, and another approach will be the face-to-face education and practical demonstration related to ORT and continued feeding. In addition, the attempt will be made to involve Nepal CRS company to sell pre-packaged ORS in the commercial outlets of the study area.

3.8.2.1 Usage of mass media:

The finalized health education messages (designed, pre-tested, re-designed and re tested) will be fitted on the respective media and disseminated towards the target audiences with possible frequency. For Radio programs, the agreement will be made with Radio Nepal, a government undertaking Radio station. Radio Nepal will be requested to broadcasting the program at a possible subsidized rate. In this connection, NCDDP and NHEICC will be requested to provide recommendation letters to Radio Nepal. A short Radio message of about 4-5 minutes will be broadcasted daily at morning and evening with the project messages related to ORT and feeding. In addition, a prerecorded program of about 30 minutes will be broadcasted every week, preferably on Saturday morning or evening when it is the most convenient for the target audience. The Radio program will be conducted throughout the intervention period.

Similarly, a drama team will be hired from Kathmandu, which will show a drama in every 9 wards of the Laharepauwa Village. Just after the duly inauguration of the intervention program, the drama will be showed respectively from ward number 1 to 9. After nine continuous shows the drama team will return to Kathmandu. Another drama show will be done after 6 months period (after process evaluation) or any other times, if the committee feels the necessity of other shows.

One billboard will be placed at the center of each ward in order to provide the impression/information to the passers by. Similarly, wall paintings will be done at least at one of the busiest areas in each ward. The billboards and wall paintings will contain

the logo and the project messages related to the increased amounts of fluids and foods during diarrhea.

The printed materials, such as: pamphlets, posters will also be developed and distributed to Village government offices, ward offices, schools, Village health pos:, the formal and informal leaders of the community and other interested community people. Pamphlets will deal with various topics, such as: introduction of the project, objectives of the project, A basic knowledge about Diarrhoeal Diseases, the emergence of ORT and continued feeding etc. Posters will contain the logo and the project messages. In order to maintain consistency and uniformity in all health education messages, the final approval will be done with the chief (manager) of NCDDP.

3.8.2.2 Face-to-face education:

FCHVs are the members of the mothers group of the community. The community will select one woman to work as a volunteer and the Health post in-charge trains her for 24 days on Primary health care components including DD. Most of the old FCHVs are provided refresher training at between six months and one year periods. At present also all FCHVs are providing interpersonal communication to the community people up to the household level in need. Since they are already trained and performing the same job under the monitor and supervision of health workers, a separate training program for them is not feh as felt necessary. However, the committee will review their overall performance on CDD services. In addition, they will be rehearsed one or two days for performing the education and practical demonstration in

a better way. Every FCHVs from each of the 9 wards will be requested to work as the interpersonal communicator of this program.

FCHVs will be the key people of the proposed health education program. During face-to-face education, they will repeat the project messages, and thus, complement the health education services provided through different mass media and print materials. Similarly, they will try to identify the obstacles related to the access and usage of mass media and report to Village health worker (Please refer to the monitoring and supervision part of this chapter for details). In the meantime, they will clarify certain confusion, and curiosities of the target population that are related tc the proposed behavior changes (usage of ORT and feeding). They will also demonstrate the correct preparation of ORS and how to preparing and feed the recommended home fluids in the proper way.

3.8.2.3 Availability of Respective Commodity

NCDDP recommended home fluids are food based fluids, such as: gruel (thick drink made from cooked rice, wheat, maize, sorghum, millet, cassava etc.), soups (of legumes, cereals, or potatoes or meat or fish), Yogurt etc., which are easily available, familiar and culturally acceptable in most parts of the country including Laharepauv'a Village. The concern is to promote these things so that people con use it in time. The dehydrated cases need ORS, which will be available either from FCHVs in the community level or in the Village health post free of cost. In addition, Nepal CRS company will be requested to expand their network for the sale of ORS in other

commercial outlets of the Village. The project will contribute some budget to purchase ORS and encourage the community to provide some community resources for this. On the recommendation of committee members, this budget will be utilized to buy ORS (if not available in the respective health post), for those who cannot buy.

