

## **CHAPTER II**

### **The Problem of Incorrect Home Care for Children under Five Years of Age with Acute Diarrhoea in the Mekong delta of Vietnam**

#### **2.1. INTRODUCTION**

Diarrhoea still remains a common illness among children in the developing countries. High morbidity and mortality rates due to diarrhoea create concern and the need to raise awareness. In the past decade, one simple and effective therapy used in the management of diarrhoea: Oral Rehydration Therapy (ORT) has been widely introduced.

The control of diarrhoeal disease, based on ORT, was established by the world Health Organization (WHO) in 1978 and was successful in decreasing the number of deaths due to dehydration in diarrhoea. But, some studies indicated that ORT alone will never reduce child death from diarrhea to acceptable levels. (Werner & Sanders, 1997). Therefore, since 1980 WHO continued research and developed a case management at home model, also referred to as “home care”. The emphasis in home care is more on feeding. It acknowledges the importance of feeding during and after diarrhoea episodes. Since 1992, home care includes three rules: (1) give extra fluid, (2) continue feeding and (3) bring the child to the health worker for check up (WHO, 1995).

The morbidity and mortality of diarrhoea in Vietnam is still high when compared to other Asian countries. Especially, in the Mekong delta, diarrhoea is the tenth leading cause of morbidity and mortality. In this area, knowledge of mothers in home care for children with diarrhoea was reported as a problem. A household survey in 1998 conducted by the National Control of Diarrhoeal Diseases Program (NCDDP) pointed out that 64% of mothers have incorrect knowledge and practice in home care. Other research studies also concluded that mothers lack knowledge in home care (Sac, 1997; Tien, 1998).

These findings lead to the question why do mothers have incorrect knowledge and practice on home care for children suffering from diarrhoea? This essay will explore the problem of incorrect home care.

## **2.2. DIARRHOEAL DISEASE AND DIARRHOEAL CASE MANAGEMENT IN BRIEF**

### **2.2.1. Definition of Diarrhoea**

The term diarrhoeal disease refers to a group of diseases in which the main symptom is diarrhoea. Diarrhoea is a complex of signs and symptoms. There are many definitions of diarrhoea. Snyder and Merson (1982) found that there were 8 definitions of diarrhoea. There are two essential components in the definition. The first is the frequency of defecation and second is the appearance and characteristic of

fecal matter. Both components depend on the dietary regimen of the child and can change from child to child. Exclusively breastfeed infants normally pass several soft, semi-liquid stool each day. For a breastfeed infant then, it is more practical to define diarrhoea as stool that the mother considers being abnormally liquid or frequent. Researchers and physicians largely accept the following definition. Diarrhoea is usually defined as the passage of three or more loose or watery stool in a 24-hours period (WHO, 1990).

### **2.2.2. Pathogens and transmission of infection**

Pathogenic agents can cause diarrhoea; some common pathogens causing diarrhoea among children in developing countries have been discovered. For example, virus such as *Rotavirus*; bacteria such as *Escherichia coli*, (the toxic form), *Shigella*, *Vibrio cholera* and *Salmonella* or protozoa such as *Giardia lamblia* and *Entamoeba histolytica*.

The fecal-oral route usually spreads the infectious agents that cause diarrhoea. They may be ingested with feces contaminated water or food, or direct contact with infected feces.

### **2.2.3. Assessment and classification of diarrhoea**

According the chart “Assess and Classify the Sick Child” developed by WHO (1995), diarrhoea can be classified by its duration as acute or persistent. If an episode

of diarrhoea lasts less than 2 weeks, it is acute diarrhoea. If it lasts 2 weeks or longer, it is persistent diarrhoea. Dysentery is diarrhoea with visible blood in the feces. The passage of many small, blood-containing stool is typical.

Dehydration can be classified into three dehydration degrees: severe dehydration, some dehydration and no dehydration (WHO, 1995).