3.8.2.4 Monitoring and supervision of services:

"Social Marketers cannot achieve timely and efficient implementation, if they lack an appropriate control system. Although campaign management can be categorized into planning, implementing and controlling function, managing, in practice is a continuous process. Social Marketers do their work by continually assessing, planning, implementing, controlling, evaluating and re-planning their programs (Kotler and Roberto, 1989)."

Good monitoring and supervision systems are essential parts of Social Marketing control system. Social Marketers will work on the day to day activities and tasks, where many things can effect these activities. Therefore, a close monitoring and supervision system will be applied in order to control the ongoing activities of the intervention program. The main concern of monitoring and supervision will be to: maintain a routine recording/reporting system, timely conduction of health education services (mass media communication and face-to-face education) and to maintain the quality of the provided health education.

By the nature of the proposed intervention program, the researcher, the communication officers, logistic officer, and the Village health post staff will work collaboratively at project office level. Any identified problems/obstacles related to the day to day work will be reported immediately and corrected collectively. For identification and correction of the problems, the committee meeting will be held routinely (every month) or whenever necessary based on the nature of the problem. A "Meeting Review Minute Worksheet" will be developed (Appendix- 13), which will deal with the issue of the meeting, summary of decision and conclusion/action to be taken. The worksheet will be utilized in every meeting and the conclusions will be kept in record. For convenience, monitoring and supervision part will be described separately.

a. Monitoring:

The main purpose of monitoring in the purposed health education services is to establish a regular recording/reporting system, which shows the usage of ORT and feeding practices of the target population. In this connection, a diarrhea history form will be developed (Appendix 14) and distributed among FCHVs and Village health workers. They will fill out this form and report it to the health post Village health worker (VHW) register (according to the government policy, Village health workers will use a register, which consists of monthly morbidity-mortality records that occur in each ward). This form will collect information about diarrhea morbidity that occurred in each ward including the status of dehydration and usage of ORT and feeding.

Another diarrhea information form (similar to diarrhea history form) will be developed, which will be utilized in the health post. This form (Appendix 15) will collect additional information (apart from the diarrhea history form) including knowledge of the target population on recognizing the signs and symptoms of diarrhea associated complications, types of three main fluids and foods provided at household level etc. Other sources will be diarrhea register (Appendix 17), which will gather brief information about each diarrhea case visiting to the heath post, followed by age, sex, address, weight, status of dehydration, medical treatment history (usage of ORS/IV fluids / Other medicines) and the result of the treatment (improved, death, referred) at the Health Post.

b. Supervision:

Supervision in the proposed program is to provide a routine health education services at the community level and to maintain the quality of the provided health education messages. For this, a routine supervision activity will be conducted throughout the intervention period. Supervision will be done at the community level to observe the overall performance of FCHVs at the work place. As already mentioned, FCHVs will play an important role in this health education program, because, they can influence the ORT and feeding practices of the target population from different sides. For example, they can enhance and complement the educational messages provided through mass media and print materials, and thus, improve the health knowledge, attitudes and behavior of the target population. In the mean time, they can collect different information relating to the access and usage of the offered media/messages etc. and report to the project office. Similarly, they can collect information from the

target population relating to the availability of ORS in the health post as well as in commercial outlets.

Primarily, as the existing government policy, the health post staff (in-charge, AHW, ANM, VHW) will monitor and supervise FCHVs. In principle, there will be one VHW in a Village health post, whose main responsibility is to supervise FCHV at the community level and report routinely every month in the health post. A checklist will be developed (Appendix 16), which will be utilized by VHWs during supervision. T' e project staff will also join VHW or other health post staff in the supervision. During supervision, the check list will be utilized to observe the overall performance of FCHVs such as: the time provided for education, repetition of messages, the quality of provided education, facial expression, practical demonstration, usage of supportive media etc. In addition, the supervisory team will observe whether FCHVs ask the target population different questions relating to the exposure/non-exposure, parts that were liked and disliked, convenience and inconvenience of using particular media etc.

During supervision, the attempts will be made to solve the problems/obstacles identified while providing face-to-face education and practical demonstration. In the mean time, the supervisory team will provide necessary skills to FCHVs in order to perform health education in a better way. The supervision will be done every three months. During supervision, the supervisory team will visit every FCHVs in each of the nine wards separately at their respective ward.

3.8.3 Third Phase: Evaluation of the intervention program:

In a simple words, evaluation is the gathering and analysis of information intended to guide decisions. The term can be referred to different types of data collection applied towards many types of decisions. Evaluation helps to measure outcomes of the intervention program in terms of determination whether or not intervention program was successful to change the target audience behavior either in quality (improvement) or in number (increasement). Evaluation in the proposed intervention program will be done to determine two main components: whether the offered media and messages are accessible, believable and obtainable within the target audience (process evaluation) and whether there is an improvement in the usage of ORT and feeding practices of the target population (impact evaluation). Both process and impact evaluations will be described in brief as follows:

3.8.3.1 Process evaluation:

Most of the health education intervention programs deal with process evaluation, while the project is in operation. "When evaluation is directed toward process, the assumption is that if the process is as design, then the effect on the client is predictable. For this reason, in addition to the fact, that it is often much easier o evaluate the process than impact or outcomes (Dignan and Carr, 1992)".

Process evaluation conducted mainly with the target audiences and project staff, tends to be small scale and designed to furnish rapid feedback to improve the identified problems/obstacles. In a health education program operation, process

evaluation can be conducted at periodic intervals up to 2 to 4 times a year. The process evaluation of this intervention program will be done six months after the implementation of the project. The evaluation will have two main concerns: first improvement of the process for implementing the health education services, and the second to improve the access and usage of media offered including the contents of the messages. Information will be collected through project staff and target audience. Project staff will be interviewed to identify different problems/obstacles identified during the project operation. Similarly, target audiences will be interviewed to identify their views of the media and messages offered.

a. From the view of the target audiences:

The target audiences will be interviewed to express their views towards the health education services (media, messages). offered A health education program is more successful, if the services offered have more access and usage among the targeted population. Thus, different questions relating to the access and usage of the media/messages will be asked to the target audiences. The Process of the focus group discussion is given in the data collection part of this chapter. The interview guidelines are given in Appendix 18.

b. From the view of the Female Community Health Volunteers:

FCHVs are key people of the proposed health education program. The success of the proposed health education services hinge between their action and many factors can influence their day to day activities during the program operation. The success is

most likely when these factors are identified in advance and solved at the earliest possible. Time thus, FCHVs will be asked to identify these problems/obstacles relating to the project operation. The information will be collected through the focus group discussion technique. Details of the discussion is given in the data collection part of this chapter. The interview guidelines are given in Appendix 19.

Apart from FCHVs and target audiences, the information will also be collected through the committee members of the project. But, these discussions will be more informal. The findings of each discussion will be noted and kept in records, which will be utilized for further improvement. These sorts of informal information collection will be conducted throughout the intervention program followed by prompt possible corrections.

3.8.3.2 Impact evaluation:

Impact evaluation is an important evaluation in a health education intervention program. Impact evaluation is done to determine whether the methods and activities utilized during the program intervention result in the desired immediate changes of the target population (Dignan and Carr, 1992). The desired immediate changes of the proposed intervention program is the improvement of the knowledge and practices of the target population towards ORT and feeding practices, which will be confirmed through different approaches.

The use of ORT and continued feeding includes a cluster of practices, such as: the use of increased amount of fluids, continuation of nutritious foods, the usage)f ORS, correct preparation of the ORS solution, knowledge on seeking external (medical) help etc. Thus, a variety of related components will be evaluated to determine the improvement of the proposed behavior changes of the target population. Thus, the following components will be evaluated to determine the impact of the intervention program:

Knowledge of diarrhea:

- Definition of diarrhea.
- Causes of diarrhea.
- Dangers of diarrhea.
- Usage of fluids/foods during diarrhea.
- Types of fluids/foods to be used.
- Quantity of fluids/foods to be used.
- Usage of ORS solution.
- Quantity of ORS solution to be used.
- Correct preparation of ORS solution.
- Recognition of diarrhea associated signs/symptoms for seeking medical help.

Usage of ORT and Feeding:

- Usage of fluids/foods during diarrhea.
- Types of fluids/foods used during diarrhea.
- Quantity of fluids/foods used during diarrhea.
- Usage of ORS solution including the quantity used.
- Where did they learn this idea?

- When did they first practice the usage of fluids/foods during diarrhea?
- Are there any hindrances (from family/community members) on using these practices?
- Are they satisfied with this practice (usage of fluids/foods during diarrhea)?
- Will they continue this practice in the future?