#### **2.2.4. Case management of acute diarrhoea**

WHO's treatment guidelines for diarrhoea are based on the major features of the disease. The following principles guide the treatment of diarrhoea:

- Watery diarrhoea requires replacement of fluid and electrolytes, regardless of the cause of the diarrhoea. For most patients, this can be accomplished with an Oral Rehydration Salt (ORS) solution. Severely dehydrated patients can be rehydrated intravenously with Ringer's Lactate solution.
- Feeding should be continued during all types of diarrhoea to the greatest extent possible. It also should be increased after the diarrhoea stops to avoid the effects of malnutrition.

Increasing fluid intake as soon as diarrhoea starts and continue feeding: these two keys can ensure that 90 percent of diarrhoea cases can be treated successfully at home, without requiring the assistance of health workers (Ronald Waldman, 1993)

- Drugs should not be used routinely. Drug treatment does not help in most episodes of diarrhoea, including severe diarrhoea and diarrhoea with fever. The only exception to this is dysentery (with bloody stool), suspected case of cholera, and some cases of persistent diarrhoea. The WHO recommendation is that antidiarrhoeal and antiemetic drugs should never be used to treat diarrhoea in children. None of these drugs has practical value and some are dangerous. (WHO,1990)

#### **2.2.5. Definition of home care for acute diarrhoea in children under five years old**

Home care for acute diarrhoea in children under five years old was defined included 4 rule as: (1) give extra fluid intake, (2) continue feeding, (3) recognize danger signs and bring the child to health worker for check up, and (4) do not give the child any antidiarrhoeal drugs (WHO,1995).

**Six danger signs of acute diarrhoea in children under five years old:**

- Has fever
- Vomits repeatedly
- Blood in stool
- Drink poorly
- Not able to drink or breastfeed
- Does not get better (the passage of many watery stools)

## **2.3. PROBLEM STATEMENT**

### **2.3.1. Situation of Diarrhoea Disease in Vietnam**

The situation of diarrhoea in Vietnam is similar to other developing countries. During recent years, diarrhoeal diseases remained at the same level and is the tenth leading cause of morbidity. In 1998, the morbidity rate is 2271.5 in Vietnam were as Thailand had 1814.1cases / 100 thousand. The mortality rate (0.85) in Vietnam is also higher than Thailand (0.53 number of deaths/ 100 thousand) (MOH Vietnam; MoPH Thailand 1998).

Recorded in hospitals among the children in 1998, diarrhoea is the second disease in the ten leading causes of morbidity, and it is the ninth in ten leading causes of death. (MOH, 1998).

Especially, in the Mekong delta diarrhoeal diseases are prevalent, ubiquitous and the mortality and morbidity rate are highest when compared to all of other areas in Vietnam. Gastroenteritis diseases (including diarrhoea diseases) represent 60 % among the total number of cases for 24 communicable disease reported to the MOH. Among gastroenteritis, diarrhoea gets approximately 90% of cases. In 1998 had 2701.6 diarrhoea cases per 100 thousand remains high (CDDP South Vietnam reports 1998). Table 2.1 offer and comparison.

Table 2. 1 Diarrhoeal Diseases Morbidity and Mortality (per 100 thousands) in 1998

	<b>Mekong delta</b>	<b>Vietnam</b>	<b>Thailand</b>
Morbidity	2701.6	2271.5	1814.1
Mortality	1.5	0.85	0.53

Kim Tien et al., (1998) pointed out that the incidence rate in Mekong delta among the children under five years of age remained in a high range: 3.02 episodes/child/year when compared to Thailand in 1999 with 0.93 episodes/child/years (Household survey MoPH, 1999).

Compared with Thailand the morbidity and mortality in the Mekong delta of Vietnam is still high. Table 2.2 gives an overview.

Table 2.2 Diarrhoeal Diseases Morbidity, Mortality (per 100 thousand) and Incidence Rate among Children Under Five Years of Age.

	1998		Episodes/child/year
	Morbidity	Mortality	
<b>Mekong, Vietnam</b>	13,729.2	2.9	3.02
<b>Thailand</b>	8,960.5	1.6	0.93 (*)

(\*): Figure of 1999

It has been estimated that children under five years old have approximately 5 million diarrhoeal episodes per year in Mekong delta. Calculating only the treatment cost, it will take nearly 300 billion VND (approximate 21 million USD). If health

services could control about 20% of the cases, 4 million USD would be saved per year (Hoang Ninh, 1998).