Improvement of the above components will be determined through three different views: from the view of the target audiences, from the view of the key informants and by reviewing the service statistics of the Village health post. The details of each will be described in the data collection part of this chapter.

3.9 STUDY POPULATION:

The actual study population of this study are the children under 5 years at age of Laharepauwa Village. According to the census of 1991, there are 653 children of this age group in Laharepauwa Village. Therefore, the mothers of these children will be t..e primary study population. This intervention program will be focused primarily to change their behavior. Similarly, the proposed intervention program is intended to provide education to other family/and community members (since they also can influence the health behavior of the primary study population, directly or indirectly). Thus, the entire community members (such as: fathers, grandmothers, grandfathers of the children as well as formal and informal leaders of the community etc.) will be other possible study populations (secondary or tertiary) of this study.

3.10 DATA COLLECTION:

The relevant information will be collected through three different techniques: Focus group discussion, key informant interview and the consultation of service statistics. Focus group discussion will be the main data collection technique that will be conducted in many series throughout different stages of design, implementation and evaluation process of the proposed intervention program. During the process, the focus group discussion will be conducted to identify various components of the intervention programs, such as: the target audiences, their problem perception and health related behaviors, potential channels of communication, pretesting the health education messages/media, and to identify access and coverage of the offered health education services. Furthermore, this technique will be utilized to collect information during impact evaluation in order to determine the improved (determination in quality) evaluation components related with the target population.

Another data collection technique will be key informant interviews. This technique will be utilized for impact evaluation only. Key informant interviews will be conducted with female ward members and primary school teachers to determine improved health knowledge and practices of the target population (in quality) from their (key informant's) view. This technique will be utilized to increase the accuracy of research results emerged from focus group discussion technique. Similarly, the review of service statistics will be another data collection technique of this study, which will show the decreased trend of dehydration (both in health post and community) and improved usage of ORT and feeding practices in the community. The data collection process will be described in brief as follows:

3.10.1 Focus Group Discussion:

a. Focus group discussion with target audiences:

A focus group discussion is a small group of people (respondents brought together and guided by a moderator through an unstructured, spontaneous discussion about some topic/s in order to draw out ideas, feeling, and experiences in certain issue/s). An Advantage of focus group discussion is that they depend on relatively small groups, and therefore are less expensive. An Ideal number for a focus group is 6-12. If the group is too small the ideas cannot be generated properly. If the group is more than 12, there will be the possibility of developing sub groups with several conversations going at once, making it more difficult to moderator to stay on top of the discussion.

The main respondents of the discussion will be the mothers of children under 5 years of age (the most potential primary target audiences of this study). Since the discussion will be done for different purposes, the contents of the discussion will also be different. (Please refer to the appendices for the details of the contents relating to each focus group discussion).

Focus group discussion will be conducted among the mothers of children under 5 years old, which will be selected purposively from each of the nine wards (Please refer to the sampling part of this chapter for details). The respondents will be selected to be new to the focus group technique and also not an expert in the subject matter. Precautions will be taken that they should not be totally ignorant in the subject

matter. They will be grouped in such a manner that they will be unknown to each other as far as possible.

The discussion will be held in the project office or at any place and time convenient to the respondents. The discussion will be conducted in the Nepali language, which will be easy and understandable to both groups (research team and the respondents). There will not be a strict time limitation, but it is expected to be around one hour to ninety minutes. The discussion will be conducted with the help of a moderator and a note taker, who will be the communication officers of the project (the representatives of NCDDP and NHEICC), during design, implementation, and process evaluation. To avoid the biases, two teachers from neighboring high schools will be requested to be the moderator and note taker during the impact evaluation. A rehearsal will be performed before the discussion for better performances.

The moderator will start the discussion with the introduction of the research team, introduction of participants, and the objectives of the discussion. Similarly, the permission will be taken to use a tape-recorder and to take photographs. The discussion will be made in a non-formal, non-threatening environment. The moderator will equally encourage every respondent to express their ideas, feelings, concepts etc. related to the different components of the discussion. In addition, the moderator will observe the facial and body expression of the respondents while answering particular questions, which will be included in the findings.

The note-taker will note down all the information explored during the discussion. Similarly, he will record the whole conversation by a tape recorder. The researcher will sit in one corner of the room as an observer. The findings of the discussions will be interpreted and analyzed by the researcher as early possible with the help of the communication officers.

b. Focus group discussion with Female Community Health Volunteers:

One focus group discussion will be conducted among the nine FCHVs during the process evaluation for the identification of different problems/obstacles relating to the project operation. Every FCHVs will be selected purposively from each of the nine wards and interviewed collectively. The discussion will be more informal in the comparison with the discussion with the target audiences (mothers of children under five). To avoid the biases, none of the project staff will be involved in discussion. The neighboring high school teachers will be the moderator and note takers. The other process of the discussion will be generally same as with the target audiences.

3.10.2 Key informant interview:

Key informant interviews are informal, conversational interviews aimed at learning about peoples views on the topics of interest, to learn their terminology and judgments and to understand to their perceptions and experiences. Mwenesi, 1994 writes that "A Key informant is a person who is specially knowledgeable, at least in some subjects or topics of interest and with whom the interviewer develops an ongoing relationship of information exchange and discussion. Most people act as informants

without realizing this, especially when they offer information in response to questions about their every day lives.

The difference between a general informant and a key informant is that general informants primarily give information about themselves, where as key informants provide information about others or specific situations, events and conditions in the study area. Thus, a key informant is a kind of expert on some cultural, political or health aspects of the community beyond his or her own personal beliefs and behaviors, Both men and women, formal and informal leaders, professional and 'ordinary' people can be key informants."

The potential key informants of this study will be the female ward members and primary school teachers. (Please refer to the sampling part of this chapter for the selection of key informant respondants). Key informant interviews needs a series of contacts between the interviewer and the respondants in order to built trust and get better information. Therefore. the interviewer (the researcher) will visit the respondent a number of times without hampering their day to day activities. The interview will be conducted either in the project office or other places and times convenient to both researcher and respondants. To avoid external influences, only one respondant will be interviewed at once. Every meetings will be an informal conversation aimed at gaining a deeper understanding by verifying earlier information, by correcting original misinterpretations and by filling information gaps. The interviews will be carried out in the Nepali language, which will be tape-recorded, after taking the consent of the respondants.

The interview guidelines will be developed in advance based on the indicators of impact evaluation (Please refer to appendix 21.) The guideline will contain open-ended questions.

3.10.3 Review of service statistics:

Another important technique of data collection for impact evaluation will be the review of service statistics in the Village health post. Service statistics will be utilized to determine the decreased trend of dehydration cases in health post as well as at the community level. The Annual report of department of health services, 1994/95 indicated that 48.8% of children visiting the health facilities of Rasuwa District are suffering from diarrhea associated dehydration and out of them 20.1% are severely dehydrated. (At the moment, we do not have the actual situation of Laharepauwa Village, thus, the same number of Rasuwa District will be considered for this study). The proposed intervention program aims to decrease the existing number of dehydration cases at most (both in the Village health post and the community).

Services statistics will be collectively reviewed through diarrhea history form (Appendix 14), diarrhea information form (Appendix 15A and B) and diarrhea register (Appendix 16). The Diarrhea history form (Appendix 14) will show the number of diarrhea cases that occurred in the community level. This Form will be utilized by FCHV and VHW, which will be reported every month in the Village health post along with the VHW register. This Form will provide the information of each diarrhea cases followed by name, age, sex, ward etc. Furthermore, this form will be reviewed to

determine the status of dehydration and the treatment provided at home (usage of fluids/ foods/ORS etc.).

The Diarrhea Information Form (Appendix 15) will be reviewed for additional information of diarrhea history form including the weight of the child, presence of other diarrhea associated problems, three main types of fluids/foods provided at home during diarrhea and recognition of diarrhea associated complications by the mothers/caretakers. The Diarrhea Register (Appendix 16) will be reviewed for additional information including treatment provided at health post (usage of ORS, IV fluids and other drugs) and the result of treatment (improved, died, referred) at health post. In addition, the VHW Register will be reviewed for each diarrhoeal morbidity, mortality that occurred in all nine wards. Thus, the review of the above Forms will provide precise information about the numbers of diarrhea cases, age, sex and address of each diarrhoeal case, usage of ORT and feeding at community level, trend of dehydration and under-nutrition (related to diarrhea) including mortality in community as well as the health post.