In addition, Kim Hung (1996) reported that the malnutrition rate among children in this area is highest (43%) compared to other areas so this could be associated with a high episode rate.

The situation should be addressed, but before doing so it is important to explore the possible factors that affect home care.

### **2.3.2. Problem in home care for children with acute diarrhoea**

There are several factors associated with knowledge and practice of mothers in home care such as socio-economic (i.e., income, mothers' education, mothers' occupation, family size); geographic-hygienic environment (i.e., living condition, safe water supply, latrine, personal domestic hygiene). In this study I focus on factors such as: (1) knowledge, attitude and beliefs of mothers; (2) factors associated with health care providers, and (3) factors associated with ICE in home care.

#### **2.3.2.1. Knowledge, attitude and beliefs of mothers**

In the Mekong delta, people are living in an environment that has shortness of safe water supply; most of them use river water (92%). Fish-pone latrine is popular



(96%); while personal and domestic hygiene practices are poor. The average household income is also low (25 US\$ / month).

Ten years after the Control of Diarrhoeal Diseases Programme (CDDP) operated nationwide in Vietnam, the access to ORS is 100% since 1994. However, mothers' knowledge on the three rules of home care is only 41% for the whole country and 35% in the Mekong delta (NCDDP Household survey 1995).

Studies on home care in Vietnam can be classified according to the 3 rules of home care and the use of antidiarrhoeal drugs.

#### – **Fluid**

A cross-sectional study has been done in Tien Giang province, in the Mekong delta in 1998. The findings show that the majority of mothers (95%) give fluid when the child has diarrhoea and they know fluid will get the child better. Among them most (83%) used ORS solution, they think ORS solution can stop diarrhoea, but only a half of them (50%) prepare the ORS solution correctly (Kim tien et al., 1998).

Kim Sac, (1997) reported that among 50 % of mothers using ORS at home, the amount of ORS solution given to the child with diarrhoea was no more than 60 ml during 24 hours; and they do not give fluid right away at the onset of diarrhoea. These finding are similar to the finding from a study by Sabchareon (1992) in central Thailand.

68% of mothers do not read the directions printed on the ORS packets; some of them read but do not mix the whole packet, because they think that one liter ORS solution is too much, so the child can not finish it. Mothers like to save ORS solution. A package type of one liter is not appropriate from the mothers' perspective (CDDP South Vietnam, 2000).

#### – Feeding

Kim Hung (1997) pointed out that knowledge among mothers about feeding is insufficient. Mothers think that expensive food is nourishing food, vegetables and fruits are not seen as necessary for children.

When children get diarrhoea, mothers abstained from some common daily food such as small fish, shrimp and oil. Kim Sac et al. (1997) have indicated that the majority of mothers (91%) abstains from animal and vegetable oil when their child has diarrhoea, because they think the child can not digest these. One fourth of mothers (25%) abstain from fish, shrimp, and crab when their child has diarrhoea, because they think seafood will cause the child to have more diarrhoea. Approximate 30 % of them give their child with diarrhoea only rice gruel with sugar or salt. 51% of them reduce feeding and 12% stop breastfeeding the child. These findings are similar to results from study in Sudan that 45 % mothers stop breast feeding and food during their children have diarrhoea (Ahmed and Elton et al., 1994). The authors concluded that mothers lack knowledge in how to feed their children with diarrhoea.

– **Danger signs**

Kim Sac (1997) has indicated that 87% mothers can not recognize all 6 danger signs. Some danger signs mother do not know such as ‘drink poorly’ and ‘not able to drink or breastfeed’. These findings are consistent with study by Ahmed et al. (1994) in Sudan found that 90% of mother could not recognize danger signs.