3.11 SAMPLING

3.11.1 Focus group discussion:

3.11.1.1 Focus group discussion with the mothers of children under five:

For each focus group discussion, one mother will be selected purposively frc n each of the 9 wards. Their name list will be available from the Village health workers (VHW) of the Village health post or from the recent census. The entire name list will be divided into two groups: high privileged group (HPG) and low privileged group (LPG).

LPG of Laharepauwa Village represents relatively low educated and low in-come group people. They include the people from Damai, Kami, Sarki, Sunar etc. The other groups of the population will be considered as HPG, which are relatively educated and higher economic groups. The name of the mothers from each ward will be selected randomly by a lottery system. The selected samples will have explained to them the purpose of the discussion and asked whether they will accept to participate. If some samples show unwillingness, others will be selected by the same process. Two focus group discussions will be conducted with HPG and two with LPG, with a total of four discussions. However, the actual number of discussions will be decided based on the availability of the required information. The interview will be continued in many series, learning more each time, until additional conversations will not produce any new or deeper insights.

3.11.1.2 Focus group discussion with FCHVs of Laharepauwa Village:

According to the government policy there should be one FCHV for 150 people in the mountain region of the country, which suggests that there will be one FCHV in each of the 9 wards of Laharepauwa Village. All FCHVs will be selected purposively for process evaluation. Altogether there should be 9 FCHVs in Laharepauwa Village and all of them will be requested to take part in the discussion.

3.11.2 Key informant interview:

A Key informant is a kind of expert on some cultural, political, social or health aspect of the community beyond his or her own personal beliefs and behaviors. Thus,

the possible respondents of this study will be the Village chief, ward chief, and female ward members of the Village. These people are political people in the Village, who are elected by the community members. Other possible respondents are primary school teachers and government staffs from other ministries (such as: agricultural, irrigation, forestry, road etc.). Since most of the primary school teachers should be local people, they have better access to the community and therefore are, considered as potential respondents for key informant interviews.

Other possible key informants are Village health post staffs: in-charge, one auxiliary health worker, one auxiliary nurse midwife and one Village health worker. In addition, FCHVs of all 9 wards are also other potential key informants. But, as most of these people, will be involved in the project activities (such as Village chief, health post staff, FCHVs will be committee members of the project) therefore, in order to reduce biases, they will not be included as the respondants.

The potential key informants will be the female ward members (FWM) (according to the government policy, there should one female community member in each ward, who are relatively educated and knowledgeable community women) and primary school teachers. Every female ward member will be selected purposively from each of the 9 wards. There will be a total of nine FWM in Laharepauwa Village, therefore, all of them will fall under this study. According to the profile of the Rasuwa District 2051, there are seven primary schools in Laharepauwa Village with total of twenty-eight teachers. One teacher from one school will be selected by a lottery system. So that there will be seven primary school teachers and nine FWM with a total of

sixteen key informants. However, the above are possible key informants only. The actual number and types of respondents will be determined based on the availability of the required information during the real study.

3. 12 ACTIVITY PLAN WITH TIMETABLE:

The study will be a seventeen months intervention program from September 1998 to January 2000. The whole study is divided into three main phases: design, implementation and evaluation. The summary of the activity plan will be as follows:

a. First Phase- Design:

The first phase will begin from September and end by December 1998. These first four months will be utilized to identify the target audience, their needs (based on their problem perception and health related behaviors), possible channels of communication as well as to develop and pretest the health education messages for each identified channel of communication. Focus group discussion will be the data collection technique, which shall be conducted in many series throughout this phase.

b. Second Phase- Implementation:

The Second phase will be started from January 1999 for six continuous months. During this period, multidisciplinary health education services will be offered for the target audiences. Different channels of communication will be utilized to provide health education through possible reach and frequency. In addition, FCHVs will provide face-

to-face education and practical demonstration of fluids/foods/ ORS solution preparation. This phase will end by June 1999.

c. Third Phase- Evaluation:

The third phase will be of a 7 months period. This phase will deal with two types of evaluation: process evaluation and impact evaluation. Process evaluation will be done in July 1999 in order to detect the problems/obstacles related to the project operation including the reactions of the target audiences towards the services offered (message, media). The corrective actions will be taken based on the findings of the process evaluation, which will be forwarded to the authorities concerned (NCDDP and NHEICC). The intervention program will be continued for six more months and afterwards the impact evaluation will be done.