– **Drugs**

When the child has diarrhoea, 42% of mothers treat the child at home by buying drugs at the drug store or pharmacy (without any check up or prescription). And among them over half (67%) do not know the effects of those drugs given to their child (Kim Tien, 1997). Compared to Nigeria, drug use rate of mothers in Vietnam is two fold higher, as Omokhodion (1998) shown that in Ibadan, Nigeria 19% mothers purchased drugs for the children with diarrhoea.

– **The first place of treatment children with diarrhoea**

At first, when children get diarrhoea, often treatment is given at home, as Kim Sac (1997) pointed out in the Mekong delta most of the mothers (78%) manage their child at home first. While, 56% of the mothers in central Thailand treat their children with diarrhoea at home (Sabchareon et al., 1992).

### **2.3.2.2. Health care providers**

#### **– Health staff**

The NCDDP of Viet nam (1998) reported the following on case management of diarrhoea in children:

- Hospitals do not have a policy on ICE.
- Physicians only prescribe ORS, and they are not concerned about feeding. They do not think this is their responsibility, although it is recommended by NCDDP.
- In cases where there is no dehydration, physicians have to advise mothers on home care, but this is not observed in most of the health care facilities.
- Health education is seen as time consuming, and not feasible due to shortness of staff.
- Staff also lack knowledge and skills in communication, there is a need for training.

#### **Health volunteer**

Health volunteers play an important role in primary health care. They are the link between health staff and mothers in the community, this by providing knowledge and good practice in home care (Ngoc Diep et al., 1995). Health volunteers such as women 's union members have the advantage of a positive relationship between them and mothers. As Kim Sac (1997) stated they organize networking, have enthusiasm,

have free time for helping people in community; and their knowledge in home care is better than those of mothers. Moreover, they live in the local community so they understand mothers' thinking and practices. Their cooperation with the ministry of health is very successful in the Family Planing Program. The cooperation between MOH and the women 's union is unfortunately limited to family planing only.

### **2.3.2.3. Education, Communication and Information Material**

Education, Communication and Information (EIC) material for diarrhoeal disease among children was developed by NCDDP. The common EIC material for CDD services include flip charts, treatment chart, leaflets and posters, which are distributed to the Village Health Stations via the Provincial Preventive Medicine Centers and District Health Centers. But there is no assurance on proper distribution and access to this material for the target population. As Kim Tien et al. (1998) reported 87 % of the Village Health Stations do not have leaflets for mothers with children suffering form diarrhoea. Most of the hospitals (79%) lack leaflets, posters and flip charts. Few people in the community have access to EIC material, only 2.5% of people in the community responded to have access to leaflets and 7.1 % of them responded to have access to posters. While 21% of them never heard about EIC material in home care for diarrhoea disease.

12% of the villages in the Mekong delta have written guidelines on the management and prevention of diarrhoea, then using village public speakers to announce the information to people during the peak diarrhoea season (from February

to May), but access and usage of this kind of media in remote areas is very limited. (Kim Tien, 1998).

### **2.3.3. Consequences of incorrect home care for children with acute diarrhoea**

Diarrhoea is, in reality, as much a nutritional disease as one of fluid and electrolyte imbalance, and treatment is not adequate unless both aspects of the disease are treated. However, in contrast to fluid replacement, nutrition requires good feeding practices both during the illness and after diarrhoea stopped, when this is done, and malnutrition is either prevented or corrected, the risk of death from a future episode of diarrhoea is greatly reduced. (WHO, 1990).

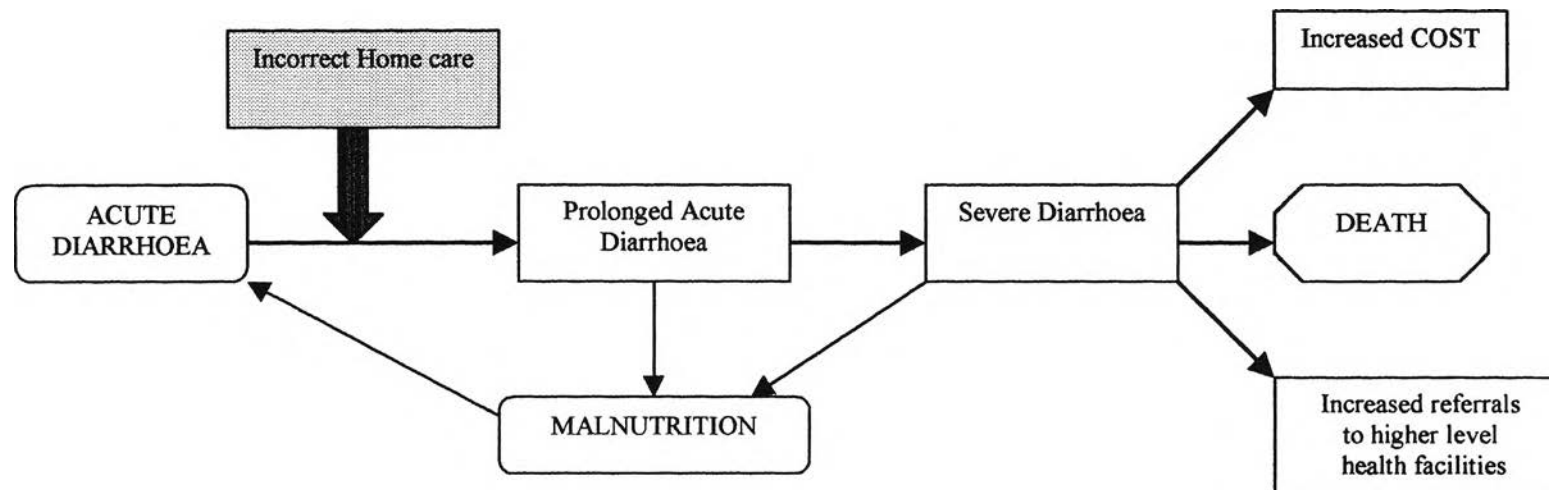
According a report of NCDDP (1998) and the finding of studies done (Sac, 1997; Tien, 1998), diarrhoeal home care is a problem in the Mekong delta in Vietnam. In absence of correct home care, children who experience frequent diarrhoeal episodes are more likely to face prolonged diarrhoea, or more likely to face malnutrition, it may lead to severe diarrhoea and or malnutrition. Afterwards, they easily suffer to death (Mata, 1971). A cohort prospective study done in the Mekong delta found that one of the risk factors of prolonged diarrhoeal duration is malnutrition where  $RR = 2.4$  (1.1- 5.8) (Kim Tien et al., 1998). This demonstrates a cause-consequence loop in the illness.

At the onset of diarrhoea; incorrect home care is one of the causes of prolonged acute diarrhoea <sup>1</sup>. If not managed sufficiently, it may lead to either malnutrition or severe diarrhoea. Children with malnutrition get easier diarrhoea and if so, they often develop serious illness compared to others not suffering from undernutrition, in cases of prolonged acute diarrhoea and severe diarrhoea. Moreover, besides the physical consequences from severe diarrhoea, an increased number of cases lead to referral to higher-level health care facilities and the cost will increase. Thus, improving home care by mothers can not only prevent dehydration but also prevent death; malnutrition associated with diarrhoea, and increased health care costs. (See figure 2.1.)

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<sup>1</sup> Prolonged acute diarrhoea is defined as diarrhoea of such duration and severity that hydration support is required for longer than 7 days. Large cumulative nutritional losses have been demonstrated with severe diarrhoea of 7 days duration and the maintenance of nutrition has become as serious a problem as the maintenance of hydration (Bowie M.D, 1992).