The Impact evaluation will be done on January 2000 in order to determine the immediate effect of the intervention program. The desired changes of the intervention program (usage of ORT and continued feeding practices of the mothers of children under 5 years of age) will be determined through three different views points: from the view point of the target audiences (mothers of children under 5 years of age), from the view point of key informants (female ward members, primary school teachers) and the review of service statistics. The findings of the evaluation will be forwarded to NCDDP and NHEICC, and therefore it will be, decided whether or not the intervention program should be sustained. The timetable of the proposed program is given in Table 3.1.

Table 3.1. Time Table of Activity Plan:

Activities	September 1998	October 1998	November 1998	December 1998
First Phase (September 1998 to December 1998) :				
a. Registration of the project.				
b. Settlement of the project office.				
c. Formulation of the committee.				
d. Data collection by focus group discussion:				
- Identification of the target audiences.				
- Identifying their needs.				
- Identification of possible channels of communication				
- Development of health education message.				
- Pre testing/correction and further pre-testing.				

Activities	January 1999	February 1999	March to June 1999		
Second Phase (January 1999 to June 1999):					
a. Dissemination of health education messages through possible mass media channels.					
b. Face-to-face education/ practical demonstration.					
c. Monitoring and supervision of health education Services.					
d. ORS sales through different commercial channels.					

Activities	July 1999				
Third Phase (July 1999):					
1. Process Evaluation:					
a. Focus group discussion with target audiences.					
b. Focus group discussion with FCHVs.					
c. Data analysis, findings and correction					
d. Report writing and reporting to NCDDP and NHEICC.					

Activities	January 2000				
2. Impact Evaluation (January 2000):					
a. Focus group discussion with target audiences.					
b. Interview with key informants.					
c. Review of official statistics.					
d. Analysis and discussion of data.					
e. Report writing.					

3.13 BUDGET AND MAN POWER FOR THE STUDY:

The tentative budget and manpower required for the proposed intervention program will be as given below. Budget requirements have been divided into three main titles: Budget for personnel, Budget for office and Budget for operation. The details of each title is shown on the following table:

Table 3.2. Budget for the proposed intervention program.

S. No.	Particular	Number	Duration	Per month	Total Amount (in US$)
A. Budget for personnel:					
1.	Project manager	1	17 months	258.00	4386.00
2.	Communication officers	2	17 months	172.00	5848.00
B. Budget for Office					
1.	Renting the house		17 months	52.00	884.00
2.	Official accessories		17 months	-	1000.00
C. Budget for Operation:					
1.	For potential media @ 20% of above total cost		17 months		2423.60
2.	Meeting allowances and field works @ 5% of above total cost		17 months		727.08
3.	Transportation, stationery and miscellaneous @ 5% of above total cost		17 months		763.43
Total					16,032.00

3.14 HUMAN RESOURCE REQUIREMENTS:

To minimize additional time and the cost required for the preparation for human resources, the intervention program has been designed to utilize the existing manpower as much as possible. Thus, additional human resources will not be required. Most parts of the intervention program (such as: design, implementation and process evaluation) will be performed by the researcher and communication officers. Both of the communication officers will be requested from the Department of Health Services (from National Control of Diarrhoeal Diseases Program and National Health Education, Information Communication Center). They will help the researcher from the beginning of the program including the selection of communication channels, development of health education message, pre testing of the offered messages/media etc. up to the process evaluation. Two high school teachers will be requested from the Village high school to conduct focus group discussion for impact evaluation. Thus, the required human resources will be obtained from the existing organizations.

3.15 SUSTAINABILITY OF SERVICES:

Social Marketing in this study has been utilized as the trade name of multidisciplinary approach intended to improve the low usage of ORT and feeding practices. The proposed health education program will be dealt with three different approaches: modification of existing communication channels, utilization of female community health volunteers and introduction of ORS sales in commercial outlets in the study area. The sustainability of each approach will be decided in brief as below.