**Figure 2.1. Consequences of Incorrect Home Care of Acute Diarrhoea in Children Under Five Years old**

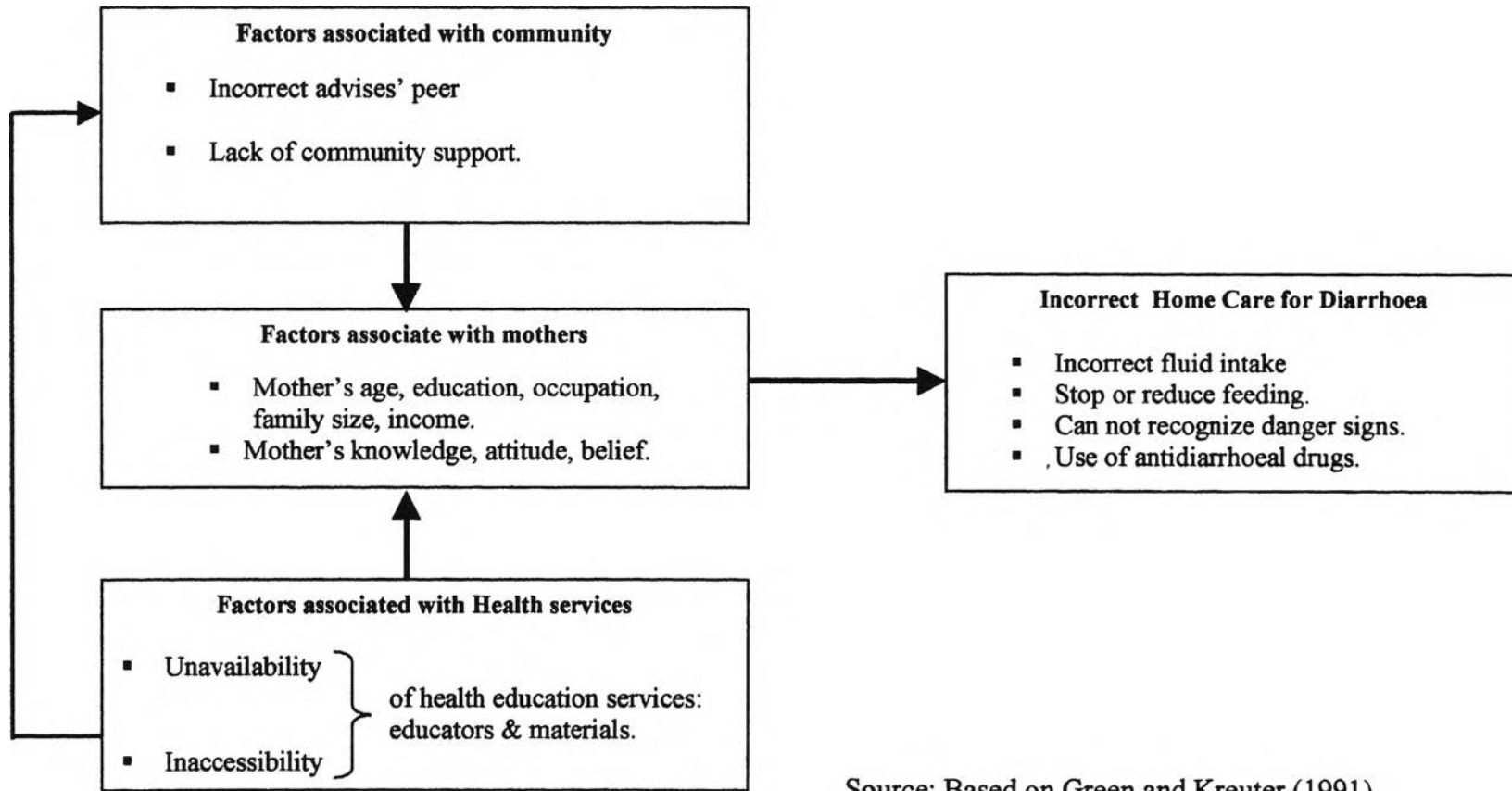




#### **2.4. Analyzing the Possible Factors that Affect Knowledge and Practice of Mothers in Home Care for Children with Diarrhoea**

Applying the Precede-Proceed model (Green & Kreuter, 1991) the different factors that affect home care of mothers are classified into three main groups of factors: (1) the predisposing factors: factors associated with mothers such as knowledge, attitude and beliefs of mother; (2) the reinforcing factors: communication between mothers together and the support of community member; (3) the enabling factors: availability and accessibility of health services in Heath education such as health educators and EIC material. (See Figure 2. 2.) It is necessary to analyze these factors and prioritize these in term of feasibility and appropriateness.

**Figure 2.2 Causal Relationship of Different Factors Affecting Home Care of Acute Diarrhoea in Children**



Source: Based on Green and Kreuter (1991)

#### **2.4.1. Factors associate with mothers:**

Based on Precede-proceed model factors associated with mother can be classified as predisposing factors. Predisposing factors include the cognitive and affective dimension of knowing, feeling, valuing and having self-confidence or a sense of efficacy. Knowledge, attitudes, beliefs, values; cultural modes and folkway are some examples of predisposing factors. It motivates an individual or group to take an action. Demographic factors such as age, gender and family size, and socioeconomic factors such as education, income and occupation are also predisposing determinants of behavior. These factors can facilitate or hinder a person 's motivation to change and can be altered through direct communication.

Lack of knowledge, belief and attitude need long term intervention and need a continuous effort for improvement. These factors are also strong influenced by socioeconomic determinants such as mothers' education, occupation, income, and number of children and age. Improvement of socioeconomic determinants needs a strong commitment of the government, large budgets and time. Therefore, improvement of these factors is rather complex. Socio-economic factors will not be included in the intervention of this study, because a health education program can not control these factors.

- **Knowledge:**

Knowledge is an essential factor to decide individually or collectively to use or not use certain practices. Knowledge brings a positive association towards change. Therefore, it can be assumed that if there is an increase in knowledge, there could be the possibility of change in practices.

- **Beliefs:**

Beliefs play an important role in the usage of fluid and food in home care. Many mothers still believe seafood can increase their child's diarrhoea, and they also believe that breast milk can cause more diarrhoea if the mother eats seafood. Some mothers stop feeding the child because they believe the bowels of children with diarrhoea need rest. Some mothers believe the child will get better if they use herbals to stop diarrhoea for the child. Beliefs of mothers are often based on cultural role models in the community. Negative beliefs directly affecting home care should be addressed; mothers need to be encouraged over time, and positive beliefs need to be reinforced.

#### **2.4.2. Factors associated with health services**

Factors associated with health services are enabling factors. These factors often deal with the environment. Enabling factors attribute to the action of any individual or organization including the program, services and resources. They refer to the availability, accessibility and affordability of health care facilities and

community resources necessary for behavioral and environmental outcomes to be realized. Enabling factors also include new skills that a person, organization or community needs to carry out to change in behavior or to change the environment. These factors can be changed primarily through training for skill and community organization for barriers and resources.

In this study I will be focus on the availability and accessibility of health education services such as educator (e.g. health staffs and health volunteers) and EIC material such as leaflets, poster so that mothers will be guided in home care for children with diarrhoea.

Lack of these enabling factors such as access to education services on home care, EIC materials on home care, have a direct effect on the knowledge and practice of mothers in home care.

The accessibility to home care education plays an important role to raise awareness among mothers. It is assumed that mothers access to home care education services and EIC material, could improve contact with health educators, and could improve knowledge among mothers.

Enabling factors such as EIC materials and education services can support reinforcing factors i.e., supporting peer communication such as mothers using leaflets, and flip chart to discuss together home care in education sessions or in their house. Home care education program can also inform community members e.g., village

leaders, hamlet leaders so that mothers have more chance to receive support within the community.

In addition, well-designed and distributed EIC material may support the demand of mothers on home care guidance. This means that enabling factors can also indirectly influence the predisposing and reinforcing factors.

Health care providers such as health staffs and health volunteers play an important role to provide reinforcement to mother's home care for children with diarrhoea. In addition, mothers trust both health staffs and women 's union member to provide credible information.

- **Education of mothers by health staffs**

Health staffs are important collaborators and are in key roles to effect change in the knowledge of mothers. When performing a check up of a child with diarrhoea, health staffs have to communicate with the mother for getting information about the child for diagnosis. Mothers also want to give all of information about their child health status. Mothers belief in the guidance given by a physician who checks up their child. A rapid assessment conducted by Tuan (2000) at Ho Chi Minh city seem to indicated that mothers value the guidance from physicians. A good communication between health staffs and mother will help improving knowledge and practice on home care of mothers.