3.15.1 Mass media:

In 1992, NCDDP felt that the implementation activities were faltering, and thus, the government decided to revive the program (Children and Women of Nepal, 1996). As a result, a "National Reactivation Program" was designed and implemented sequentially in each of the 5 regions of the country between 1993 and 1995. Since then, different attempts are being made to improve CDD services including the usage of ORT and feeding practices (Reactivation Report, 1996). Thus, it is hoped NCDDP will support this approach, if the research results show positive impact towards the proposed behavior change.

Utilization of mass media is a long-term strategy of NCDDP (Annual Report, 1994/95), and thus, committed to continue mass media campaigns to increase public awareness. Thus, NCDDP will be requested to provide regular budgets to sustain mass media channels of communication. Thus, the mass media communication can be continued within the yearly budget. NHEICC will be requested to timely modify health education messages and mass media channels of communication in the near future.

3.15.2 Face-to-face education:

Face-to-face education is a regular responsibility of FCHVs. At present also, every FCHV is performing the same job. Since FCHVs work voluntarily, additional financial burden is not necessary. FCHVs want moral recognition from the community as well as support, timely supervision and feedback from health personnel. Therefore, the community leaders will be recommended to recognize

FCHVs morally and praise her for her contribution and also to inform other community members. Similarly, health personnel will be recommended to support FCHVs morally and to conduct a regular supervision and feedback system. In addition FCHV programmers will be requested to conduct a study in terms of identifying the problems/obstacles related to FCHVs.

3.15.2.1 Selling of Oral Rehydration Salt:

Nepal CRS Company is a private, non-profit making, health commodity selling agency in the country. This company will start ORS sales in the commercial outlets of the study area. The price will be determined carefully with a joint effort from the donor agency, Ministry of health, community leaders and Nepal CRS Company. Nepal CRS Company will be requested to continue the commodity sales in the study area.

3.16 ETHICAL ISSUES OF THE STUDY:

During the proposed study, the researcher will have to identify various factors relating to the consumer's research (such as: identification of the target audience, their problem perception and health related behavior) including the identification of possible media etc. In this course, there will be a series of discussions and interviews between the subjects and the researcher related to different sociocultural, psychological, economical factors of the target audience. The study team will collect information within the ethical limitations.

The subject will be informed in advance about the purpose of the study and the attempts being made to identify the above factors. During data (information) collection, the subjects will not be forced to answer those questions that will be sensitive to them by any economical, sociocultural, religious and psychological points of view. They will be assured that any information provided by them will not be disclosed to others and misused at any cost. The research team will not comment or react on any information or idea provided by the respondents. Every respondent will have the right to/or not to participate in the discussion, if they feel anything unethical during the research period. Similarly, they will have the right to leave the researcher at any stage of the study. The use of tape recorders and camera will be done only at the consent of the respondent.

Equity is another ethical concern of Social Marketing program. Therefore, the intervention program will be focused to cover even less privileged groups as much as possible. Media will be selected carefully to make it more accessible to the low in-come people. Similarly, the health education message will be designed carefully to make it understandable even to uneducated/low educated people. The FCHVs will be asked to visit more, where the less privileged people stay, because these people may not have other form of media (Radio, TV etc.) in their house. In addition the project will bear the expenses of ORS to the actual needy cases, (if not available at the Village health post) on the recommendation of committee members, who cannot buy at all.

3.17 LIMITATIONS OF THE STUDY:

A complete Social Marketing program deals with both qualitative and quantitative approaches. Qualitative approaches are used for planning and designing the Social Marketing strategies, such as: identification of target audiences, their needs and wants, identification of potential media and to pretest the proposed media, message etc. Similarly, quantitative approaches are used to profile the target audiences (such as: epidemiological trends, health related knowledge, attitudes and practices, media patterns etc.), to develop a quantifiable base line data upon which a summative evaluation data could be compared, and to gauge target audience reactions towards the messages and media. But, the proposed study will be of a qualitative approach only, and therefore, will not be able to gauge the above variables in numbers, which will be the main limitation of this study.

Nepal is a geophysically diverse country. Primarily, the geophysical division has been divided between three distinct belts: the mountains in the north, the hills in the middle and plain belts in the south. The enabling factors like availability, accessibility, and affordability vary between each regions. The study area, Laharepauwa Village is a small mountainous area, which will not represent every part of the country. Therefore, the research results emerging from the study area can be generalized only in the other similar districts of the mountainous region, which is another limitation of this study.

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