- **Education of mothers by health volunteers**

Health volunteers involved in health education bring their particular expertise in working with individual mothers and groups of mothers. As Kim Sac (1997) suggested that women 's union members have good basic capacities as health educators in the community, such as free time, good personal hygiene, knowledge and practice on home care for children with diarrhoea. In addition, Ngoc Diep (1995) concluded that health volunteers could guide mothers to promote good practice in diarrhoeal home care. The success of a primary health care program often depends on the quality of good health volunteers.

#### **2.4.3. Factors associated with community**

Factors associated with community are classified reinforcing factors. These factors comprise of the different types of feedback and rewards that those in the target population receive, which may either encourage or discourage them in the changing their behavior. Thus, the reinforcing factors include social support, peer influences for the continuation or discontinuation of a behavior. The reinforcing factors can be change mainly by indirect communication with family, peers, and teacher, employer and other who control social rewards.

The importance of social support for behavior change and its relationship to health have been noted by several researchers (Becker & Green 1975; Kaplan, 1977). These authors suggested that one form of social activity should be included in

interventions such as: a support group, or peer education, or social network. For example: support of community members such as formal or informal village leaders, hamlet leaders and communication among mothers are important in the Vietnamese social setting.

- **Communication among mothers' peer**

Communication among mothers in other words is peer education. It is one kind of internal resource that health education planners are using successfully in a variety of setting. The process uses individuals who have specific knowledge, skills, and understanding of a concept to help educate their peers (Mc Kenzie, 1997). In the community there are mothers who correctly apply in home care for children with diarrhoea, they can communicate and guide other mothers so that knowledge and skills on how to practice home care correctly are passed on e.g. they demonstrate how to prepare ORS solution for other mothers. Mothers can ask questions; they exchange their knowledge, experience in practice home care. In this way home care by mothers can be improved.

Major advantages of peer education are: its low cost, and the credibility of the instructor (mothers).

- **Support of community members**

Community members such as formal or informal village and hamlet leaders, who are demographically similar to the target group e.g., mothers. They



knowledgeable about community issues and concerns e.g. degree of incorrect home care; they may be early adopters of innovative behavior, and active in persuading mothers to get involved and remind their commitment to goals for improving home care.

Moreover, leaders have authority and the potential to create more support: keeping people in community informed; influencing decisions and activating mothers who are non-participants. They can improve services on health education, make stakeholders more responsive through commends or rewards. Leaders' support is essential for any attempt to achieve improvement of home care by mothers.

From the perspective of mothers, they will feel easier to change a behavior if those around them provide support or are willing to be partner in the behavior change process.

## **2.5. CONCLUSION**

The problem of incorrect knowledge and practice among mothers in home care of children with diarrhoea in the Mekong Delta is complex. Several factors influence the knowledge and practice of mothers in home care such as: socioeconomic and demographic factors and environmental factors. Key factors can be classified as predisposing factors, enabling factors and reinforcing factors. These factors not only directly or indirectly affect knowledge and practice of mothers in home care, but factors also have the inter-relationships and interactions and this is important.

A comprehensive strategy requires community cognition about home care. There is a need for participation of community to support, organize and develop appropriate solutions. Mothers themselves do not recognize their incorrect knowledge and practice. Consequently, they are not aware of the need to gain knowledge and improve practice in absence of support from community members e.g. women 's union; village, hamlet leaders, health staff and other mothers.

One of the internal resources that could be used is the networks available in community. Making full use of available network in community can take more effective to mobilize manpower e.g. women 's union, hamlets leaders, health staffs.

In conclusion, incorrect knowledge and practice of mothers in home care for children with diarrhoea is a problem that need to be addressed. It is important to improve home care because the vast consequences such as server diarrhoea, malnutrition, mortality and increased cost. What is needed is a comprehensive development strategy rather than only health inputs to solve this problem. The next chapter will be describe in details an action research on improving knowledge and practice of mothers in home care for children.

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